Switchboard Integration

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Switchboard Integration

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Switchboard Integration

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ComPacT NSX & NSXm
Operating and Installation Conditions

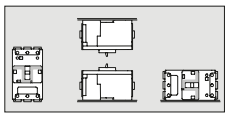
ComPacT NSXm may be mounted vertically, horizontally or flat on their back or on their side without any derating of characteristics.

C12H3TM160L.eps

ComPacT NSXm

E

DB436712.eps

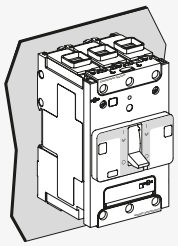


Fixed device installation positions

Fixed Circuit Breakers

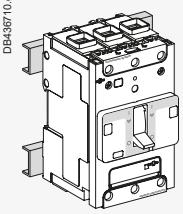
ComPacT NSXm may be mounted vertically, horizontally or flat on their back or on their side without any derating of characteristics.
These devices can be mounted on a DIN rail using the integrated DIN rail mounting feature.
For backplate mounting, the devices are supplied with two mounting screws (M4), washers and nuts. These mounting screws can be inserted through mounting holes molded into the device case and threaded into the mounting enclosure, rails or plate.

DB436709.eps



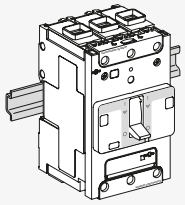
Mounting on a backplate

DB436710.eps



Mounting on rails

DB436711.eps



Mounting on DIN rail

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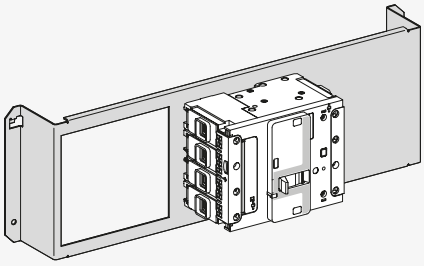


Mounting on a Prisma mounting plate

ComPacT NSX & NSXm
Operating and Installation Conditions

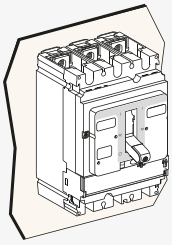
ComPacT NSX circuit breakers may be installed horizontally, vertically or flat on their back, without derating performance levels.
There are three installation versions:
- Fixed
- Plug-in (on a base)
- Withdrawable (on a chassis).

For the last two, components must be added (base, chassis) to the fixed version.
Many connection components are shared by the three versions.

Fixed Circuit Breakers

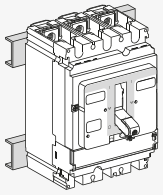
Fixed circuit breakers are designed for standard connection using bars or cables with lugs. Bare-cable connectors are available for connection to bare copper or aluminium cables.
For connection of large cables, a number of solutions with spreaders may be used for both cables with lugs or bare cables.

DB436714.eps



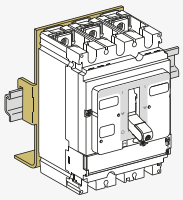
Mounting on a backplate

DB436715.eps



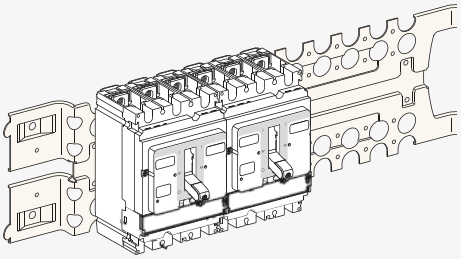
Mounting on rails

DB436716.eps



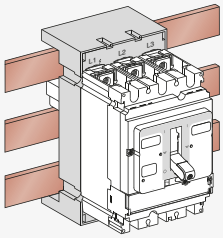
Mounting on DIN rail (with adapter)

DB436717.eps



Mounting on a Prisma mounting plate

DB439283.eps

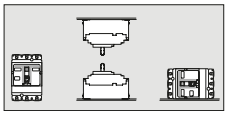


Mounting on busbars with an adapter

C25W35E250.eps

Fixed ComPacT NSX250

DB436719.eps

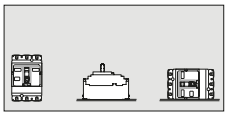


Fixed device installation positions

PB 105121-0.eps

Plug-in ComPacT NSX250

DB436720.eps



Withdrawable device installation positions

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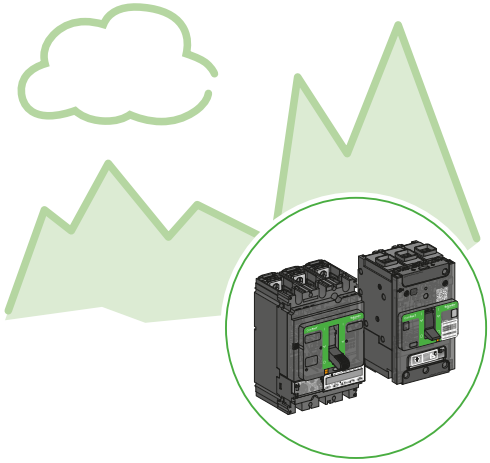
ComPacT NSX & NSXm
Operating and Installation Conditions

DB436800.ai

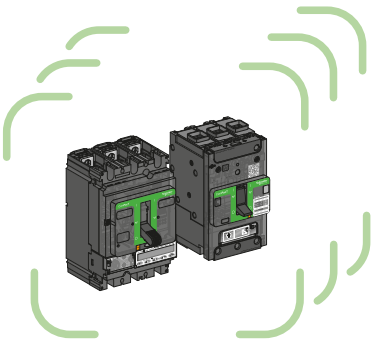


Altitude Derating

Altitude does not significantly affect the characteristics of ComPacT NSX and NSXm circuit breakers up to 2000 m. Above this altitude, it is necessary to take into account the decrease in the dielectric strength and cooling capacity of air.
The following table gives the corrections to be applied for altitudes above 2000 m. The breaking capacities remain unchanged.

Altitude (m)		2000	3000	4000	5000
Impulse withstand voltage (kV)		8	7.1	6.4	5.6
Insulation voltage (V)	Ui	800	710	635 [1]	560
for ELCB [3]	Ui	500	445	400	350
Maximum operating voltage (V) for NSX400K	Ue	1000	886	790	696
Maximum operational voltage (V)	Ue	690	690	635 [1]	560
for ELCB [3]	Ue	440	440	400	350
Average current capacity (A) at 40 °C	In x	1.0	0.98 [2]	0.96	0.94

DB436801.ai

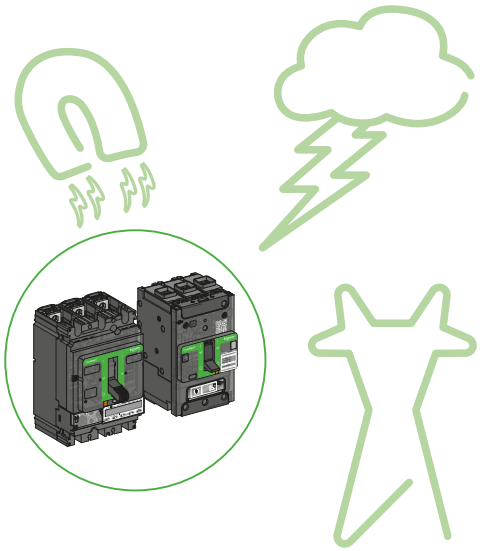


Vibrations

ComPacT NSX and NSXm devices resist mechanical vibrations.
They meet IEC 60068-2-6:
- 2.0 to 13.2 Hz and amplitude ±1 mm
- 13.2 to 100 Hz acceleration ±0.7 g.

Excessive vibration may cause tripping, breaks in connections or damage to mechanical parts.

DB436802.ai



Electromagnetic Disturbances

ComPacT NSX and NSXm devices are protected against:
- Overvoltages caused by circuit switching
- Overvoltages caused by an atmospheric disturbances or by a distribution-system outage (e.g. failure of a lighting system)
- Devices emitting radio waves (radios, walkie-talkies, radar, etc.)
- Electrostatic discharges produced directly by users.

ComPacT NSX and NSXm devices have successfully passed the electromagnetic-compatibility tests (EMC) defined by the international standards listed page A-15.
These tests ensure that:
- No nuisance tripping occurs
- Tripping times are respected.

[1] 640 for ComPacT NSX.
[2] 0.99 for ComPacT NSX.
[3] Earth Leakage Circuit Breaker.

Protection Degree

Protection degree of the product, according to IEC 60529, depends of its configuration:

Colors	Definition
	IP54/65: side/front extended rotary handle
	IP40: front cover, side, back, long terminal shield, direct rotary handle
	IP20: power connection cover
	may be IP20 or less depending of the kind of power connections and cable size used

Power Supply from the Top or Bottom

ComPacT NSXm circuit breakers can be supplied from either the top or the bottom, even when equipped with a MicroLogic Vigi 4.1 with integrated earth leakage protection, without any reduction in performance. This capability facilitates connection when installed in a switchboard.
All connection and insulation accessories can be used on circuit breakers supplied either from the top or bottom.

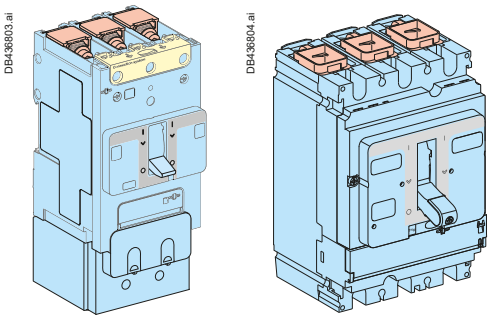
Power Supply from the Top or Bottom [1]

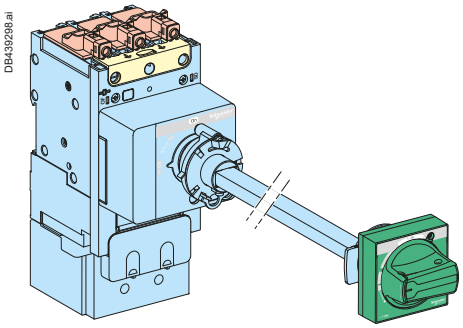
ComPacT NSX circuit breakers can be supplied from either the top or the bottom, even when equipped with a VigiPacT add-on, without any reduction in performance. This capability facilitates connection when installed in a switchboard.
All connection and insulation accessories can be used on circuit breakers supplied either from the top or bottom.
[1] All R, HB1, and HB2 circuit breakers are restricted for use as line-load connection. They can not have power fed into the bottom of the circuit breaker. They will be marked with Line and Load markings.

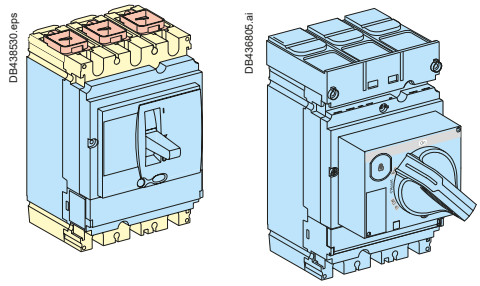
Weight

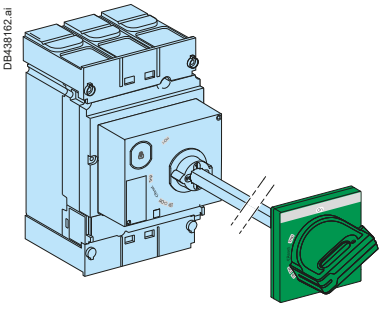
The table below presents the weights (in kg) of the circuit breakers and the main accessories, which must be summed to obtain the total weight of complete configurations. The values are valid for all performance categories.

Type of device		Circuit breakers	Base	Chassis	VigiPacT add-on	Visu module	Motor mech.
NSX100	3P/3D	2.05	0.8	2.2	0.87	2	1.2
	4P/4D	2.4	1.05	2.2	1.13	2.2	1.2
NSX160	3P/3D	2.2	0.8	2.2	0.87	2	1.2
	4P/4D	2.58	1.05	2.2	1.13	2.2	1.2
NSX250	3P/3D	2.4	0.8	2.2	0.87	2	1.2
	4P/4D	2.78	1.05	2.2	1.13	2.2	1.2
NSX400/630	3P/3D	6.19	2.4	2.2	2.8	4.6	2.8
	4P/4D	8.13	2.8	2.2	3	4.9	2.8









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Derating and Correction Factor Depending of Temperature

The overload protection is calibrated at 40 °C in the lab. This means that when the ambient temperature is less or greater than 40 °C, the Ir protection pick-up is slightly modified.

Choosing the Right Rating Depending on the Temperature:

Over the reference temperature of 40 °C, the circuit breaker has to be derated following the table below:

Temperature derating for thermal-magnetic (TM-D) NSXm at In						
Temperature °C						
40	**45**	**50**	**55**	**60**	**65**	**70**
Rating (A) In						
16	16	15	15	14	14	13
25	24	24	23	23	22	21
32	31	30	30	29	28	27
40	39	38	37	36	34	33
50	49	48	46	45	44	42
63	61	60	58	56	54	53
80	77	73	70	67	64	60
100	96	94	90	87	83	80
125	120	117	113	109	104	100
160	155	149	144	139	133	126

Temperature derating for NSXm with MicroLogic Vigi 4.1 at In						
Temperature °C						
40	**45**	**50**	**55**	**60**	**65**	**70**
Rating (A) In						
25	25	25	25	25	25	25
50	50	50	50	50	50	50
100	100	100	100	100	100	100
160	155	150	145	140	135	130

Doing the Setting or Calculating the Tripping Time for a Given Temperature:

After having determine the corrected ratio I/In, the tripping time at 40 °C is defined with the tripping curves (see pages H-2 to H-3).
To obtain the right setting or the tripping time at a different temperature, the ratio I/In has to be corrected with the correction factor below:

Correction factor table for thermal magnetic (TM-D) NSXm to determine setting or tripping time at In

Rating (A) In	Temperature °C												
	10	15	20	25	30	35	40	45	50	55	60	65	70
16	1.16	1.13	1.11	1.08	1.05	1.03	1.00	0.97	0.94	0.91	0.88	0.85	0.81
25	1.13	1.11	1.09	1.07	1.05	1.02	1.00	0.98	0.95	0.93	0.90	0.88	0.85
32	1.14	1.11	1.09	1.07	1.05	1.02	1.00	0.98	0.95	0.93	0.90	0.87	0.84
40	1.15	1.12	1.10	1.08	1.05	1.03	1.00	0.97	0.95	0.92	0.89	0.86	0.83
50	1.13	1.11	1.09	1.07	1.05	1.02	1.00	0.98	0.95	0.93	0.90	0.87	0.85
63	1.14	1.12	1.10	1.07	1.05	1.02	1.00	0.97	0.95	0.92	0.89	0.86	0.83
80	1.21	1.18	1.14	1.11	1.07	1.04	1.00	0.96	0.92	0.88	0.83	0.80	0.75
100	1.18	1.16	1.12	1.10	1.06	1.04	1.00	0.96	0.94	0.90	0.87	0.83	0.80
125	1.17	1.14	1.11	1.08	1.06	1.03	1.00	0.96	0.93	0.90	0.87	0.84	0.80
160	1.17	1.15	1.12	1.09	1.06	1.03	1.00	0.97	0.93	0.90	0.87	0.83	0.79

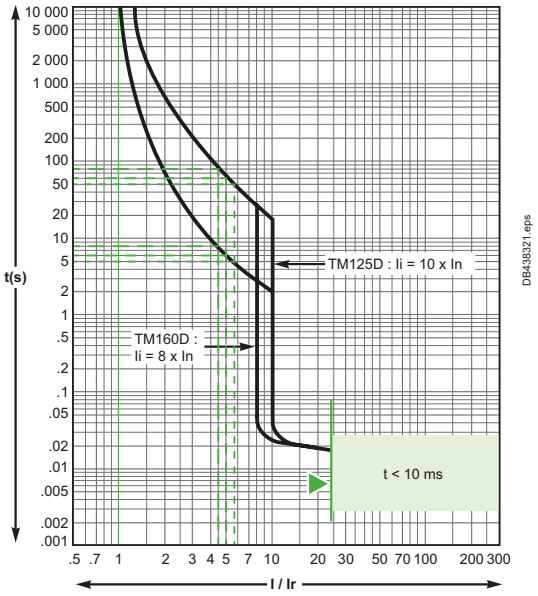
Doing the right setting depending of the temperature:
Example: What is the setting to obtain a real Ir of 105 A, taking into account the temperature, for a ComPacT NSXm 125 A?
The necessary dial setting, in amperes, is shown below.

- At 40 °C, Ir = 105/1 = 105 A
- At 20 °C, Ir = 105/1.11 = 95 A
- At 60 °C, Ir = 105/0.87 = 121 A.

Calculating the tripping time at Ir = In for a given temperature:
Example: What is the tripping time of a ComPacT NSXm 100A at Ir = In for an overload of 500 A?

- At 40 °C, I/Ir = 5, tripping time is between 6 and 60 seconds
- At 20 °C, I/Ir = 5/1.12 = 4.46, tripping time is between 8 and 80 seconds
- At 60 °C, I/Ir = 5/0.87 = 5.75, tripping time is between 5 and 50 seconds

For Ir = 0.7 to 0.9 In, additional correction factor need to be applied - please consult us.



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ComPacT NSXm
Minimum Clearance Distances

General Rules

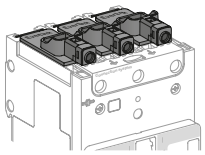
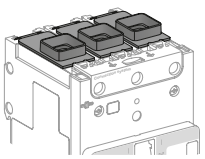
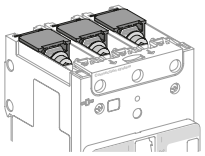
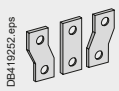
When installing a circuit breaker, minimum clearance distances must be maintained between the device and panels, bars and other protection devices installed nearby. These distances, which depend on the ultimate breaking capacity, are defined by tests carried out in accordance with standard IEC 60947-2.
If installation conformity is not checked by type tests, it is also necessary to:
- Use insulated bars for circuit-breaker connections
- Segregate the busbars using insulating screens.

For ComPacT NSXm devices, terminal shields and interphase barriers are recommended and may be mandatory depending on the kind of power connections of the device and type of installation.

Power Connections

The table below indicates the rules to be respected for ComPacT NSXm devices to ensure insulation of live parts for the various types of connection.
Connection accessories such as crimp lugs, power distribution connectors, and spreaders are supplied with interphase barriers.
Long terminal shields provide a degree of protection of IP40 (ingress) and IK07 (mechanical impact).

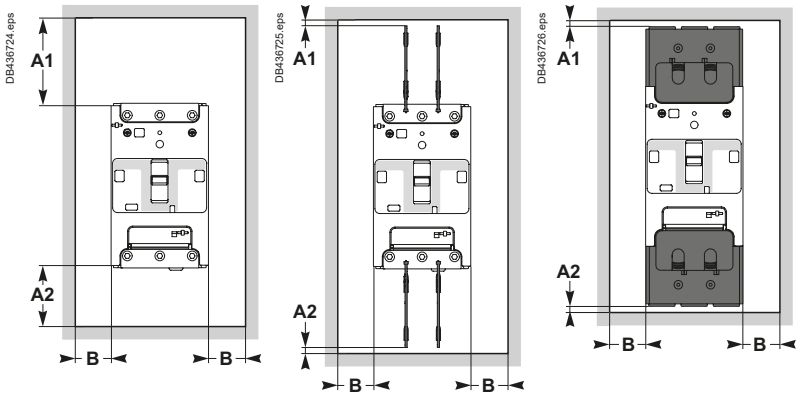
ComPacT NSXm: Rules to Be Respected to Ensure Insulation of Live Parts

	EverLink connector with or without control wire terminal			Mechanical lug connector			Compression lug/ busbar connector		
	 DB436721.eps			 DB436722.eps			 DB436723.eps		
Insulation Accessory Options Per Conductor Type									
Type of conductor	**No insulating accessory**	**Interphase barriers**	**Long terminal shield**	**No insulating accessory**	**Interphase barriers**	**Long terminal shield**	**No insulating accessory**	**Interphase barriers**	**Long terminal shield**
Cables  DB419248.eps	Possible	-	-	Possible	Possible	Possible	-	-	-
Insulated bars  DB419249.eps	-	-	-	-	-	-	Possible [2]	Possible	Possible
Cables + crimp lugs  DB419250.eps	-	-	-	-	-	-	Forbidden	Mandatory [3]	Possible [1]
Cables + crimp lugs with heat-shrinkable sheath  DB419251.eps							Possible [2]	Possible	Possible
Extension terminals: spreader  DB419252.eps	-	-	-	-	-	-	Forbidden	Mandatory [4]	-

[1] Instead of phase barriers.
[2] Safety air clearance of 8 mm has to be respected between live parts.
[3] When > 5 mm clearance between devices Interphase barriers are mandatory otherwise for < 5 mm Long terminal shields are mandatory.
[4] When > 5 mm clearance between devices Interphase barriers are mandatory otherwise > 5 mm clearance between devices is forbidden.
Note: For uninsulated bar connections, please consult us.

IEC Standard

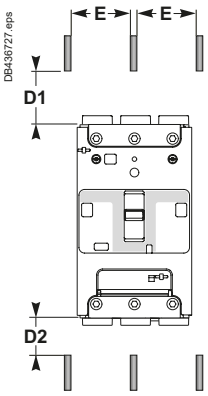
Minimum Safety Clearances



Operating voltage	Clearance (mm)						
	Between devices	Between device and sheet metal					
		Painted sheet metal			Bare sheet metal		
U ⩽ 690 V		A1	A2	B	A1	A2	B
for devices equipped with:							
no accessories	0	30 mm	5 mm	0	40 mm	5 mm	5 mm
interphase barriers [1]	0	0	0	0	0	0	5 mm
long terminal shields	0	0	0	0	0	0	5 mm

[1] 20 mm clearance when using spreaders and 5mm clearance when using crimp lugs between devices is mandatory.

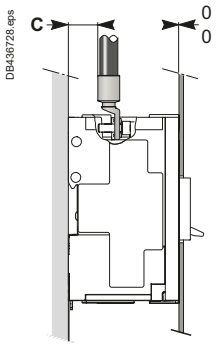
Minimum Safety Clearances to Bare Busbars



Operating voltage	Clearances to live bare busbars [2]			
	Spacing E ⩽ 60 mm		Spacing E > 60 mm	
	D1	D2	D1	D2
U ⩽ 690 V	200 mm	100 mm	120 mm	60 mm

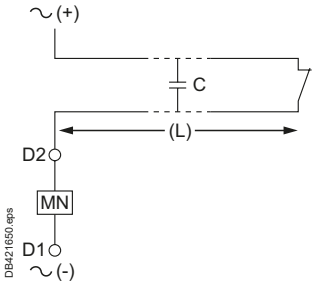
[2] These clearances can be reduced for special installations as long as the configuration is checked by tests.

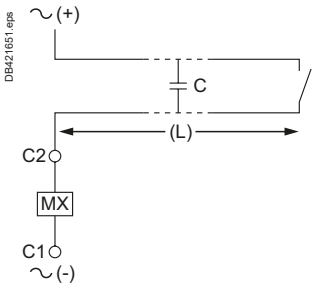
Compression Lug Safety Clearance

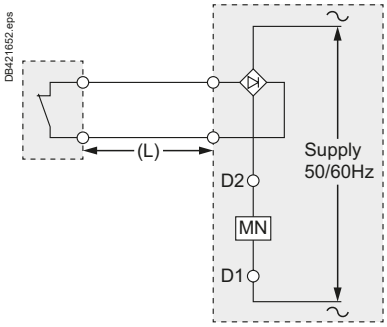


An insulating screen or long terminal shield is required if C < 8 mm.

ComPacT NSXm
Voltage Release Wiring Rules







E

Shunt Trip (MX) and Undervoltage Release (MN)

Recommended maximum cable lengths

In certain circumstances, high cable capacitance due to an excessive cable length could prevent an undervoltage release MN from dropping out resulting in safety issues. In case of a shunt trip MX, an untimely trip may occur due to capacitive current leak.
To avoid these dysfunction due to cable capacitance C, the maximum cable length (L) is defined by the following table for a 1.5 mm² cable.

Power supply voltage (Un)	Maximum cable length undervoltage trip (MN) [1]	Shunt trip (MX) [1]
24 V AC	1 243 m	3 653 m
24 V DC	unlimited	> 3653 m
48 V AC	583 m	1 667 m
48 V DC	unlimited	> 1667 m
110...130 V AC	126 m	913 m
110...130 V DC	unlimited	> 913 m
208-240 V AC	109 m	160 m
250 V DC	unlimited	> 160 m
277 V AC	98 m	120 m
380-415 V AC	86 m	80 m
440-480 V AC	56 m	67 m

[1] Make sure auxiliaries supply voltage is within working range (0.85 Un mini...1.1 Un maxi).

If a longer cable length is required, several solutions are possible to counteract excessive cable capacitance:
- Use DC operated auxiliaries
- Use lower control voltage (make sure auxiliaries supply voltage is within working range: 0.85 Un minimum...1.1 Un maximum)
- If high voltage and long control cables are required for an AC undervoltage release (MN), add a rectifier bridge (ref LV426899 – DIN rail compatible) in the control circuit. It will prevent drop out problems but increase operating time.

Electrical Characteristics of MN/MX

Characteristics			AC	DC
Rated voltage (V)			24, 48, 110...130, 208...240, 277, 380...415, 440...480	24, 48, 125, 250
Power requirements	MX	Pickup (< 50 ms)	< 6 VA	< 10 W
		Seal-in	< 4 VA	< 1 W
	MN		< 7 VA	< 2 W
Clearing time (ms)			< 50	< 50
Operating range			up to 1.1 Un	

ComPacT NSXm thermal power loss values are used to calculate total temperature rise in the switchboard in which the circuit breakers are installed.

The values indicated in the tables below are typical values for a device at full rated load and 50/60 Hz.

Power loss per pole (P/pole) in Watts (W)
The value indicated is the power loss at In, 50/60 Hz, for a three-pole or four-pole circuit breaker. Measurement and calculation of power loss are carried out in compliance with the recommendations of Annex G of standard IEC 60947-2.

Resistance per pole (R/pole) in milliohms (mΩ)
The value of the resistance per pole is provided as a general indication for a new device.
The value of the contact resistance is determined on the basis of the measured voltage drop, in accordance with the manufacturer's test procedure.
Note: This measurement is not sufficient to determine the quality of the contacts, i.e. the capacity of the circuit breaker to carry its rated current.

Calculation of total power loss
Total power loss at full rated load and 50/60 Hz is equal to power losses per pole multiplied by the number of poles (3 or 4).

ComPacT NSXm with TM-D

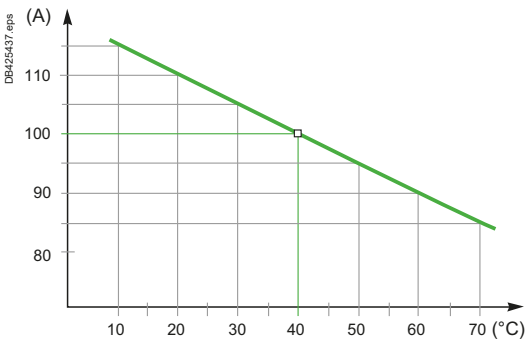
Rating (A)	R total/pole (mΩ)	P/Pole (W)
16	8.87	2.3
25	4.50	2.8
32	3.10	3.3
40	2.30	3.8
50	1.85	4.6
63	1.44	5.7
80	0.90	5.8
100	0.75	7.5
125	0.59	9.3
160	0.53	13.7

ComPacT NSXm with MicroLogic Vigi 4.1

Rating (A)	R total/pole (mΩ)	P/Pole (W)
25	2.44	1.5
50	0.48	1.2
100	0.48	4.8
160	0.48	12.3

ComPacT NSX Temperature Derating
Equipped with Thermal-Magnetic Trip Units

When thermal-magnetic trip units are used at ambient temperatures other than 40 °C, the Ir pick-up is modified.



Temperature derating curve for ComPacT NSX100

Derating and Correction Factor Depending of Temperature

The overload protection is calibrated at 40 °C in the lab. This means that when the ambient temperature is less or greater than 40 °C, the Ir protection pick-up is slightly modified.

Choosing the Right Rating Depending of the Temperature:

Over the reference temperature of 40 °C, the circuit breaker has to be derated following the table below:

Temperature derating for thermal-magnetic (TM-D) NSX at In

Temperature °C						
40	**45**	**50**	**55**	**60**	**65**	**70**
Rating (A) In						
16	15.6	15.2	14.8	14.5	14	13.8
25	24.5	24	23.5	23	22	21
32	31.3	30.5	30	29.5	29	28.5
40	39	38	37	36	35	34
50	49	48	47	46	45	44
63	61.5	60	58	57	55	54
80	78	76	74	72	70	68
100	97.5	95	92.5	90	87.5	85
125	122	119	116	113	109	106
160	156	152	148	144	140	136
200	195	190	185	180	175	170
250	244	238	231	225	219	213

Doing the Setting or Calculating the Tripping Time for a Given Temperature:

After having determine the corrected ratio I/In, the tripping time at 40 °C is defined with the tripping curves (see pages H-5 to H-7).
To obtain the right setting or the tripping time at a different temperature, the ratio I/In has to be corrected with the correction factor below:

Correction factor table for thermal magnetic (TM-D) NSX to determine setting or tripping time at In

Rating (A) In	Temperature °C												
	10	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**
16	1.15	1.17	1.13	1.13	1.06	1.04	1.00	0.98	0.95	0.93	0.91	0.88	0.86
25	1.15	1.12	1.10	1.08	1.05	1.02	1.00	0.98	0.96	0.94	0.92	0.88	0.84
32	1.15	1.13	1.10	1.07	1.05	1.03	1.00	0.98	0.95	0.94	0.92	0.91	0.89
40	1.15	1.13	1.10	1.08	1.05	1.03	1.00	0.98	0.95	0.93	0.9	0.88	0.85
50	1.15	1.12	1.10	1.08	1.05	1.02	1.00	0.98	0.96	0.94	0.92	0.90	0.88
63	1.14	1.13	1.10	1.08	1.05	1.03	1.00	0.98	0.95	0.92	0.90	0.87	0.86
80	1.15	1.13	1.10	1.08	1.05	1.03	1.00	0.98	0.95	0.93	0.90	0.88	0.85
100	1.15	1.13	1.10	1.08	1.05	1.03	1.00	0.98	0.95	0.93	0.90	0.88	0.85
125	1.15	1.128	1.10	1.07	1.05	1.02	1.00	0.98	0.95	0.93	0.90	0.87	0.85
160	1.15	1.125	1.10	1.08	1.05	1.03	1.00	0.98	0.95	0.93	0.90	0.88	0.85
200	1.15	1.125	1.10	1.08	1.05	1.03	1.00	0.98	0.95	0.93	0.90	0.88	0.85
250	1.15	1.124	1.11	1.08	1.05	1.02	1.00	0.98	0.95	0.92	0.90	0.88	0.85

For Ir = 0.7 to 0.9 In, additional correction factor need to be applied - please consult us.

ComPacT NSX Temperature Derating
Equipped with Thermal-Magnetic Trip Units

Example 1. What is the tripping time of a ComPacT NSX100 equipped with a TM100D trip unit set to 100 A, for an overload I = 500 A?
The overload I/Ir is calculated as a function of the temperature. Use the above values and the curve on page H-6 (shown on the left) to determine the corresponding time.
- At 40 °C, Ir = 100 A, I/Ir = 5 and the tripping time is between 6 and 60 seconds.
- At 20 °C, Ir = 110 A, I/Ir = 4.54 and the tripping time is between 8 and 80 seconds.
- At 60 °C, Ir = 90 A, I/Ir = 5.55 and the tripping time is between 5 and 50 seconds.

Example 2. What is the setting to obtain a real Ir of 210 A, taking into account the temperature, for a ComPacT NSX250 equipped with a TM250D trip unit?
The necessary dial setting, in amperes, is shown below.
- At 40 °C, Ir = (210/250) x 250 A = 210 A
- At 20 °C, Ir = (210/277) x 250 A = 189.5 A
- At 60 °C, Ir = (210/225) x 250 A = 233 A

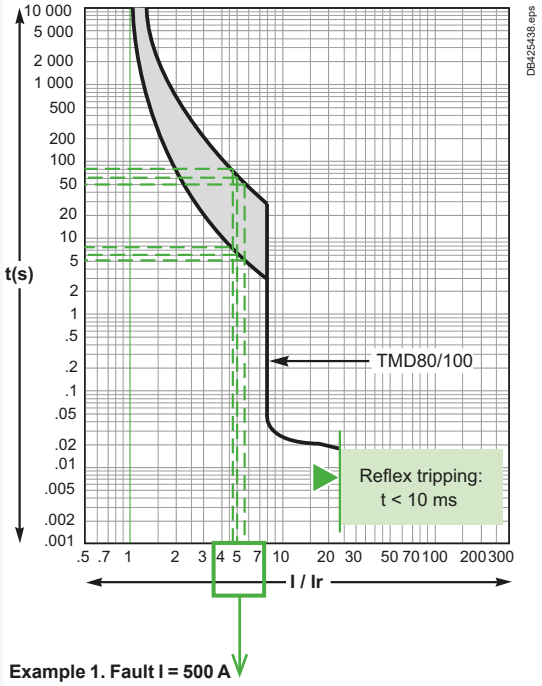
Additional Derating Coefficient for an Add-on Module

The values indicated in the previous tables are valid for **fixed** circuit breakers equipped with one of the following modules:
- VigiPacT add-on
- VigiPacT add-on alarm
- Current-transformer module.

They also apply for **plug-in or withdrawable** circuit breakers equipped with:
- Current-transformer module.

However, for **plug-in or withdrawable** circuit breakers equipped with a VigiPacT add-on or a VigiPacT add-on alarm, the coefficient 0.84 must be applied.
The table below sums up the situation for add-on modules.

Type of device	Circuit breaker	TM-D trip-unit rating	VigiPacT add-on or VigiPacT add-on alarm	Current transformer module, or PowerTag NSX
Fixed	NSX100	16 to 100	1	1
	NSX160 to 250	125 to 160		
	NSX250	200 to 250		
Plug-in or withdrawable	NSX100	16 to 100		
	NSX160	125 to 160		
	NSX250	200 to 250	0.84	



Example 1. Fault I = 500 A

I/Ir	4.5	5	5.5
T°C	20 °C	40 °C	60 °C
t min.	8 s	6 s	5 s
t max.	80 s	60 s	50 s

Thermal-protection curve with minimum and maximum values

E

ComPacT NSX Temperature Derating
Equipped with Electronic Trip Units

Changes in temperature do not affect measurements by electronic trip units.
- The built-in CT sensors with Rogowski toroids measure the current.
- The control electronics compare the value of the current to the settings defined For 40 °C.

Because temperature has no effect on the toroid measurements, the tripping thresholds do not need to be modified.
However, the temperature rise caused by the flow of current and the ambient temperature increase the temperature of the device. To avoid reaching the thermal withstand level of the equipment, it is necessary to limit the current flowing through the device, i.e. the maximum Ir setting as a function of the temperature.

ComPacT NSX100/160/250

The table below indicates the maximum long-time (LT) protection setting Ir (A) depending on the ambient temperature.

Type of device	Rating (A)	Temperature (°C) 40	45	50	55	60	65	70
NSX100/160								
Fixed, plug-in or withdrawable	100	no derating						
	160	no derating						
NSX250 + MicroLogic 2.2/5.2/6.2								
Fixed	250	250	250	250	245	237	230	225
Plug-in or withdr.	250	250	245	237	230	225	220	215
NSX250 + MicroLogic Vigi 4.2/7.2								
Fixed	250	250	250	245	237	230	225	218
Plug-in or withdr.	250	225	220	215	210	205	198	190

ComPacT NSX400 and 630

The table below indicates the maximum long-time (LT) protection setting Ir (A) depending on the ambient temperature.

Type of device	Rating (A)	Temperature (°C) 40	45	50	55	60	65	70
NSX400 + MicroLogic 2.3/5.3/6.3								
Fixed	400	400	400	400	390	380	370	360
Plug-in/withdr.	400	400	390	380	370	360	350	340
NSX400 + MicroLogic Vigi 4.3/ 7.3								
Fixed	400	400	400	390	380	370	360	350
Plug-in/withdr.	400	400	390	380	370	360	350	340
NSX630 + MicroLogic 2.3/5.3/6.3								
Fixed	630	630	615	600	585	570	550	535
Plug-in/withdr.	630	570	550	535	520	505	490	475
NSX630 + MicroLogic Vigi 4.3/7.3								
Fixed	630	570	555	540	530	515	500	485
Plug-in/withdr.	630	480	470	457	445	435	420	405

Example A fixed ComPacT NSX400 equipped with a MicroLogic can have a maximum Ir setting of:
- 400 A up to 50 °C
- 380 A up to 60 °C.

E

ComPacT NSX Temperature Derating
Equipped with Electronic Trip Units

Additional Derating Coefficient for an Add-on Module

For **fixed** or **plug-in/withdrawable** circuit breakers, the addition of a:
- VigiPacT add-on
- VigiPacT add-on alarm
- Current-transformer module can modify the derating values.
  Apply the coefficients shown below.

Derating of a ComPacT NSX equipped with a MicroLogic trip unit

Type of device	Circuit breaker	MicroLogic type	VigiPacT add-on or VigiPacT add-on alarm	PowerTag NSX	Coupling busbar	Current transformer
Fixed	NSX100	2.2/5.2/6.2	1	1	1	1
		4.2/7.2	-		1	
	NSX160	2.2/5.2/6.2	1		1	
		4.2/7.2	-		1	
	NSX250	2.2/5.2/6.2	1		1	
		4.2/7.2	-		0.95	
Plug-in or withdrawable	NSX100	2.2/5.2/6.2	1		-	
		4.2/7.2	-			
	NSX160	2.2/5.2/6.2	1			
		4.2/7.2	-			
	NSX250	2.2/5.2/6.2	0.86			
		4.2/7.2	-			
Fixed	NSX400	2.3/5.3/6.3	0.97	0.97	1	1
		4.3/7.3	-		0.97	
	NSX630	2.3/5.3/6.3	0.9	0.9	1	
		4.3/7.3	-		0.9	
Plug-in or withdrawable	NSX400	2.3/5.3/6.3	0.97	1	-	
		4.3/7.3	-			
	NSX630	2.3/5.3/6.3	0.9			
		4.3/7.3	-			

Note:
- Coupling busbar is forbidden with VigiPacT add-on.
- Current transformer is forbidden with VigiPacT add-on and coupling busbar.
- Coupling busbar is forbidden with withdrawable installation.
- To provide the Visu function, ComPacT NSX circuit breakers, with or without a VigiPacT add-on, are combined with INV switch-disconnectors. Tripping values for the selected combination are indicated in the ComPacT INS/INV catalog.

ComPacT NSX Installation in Switchboards
Safety Clearances and Minimum Distances

General Rules

When installing a circuit breaker, minimum distances (safety clearances) must be maintained between the device and panels, bars and other protection devices installed nearby. These distances, which depend on the ultimate breaking capacity, are defined by tests carried out in accordance with standard IEC 60947-2.
If installation conformity is not checked by type tests, it is also necessary to:
- Use insulated bars for circuit-breaker connections
- Segregate the busbars using insulating screens.

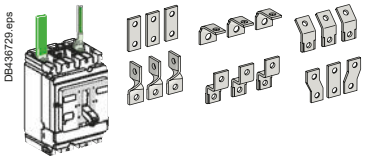
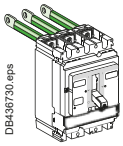
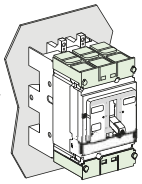
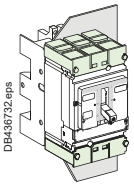
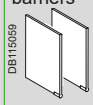
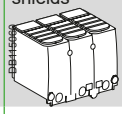
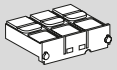
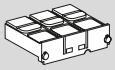
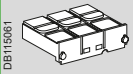
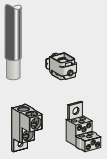
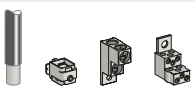
For ComPacT NSX100 to 630 devices, terminal shields and interphase barriers are recommended and may be mandatory depending on the operating voltage of the device and type of installation (fixed, withdrawable, etc.).

Power Connections

The table below indicates the rules to be respected for ComPacT NSX100 to 630 devices to ensure insulation of live parts for the various types of connection.
- Fixed devices with front connection (FC) or rear connection (RC).
- Plug-in or withdrawable devices.

Connection accessories such as crimp lugs, bare-cable connectors, terminal extensions (straight, right-angle, double-L and 45°) and spreaders are supplied with interphase barriers.
Long terminal shields provide a degree of protection of IP40 (ingress) and IK07 (mechanical impact).

ComPacT NSX100 to 630: Rules to Be Respected to Ensure Insulation of Live Parts

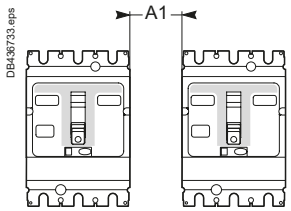
Type of connection		Fixed, front connection			Fixed, rear connection	Plug-in or withdrawable	
						On backplate 	Through panel 
Possible, recommended or mandatory accessories: With:		No insulating accessory	Interphase barriers 	Long terminal shields 	Short terminal shields 	Short terminal shields 	Short terminal shields 
operating voltage	**type of conductor**						
< 500 V	Insulated bars 	Possible	Possible	Possible	Recommended	Recommended	Mandatory
	Extension terminals Cables + crimp lugs 	No	Mandatory (supplied)	Possible (instead of ph. barriers)	Recommended	Recommended	Mandatory
	Bare cables + connectors 	Possible for cable connectors NSX100 to 250	Possible for cable connectors NSX100 to 250	Possible for cable connectors NSX100 to 250	Recommended	Recommended	Mandatory
		No	Mandatory [1] (supplied)	Possible [1] (instead of ph. barriers)			
≥ 500 V	Insulated bars 	No	No	Mandatory (use of short terminal shield possible)	Mandatory [2]	Mandatory [2]	Mandatory [2]
	Extension terminals Cables + crimp lugs 	No	No	Mandatory	Mandatory [2]	Mandatory [2]	Mandatory [2]
	Bare cables + connectors 	No	No	Mandatory	Mandatory [2]	Mandatory [2]	Mandatory [2]

[1] Long terminal shields, mandatory if the device is fixed through the door, whatever the voltage.
[2] LV433693 (3P) or LV433694 (4P) Short Terminal Shield are mandatory for R/HB1/HB2 400 A and 630 A performance.

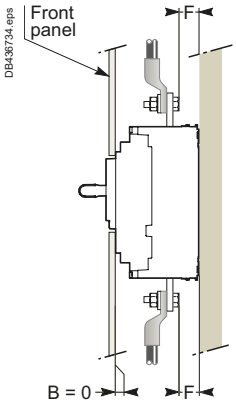
ComPacT NSX Installation in Switchboards
Installation Example

Safety Clearance

Minimum distance between two adjacent circuit breakers



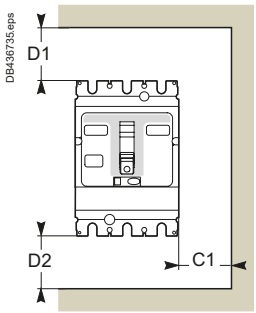
Minimum distance between circuit breaker and front or rear panels



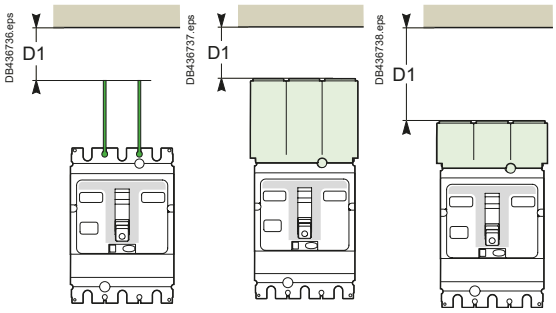
Bare or painted sheetmetal

Note: If F < 8 mm: an insulating screen or long terminal shield is mandatory (see page C-23).

Minimum distance between circuit breaker and top, bottom or side panels



Devices without accessories



Devices with interphase barriers or long or short terminal shields

> ComPacT NSX High Performance User Guide

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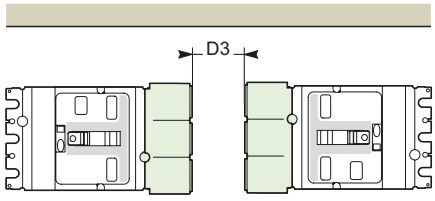


Short terminal shield rear connected

Minimum safety clearances for ComPacT NSX100 to 630

Operating voltage	Clearance (mm)							
	Between devices	Between device and sheetmetal						
		Painted sheet metal			Bare sheet metal			
	A1	C1	D1	D2	C1	D1	D2	D3
U ≤ 440 V								
for devices equipped with:								
■ No accessories	0	0	30	30	5	40	40	-
■ Short terminal shields	0	0	30	30	5	40	40	50
■ Interphase barriers	0	0	0	0	5	0	0	-
■ Long terminal shields	0	0	0	0	0	0	0	-
440 V < U ≤ 500 V								
for devices equipped with:								
■ Short terminal shields	0	0	30	30	10	40	40	50
■ Interphase barriers [1]	0	0	0	0	20	10	10	-
■ Long terminal shields [2]	0	0	0	0	10	10	10	-
U > 500 V								
for devices equipped with:								
■ Short terminal shields	0	10	50	50	20	100	100	50
■ Long terminal shields	0	10	30	30	20	40	40	-

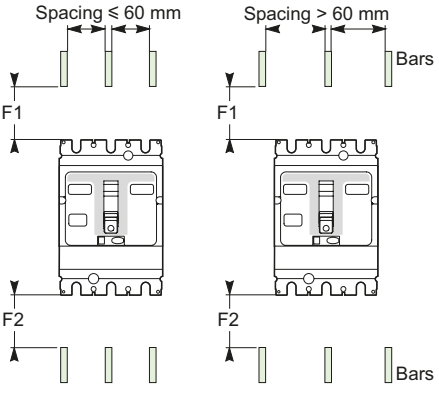
[1] Only for NSX100 to 250.
[2] For all cases.

Clearances with Respect to Live Bare Busbars

Minimum clearances for ComPacT NSX100 to 630

Operating voltage	Clearances with respect to live bare busbars			
	spacing ≤ 60 mm		spacing > 60 mm	
	F1	F2	F1	F2
U < 440 V	350	350	80	80
440 V ≤ U ≤ 500 V	350	350	120	120
U > 500 V	prohibited: insulating screen required between device and busbars			

These clearances can be reduced for special installations as long as the configuration is checked by tests



Live busbars

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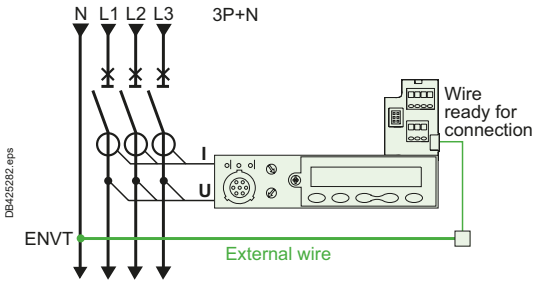
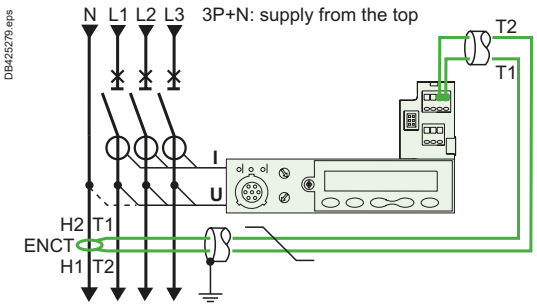
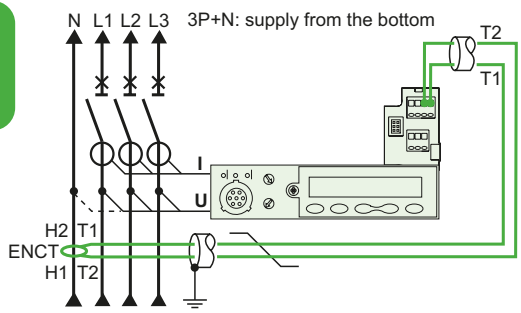
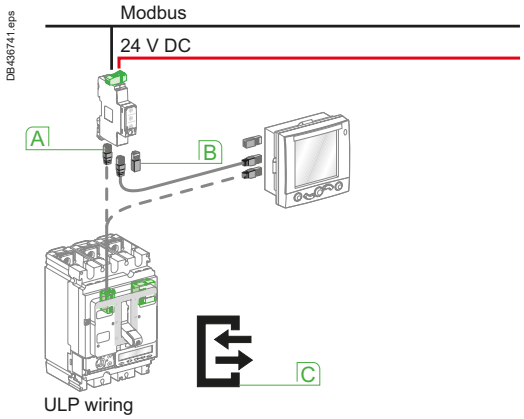


External neutral voltage tap (ENVT)





External neutral current transformer (ENCT)



ULP connection system

A RJ45
B Line terminator
C ULP symbol

Remote Tripping by MN or MX Release

Power consumption is approximately:
- 30 VA for pick-up of the MN and MX releases
- 300 VA to 500 VA for the motor mechanism.

The table below indicates the maximum permissible cable length for different supply voltages and cable cross-sectional areas.

Recommended maximum cable lengths (in metres)

Power supply voltage (V DC)		12 V		24 V		48 V	
Cable cross-section (mm²)		1.5	2.5	1.5	2.5	1.5	2.5
MN	U source 100 %	15	–	160	–	640	–
	U source 85 %	7	–	40	–	160	–
MX	U source 100 %	60	–	240	–	960	–
	U source 85 %	30	–	120	–	480	–
Motor mechanism	U source 100 %	–	–	10	16	65	110
	U source 85 %	–	–	2	4	17	28

Note: The indicated length is that of each of the two wires.

External Neutral Voltage Tap (ENVT)

This connection is required for accurate power measurements on 3-pole circuit breakers equipped with MicroLogic 5/6 E trip units in installations with a distributed neutral. It can be used to measure phase-neutral voltages and calculate power using the 3 wattmeter method.
ComPacT NSX 3-pole circuit breakers come with a wire installed on the device for the connection to the ENVT.
This wire is equipped with a connector for connection to an external wire with the following characteristics:
- Cross-sectional area of 1 mm² to 2.5 mm²
- Maximum length of 10 metres.

External Neutral Current Transformer (ENCT)

This connection is required to protect the neutral on 3-pole circuit breakers equipped with MicroLogic 5/6 E trip units in installations with a distributed neutral. For MicroLogic 6 E, it is required for type G ground-fault protection.
The ENCT is connected in the same way for fixed, plug-in or withdrawable devices:
- Fixed devices are connected via terminals T1 and T2 of the internal terminal block.
- Plug-in and withdrawable devices are not connected via the auxiliary terminals. The wires must be connected/disconnected inside the device via terminals T1 and T2.

The ENCT must be connected to the MicroLogic trip unit by a shielded twisted pair.
The shielding should be connected to the switchboard earth only at the CT end, no more than 30 cm from the CT.
- The power connections of the CT to the neutral (H2 and H1) must be made in the same way for power supply from the top or the bottom (see figure). Make sure they are not reversed for devices with power supply from the bottom.
- Cross-sectional area of 0.4 mm² to 1.5 mm²
- Maximum length of 10 metres.

ULP Connection System between MicroLogic, FDM121 Switchboard Display and Modbus Interface

The ULP (Universal Logic Plug) wiring system used by ComPacT NSX for connections through to the Modbus network requires neither tools nor settings.
The prefabricated cords are sued for both data transfer and distribution of 24 V DC power. Connectors on each component are identified by ULP (Universal Logic Plug) symbols, ensuring total compatibility between each component.

Available cords

All connections are made with prefabricated cords:
- NSX cord for connection of the internal terminal block to the Modbus interface or the FDM121 display via an RJ45 connector. The cord is available in three lengths, 0.35 m, 1.3 m and 3 m
- ULP cords with RJ45 connectors at each end for the other connections between components. The cord is available in six lengths, 0.3 m, 0.6 m, 1 m, 2 m, 3 m and 5 m. For greater distances, two cords can be interconnected using the RJ45 female/female accessory.

Maximum length of 10 m between 2 modules and 30 m in all.
A line terminator must be fitted to all components with an unused RJ45 connector.

External 24 V DC power-supply module (AD)

The external power-supply module makes it possible:
- To use the display even if the circuit breaker is open or not supplied (for the exact conditions of use, see the “electrical diagrams” part of this catalog)
- To display fault currents after tripping
- To modify settings when the circuit breaker is open (OFF position)

An external 24 V DC power supply is required for installation with communication, whatever the type of trip unit.
This module is not designed to power on 24 V DC voltage releases and electric motor mechanism.
This module powers both the control unit and the M2C programmable contacts.
We recommended using the AD power supply due to its low stray primary secondary capacitance. Good operation of the MicroLogic control unit in noisy environment is not guaranteed with other power supplies.
If the COM option is used, a second dedicated power supply shall be used.
This module powers both the control unit and the M2C programmable contacts or ESM module.

Characteristics
- Power supply AC-to-DC or DC-to-DC
- Output voltage: 24 V DC ±5 %.
- Output current: 1 A.
- DIN rail or platine Fixing with Acti9 form factor
- Conducted emissions power line: class B per IEC/EN 61000-6-3

Wiring (See Page E-87)

MicroLogic 5/6/7 not using the Communication function
The external 24 V DC supply is connected via the circuit breaker terminal block.
Use of a 24 V DC battery provides backup power for approximate 3 hours (100 mA) in the event of an interruption in the external supply.

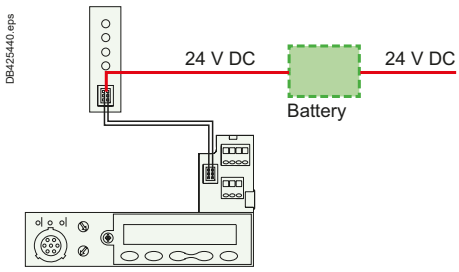
MicroLogic 5/6/7 using the Communication function
The external 24 V DC supply is connected via the Modbus interface using a five-pin connector, including two for the power supply. Stacking accessories (see page D-2) can be used to supply a number of interfaces by fast clip-on connection.
The 24 V DC power is distributed downstream by the ULP (Universal Logic Plug) communication cords with RJ45 connectors. This system ensures both data transfer and power distribution to the connected modules.

Recommendations for 24 V DC wiring
- Do not connect the positive terminal to earth.
- Do not connect the negative terminal to earth.
- The maximum length for each conductor (+/-) is ten metres.
- For connection distances greater than ten metres, the plus and minus conductors of the 24 V DC supply must be twisted to improve EMC.
- The 24 V DC conductors must cross the power cables perpendicularly. If this is difficult or impossible, the plus and minus conductors must be twisted.

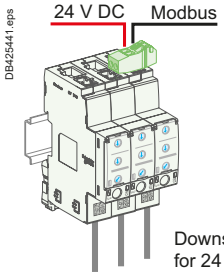
Modbus (See Page E-87)

Each ComPacT NSX circuit breaker equipped with MicroLogic 5/6/7 and an FDM121 display is connected to the Modbus network via the Modbus interface module.
Connection of all the circuit breakers and other Modbus devices in the switchboard to a Modbus bus is made much easier by using a Modbus RJ45 junction block installed in the switchboard.

Recommendations for Modbus wiring
- The shielding may be earthed.
- The conductors must be twisted to improve immunity (EMC).
- The Modbus conductors must cross the power cables perpendicularly.



Power supply, without the Communication function, via the terminal block with a backup battery



Supply, with the Communication function, via the Modbus interface

External 24 V DC power supply module (AD)

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PF106349SE_ABL8RPS24050.eps

ABL8 RPS power supply

24 V DC Universal Phaseo™ ABL8 Power Supplies

The Universal Phaseo ABL8 RPS 24050 and ABL8 RPS 24030 power supplies can be connected phaseto-
neutral or phase-to-phase.
They deliver a voltage that is precise to 3%, whatever the load and whatever the value of the AC
supply, within the ranges 85 to 132 V AC and 170 to 550 V AC.
The Universal Phaseo ABL8 powers:
- Circuit breaker communication module and interface
- Programmable MicroLogic.

Characteristics
- Power supply AC-to-DC
- Network frequency: 50/60 Hz (±5 %)
- Output voltage: 24 V DC ±3%.
- Output current: 3 or 5 A
- DIN rail or platine Fixing
- Conducted emissions power line: class B per IEC/EN 61000-6-3

To assist cooling there must be sufficient clearance around the Universal range Phaseo power supplies:
- 50 mm above and below
- 10 mm on the side.

		ABL8RPS●●●●	Module AD
Over Voltage Category		Cat I per VDE 0106-1	Cat IV per IEC 62477-1 (AC model) Cat III per IEC 62477-1 (DC model) Cat III per UL 61010-1
Degree of pollution as per IEC 60664-1		2	3
Input supply voltage AC		100…120 V AC and 200…500 V AC	110-130 or 200-240 V AC
Input supply voltage DC		N/A	24-30 or 48-60 or 100-125 V DC
Dielectric	Input/Output	4 kV rms -1 mn.	3 kV rms - 1 mn. (110-130 V AC and 200-240 V AC model)
			3 kV rms - 1 mn. (110-125 V DC model)
			2 kV rms - 1 mn. (24-30 V DC and 48-60 V DC model)
	Input/Ground	3.5 kV rms -1 mn.	3 kV rms - 1 mn.
	Ouput /Ground	0,5 kV rms - 1 mn.	1.5 kV rms - 1 mn.
Temperature		■ 50 °C ■ 60 °C with 80 % of the rated current maximum	70°C
Output current		3 A (ABL8RPS24030) 5 A (ABL8RPS24050)	1 A
Inrush current for 2 ms		< 30 A	< 20 A
Ripple		200 mV peak-peak	200 mV peak-peak
Output voltage limits		24 to 28.8 V DC	22.8 to 25.2 V DC
Protection degree		IP20	IP4x front face/IP2x terminals/ IP3x other

Note: For the applications requiring an over voltage category higher than 2, a surge arrester shall be associated to ABL8 RPS power supplies. The iQuick20prd type 2 surge arrester is recommended.

ComPacT NSX Power Loss/ Resistance
Equipped with Thermal-Magnetic Trip Units

ComPacT NSX thermal power loss values are used to calculate total temperature rise in the switchboard in which the circuit breakers are installed.

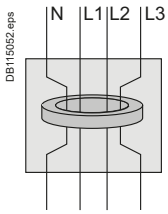
The values indicated in the tables below are typical values for a device at full rated load and 50/60 Hz.

Power loss per pole (P/pole) in Watts (W)
The value indicated is the power loss at I_N, 50/60 Hz, for a three-pole or four-pole circuit breaker. Measurement and calculation of power loss are carried out in compliance with the recommendations of Annex G of standard IEC 60947-2.

Resistance per pole (R/pole) in milliohms (mΩ)
The value of the resistance per pole is provided as a general indication for a new device.
The value of the contact resistance must be determined on the basis of the measured voltage drop, in accordance with the manufacturer's test procedure (ABT instruction document no. 1 - BEE - 02.2 -A).
Note: This measurement is not sufficient to determine the quality of the contacts, i.e. the capacity of the circuit breaker to carry its rated current.

Additional power loss
Additional power loss is equal to the sum of the power dissipated by the following:
- VigiPacT add-on: note that the deviation of the N and L3 bars required to pass through the toroid results in higher power losses compared to those of the L1 and L2 bars (diagram opposite). When calculating total power loss, use L1, L2, L3 for a 3P device and N, L1, L2, L3 for a 4P device
- Disconnecting contacts (plug-in and withdrawable devices)
- Transformer module.

Calculation of total power loss
Total power loss at full rated load and 50/60 Hz is equal to the sum of the device and additional power losses per pole multiplied by the number of poles (2, 3 or 4).
If a Vigi is installed, it is necessary to differentiate between N and L3 on one hand and L1 and L2 on the other.



With a VigiPacT add-on, the deviation of the N and L3 bars required to pass through the toroid results in higher power losses compared to those of the L1 and L2 bars

ComPacT NSX100 to 250 Equipped with TM-D and TM-G Trip Units

Type of device		Fixed device		Additional power/pole				
3/4 poles	Rat. (A)	R/pole	P/pole	VigiPacT add-on (N, L3)	VigiPacT add-on (L1, L2)	Plug-in/ withdr.	Transfo. module	PowerTag NSX module
NSX100	**16**	11.42	2.92	0	0	0	0	0
	25	6.42	4.01	0	0	0.1	0	0
	32	3.94	4.03	0.06	0.03	0.15	0.1	0
	40	3.42	5.47	0.10	0.05	0.2	0.1	0
	50	1.64	4.11	0.15	0.08	0.3	0.1	0.1
	63	2.17	8.61	0.3	0.15	0.4	0.1	0.1
	80	1.37	8.77	0.4	0.2	0.6	0.1	0.1
	100	0.88	8.8	0.7	0.35	1	0.2	0.2
NSX160	**80**	1.26	8.06	0.4	0.2	0.6	0.1	0.1
	100	0.77	7.7	0.7	0.35	1	0.2	0.2
	125	0.69	10.78	1.1	0.55	1.6	0.3	0.3
	160	0.55	13.95	1.8	0.9	2.6	0.5	0.5
NSX250	**125**	0.61	9.45	1.1	0.55	1.6	0.3	0.3
	160	0.46	11.78	1.8	0.9	2.6	0.5	0.5
	200	0.39	15.4	2.8	1.4	4	0.8	0.8
	250	0.3	18.75	4.4	2.2	6.3	1.3	1.3

ComPacT NSX100 to 630 Equipped with MA/1.3-M Trip Units

Type of device		Fixed device		Additional power/pole				
3 poles	Rat. (A)	R/pole	P/pole	VigiPacT add-on (N, L3)	VigiPacT add-on (L1, L2)	Plug-in/ withdr.	Transfo. module	PowerTag NSX module
NSX100	**2.5**	148.42	0.93	0	0	0	0	0
	6.3	99.02	3.93	0	0	0	0	0
	12.5	4.05	0.63	0	0	0	0	0
	25	1.66	1.04	0	0	0.1	0	0
	50	0.67	1.66	0.2	0.1	0.3	0.1	0.1
	100	0.52	5.2	0.7	0.35	1	0.2	0.2
NSX160	**150**	0.38	8.55	1.35	0.68	2.6	0.45	0.5
NSX250	**220**	0.3	14.52	2.9	1.45	4.89	0.97	1
NSX400	**320**	0.12	12.29	3.2	1.6	6.14	1.54	1.43
NSX630	**500**	0.1	25	13.99	7	15	3.75	3.5

ComPacT NSX Power Loss/ Resistance
Equipped with Electronic Trip Units

The values indicated in the table below are typical values for a device at full rated load and 50/60 Hz. The definitions and information are the same as that for circuit breakers equipped with thermal-magnetic trip units.

ComPacT NSX100 to 630 Equipped with MicroLogic Trip Units

Type of device		Fixed device				Additionnal power (W)/ pole				
3/4 poles	Rating (A)	R/pole (mΩ)		P/Pole (w)		VigiPacT add-on (N/ L3)	VigiPacT add-on (L1/L2)	Plug-In	Transfo Module	PowerTag NSX module
NSX + MicroLogic 2.2/5.2/6.2										
NSX100	<40 A	0.84		1.3		0.1	0.06	0.2	0.1	0
	40 A ≤ 100 A	0.47		4.7		0.7	0.35	1	0.2	0.2
NSX160	<40 A	0.73		1.2		0.4	0.2	0.6	0.1	0
	40 A ≤ 160 A	0.36		9.2		1.8	0.9	2.6	0.5	0.5
NSX250	<40 A	0.27		2.7		1.1	0.55	1.6	0.2	0
	40 A ≤ 250 A	0.28		17.6		4.4	2.2	6.3	1.3	1.3
NSX + MicroLogic 2.3/5.3/6.3										
NSX400	<400 A	0.12		19.2		3.2	1.6	9.6	2.4	2.24
NSX630	<630 A	0.1		39.7		6.5	3.25	19.49	5.95	5.56
NSX + MicroLogic add-on 4.2/7.2		**N/L1/L3**	**L2**	**N/L1/L3**	**L2**					
NSX100	<100 A	0.58	0.49	5.8	4.9	-	-	1	0.2	0.2
NSX160	<160 A	0.48	0.39	12.3	10.0	-	-	2.6	0.5	0.5
NSX250	<250 A	0.4	0.33	25	20.6	-	-	6.3	1.3	1.3
NSX + MicroLogic add-on 4.3/7.3										
NSX400	<400 A	0.16	0.14	25.6	22.4	-	-	9.6	2.4	2.24
NSX630 [1]	<630 A	0.14	0.12	55.6	47.6	-	-	19.49	5.95	5.56

Power loss/resistance values presented above are not contractual.

[1] The power loss values for VigiPacT add-on and withdrawable circuit breakers are given for 570 A.

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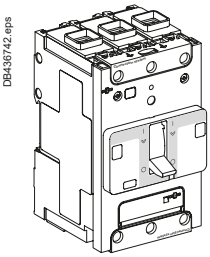
ComPacT NSXm Dimensions and Mounting

Circuit Breaker and Switch-Disconnector

Circuit Breaker



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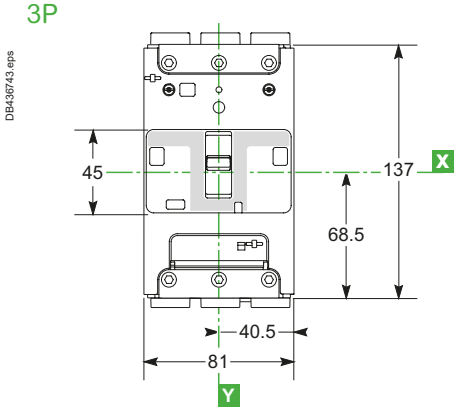

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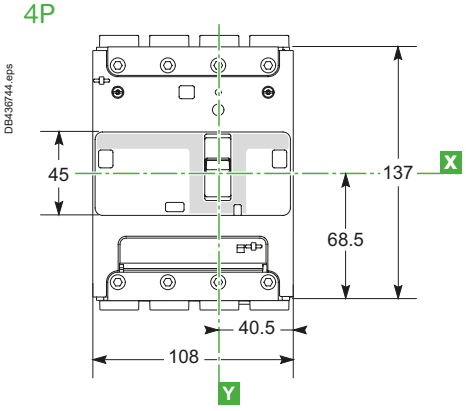
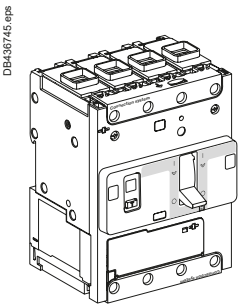


Circuit Breaker with MicroLogic Vigi 4.1



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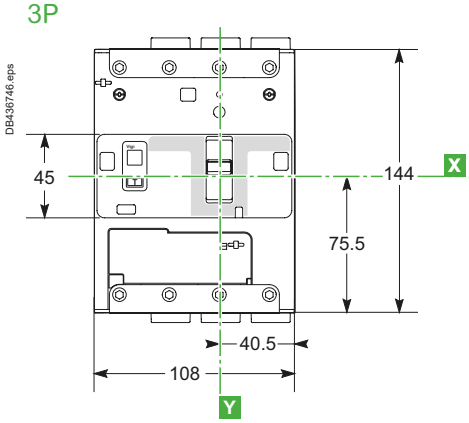

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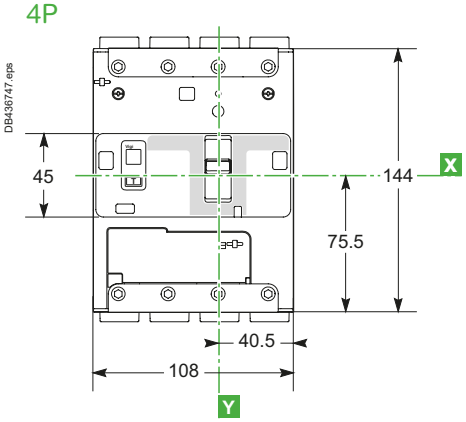
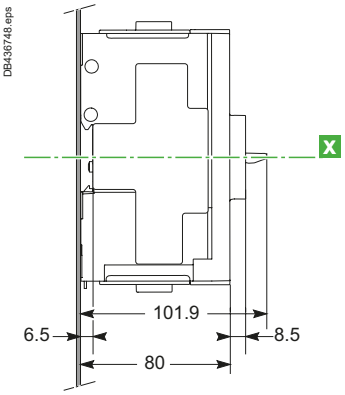
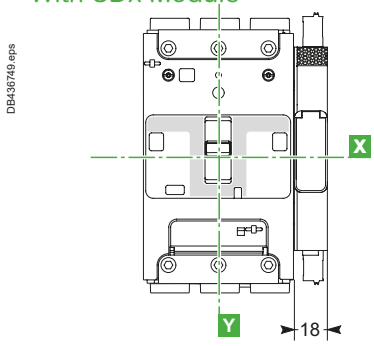


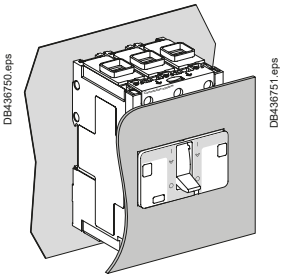
Side View

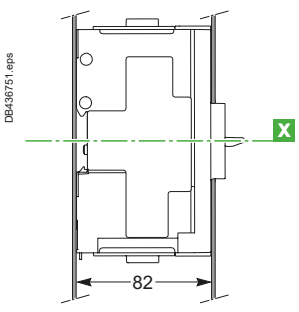


With SDx Module



Front-Panel Cutouts





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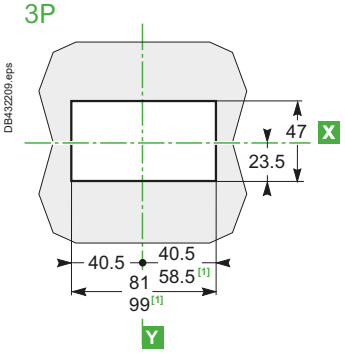

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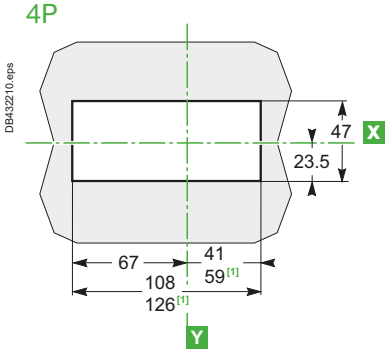


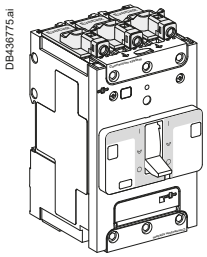
[1] With SDx module.

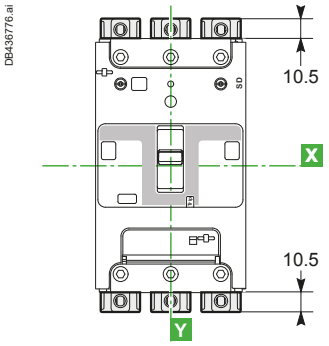
E

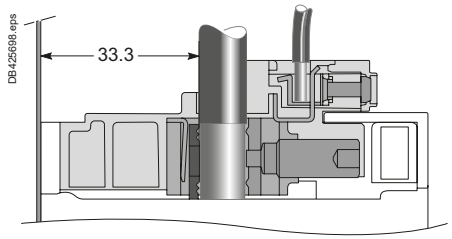
ComPacT NSXm Dimensions and Mounting
Circuit Breaker and Switch-Disconnector

Connectors

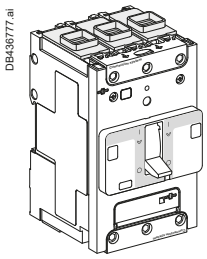
EverLink with Control Wire Terminal Connector

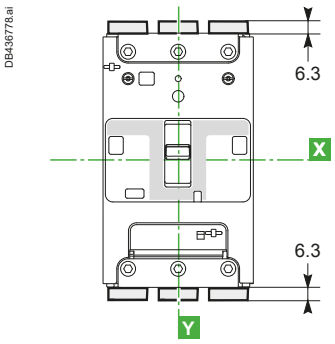


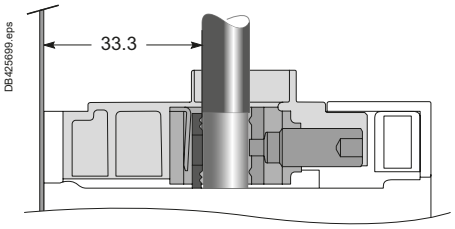




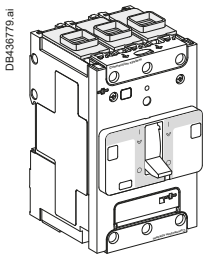
EverLink without Control Wire Terminal Connector

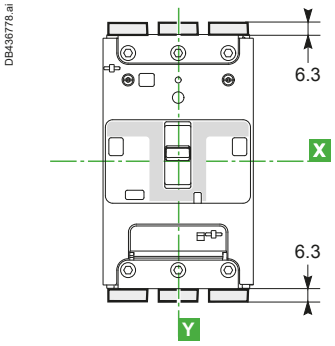


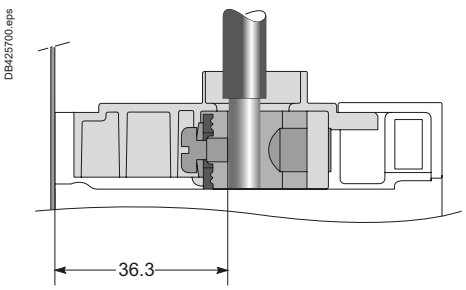




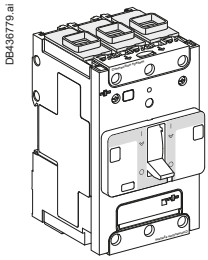
Mechanical Lug Connector

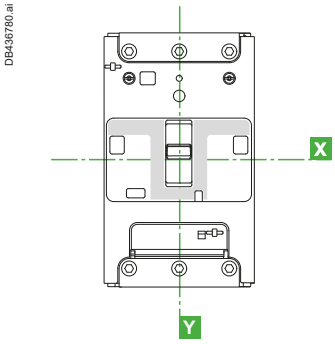


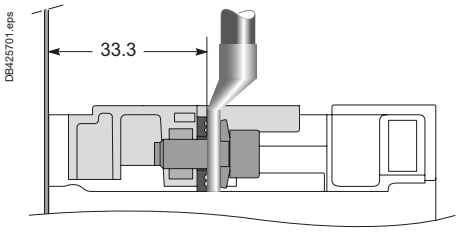




Compression Lug/Busbar Connector





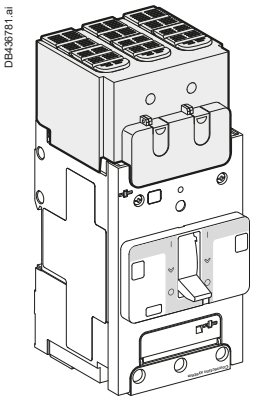


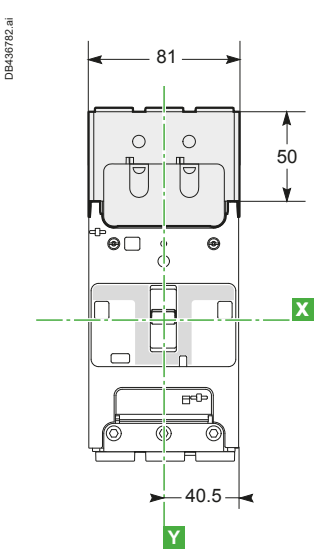
ComPacT NSXm Dimensions and Mounting

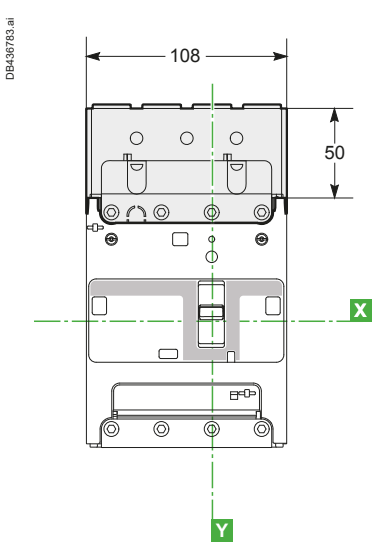
Circuit Breaker and Switch-Disconnector

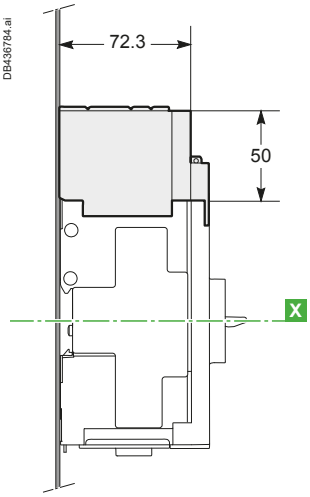
Insulation of Live Parts

Long Terminal Shields

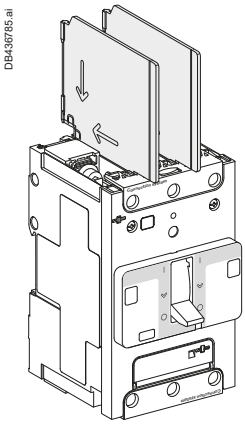


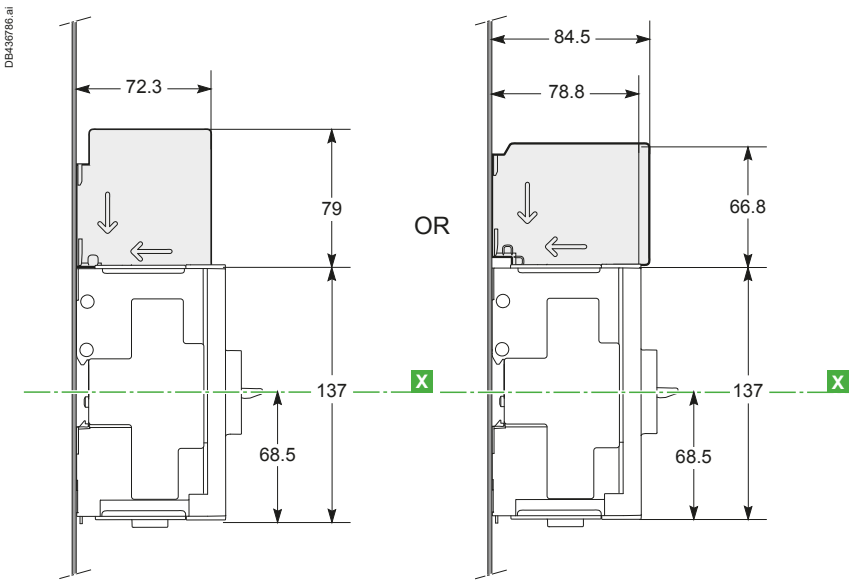






Interphase Barriers



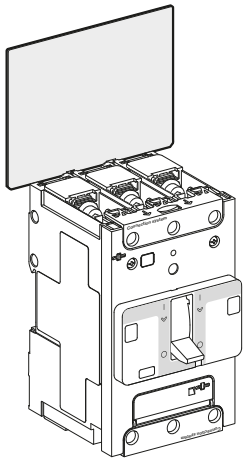


E

ComPacT NSXm Dimensions and Mounting
Circuit Breaker and Switch-Disconnector

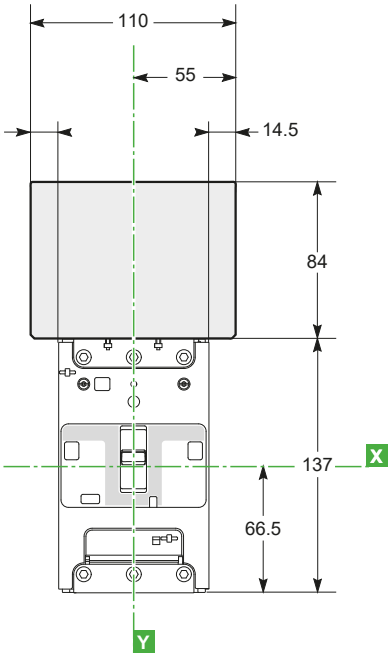
Rear Insulating Screens

DB436787.ai



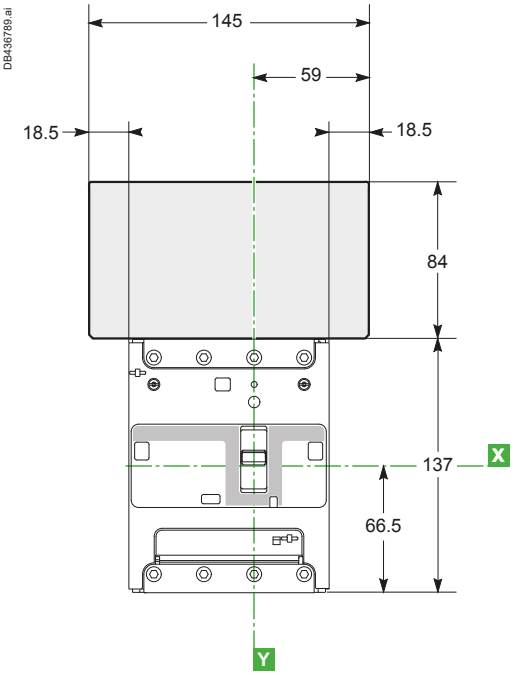
3P

DB436788.ai



4P

DB436789.ai



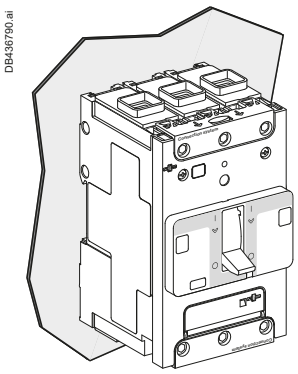
E

ComPacT NSXm Dimensions and Mounting

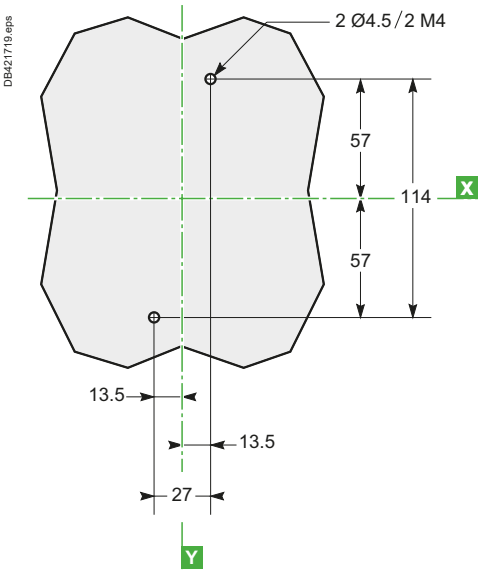
Circuit Breaker and Switch-Disconnector

Mounting on Backplate

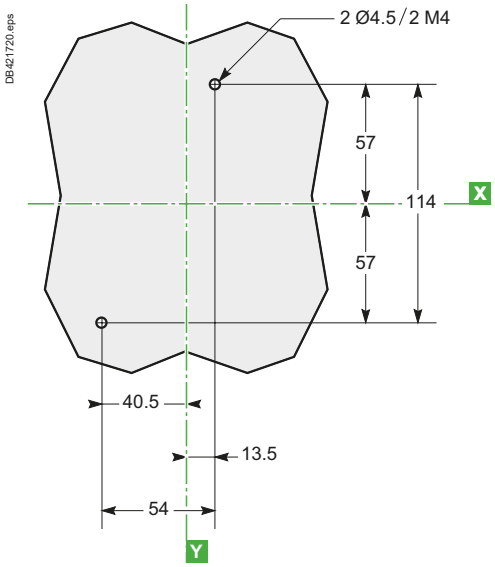
3P/4P



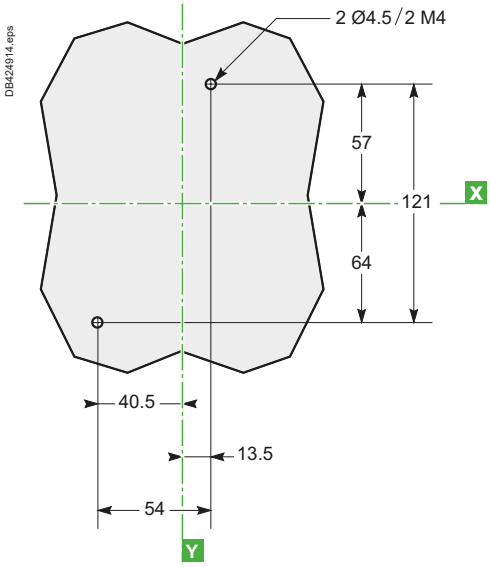
3P



4P

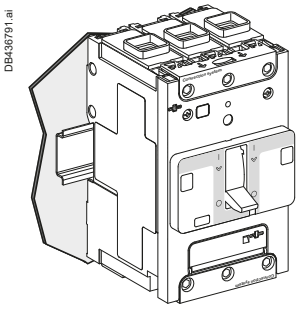


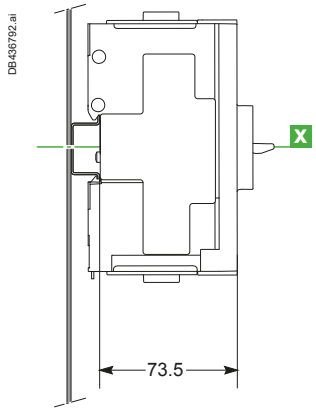
3P/4P Circuit Breaker with MicroLogic Vigi 4.1



Mounting on DIN Rail

3P



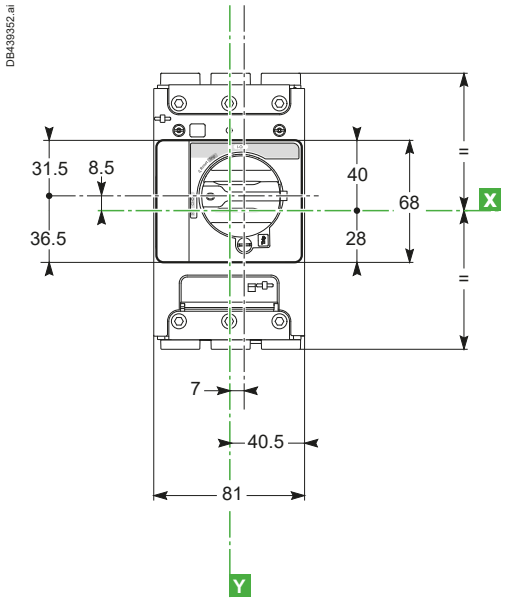


E

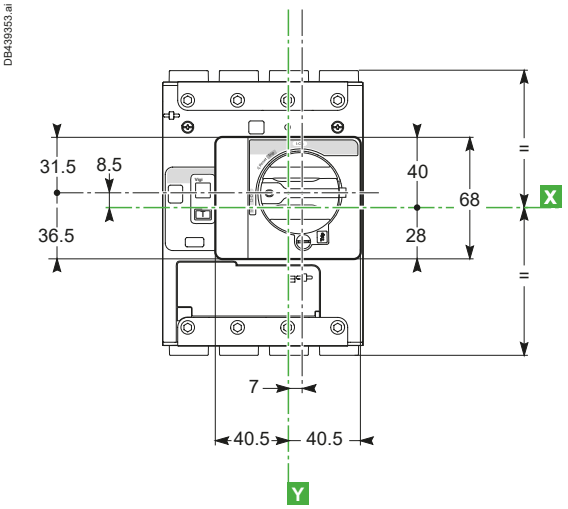
ComPacT NSXm Dimensions and Mounting
Circuit Breaker and Switch-Disconnector

Direct Rotary Handle

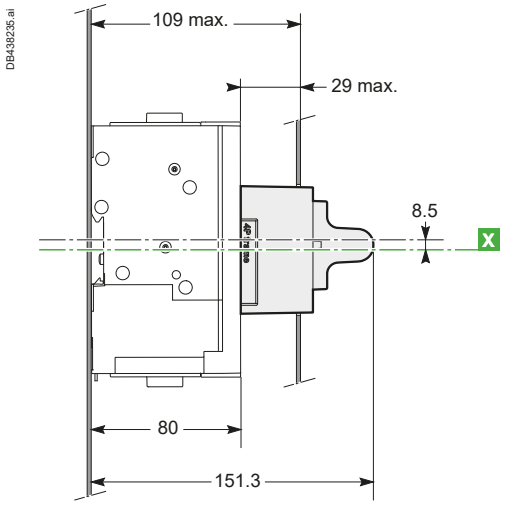
3P



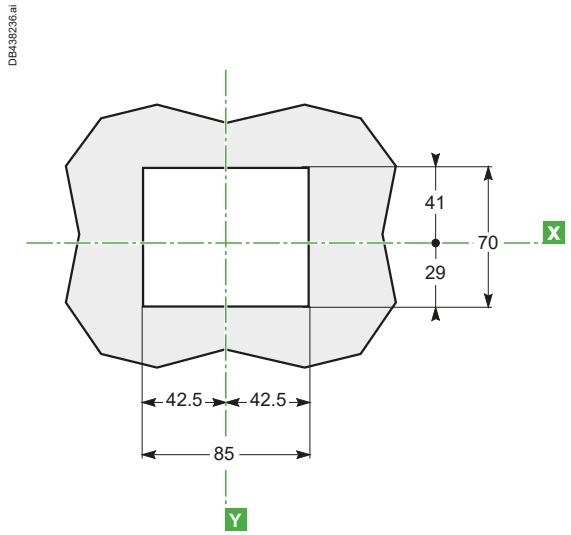
4P



Side View



Door Cutout for 3P/4P



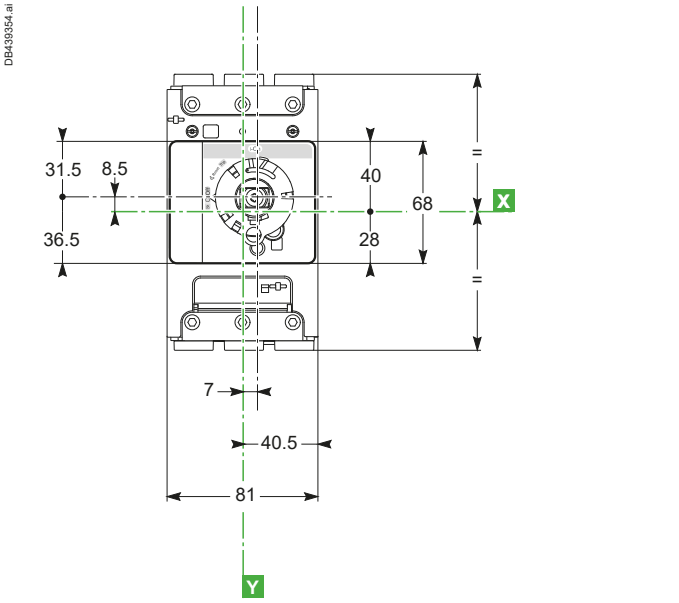
E

ComPacT NSXm Dimensions and Mounting

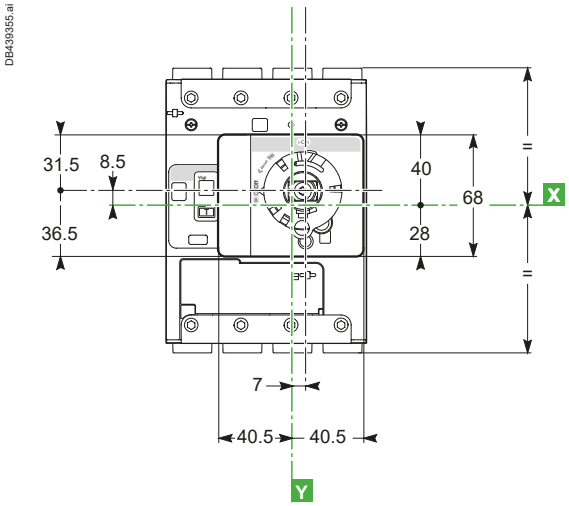
Circuit Breaker and Switch-Disconnector

Extended Rotary Handle

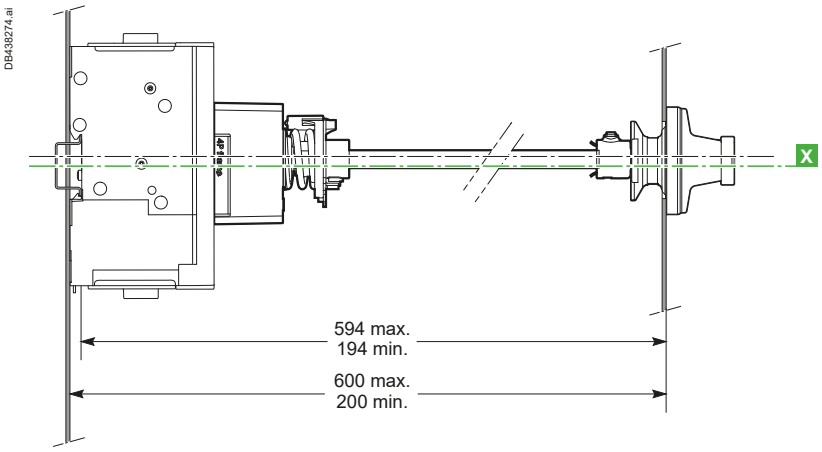
3P



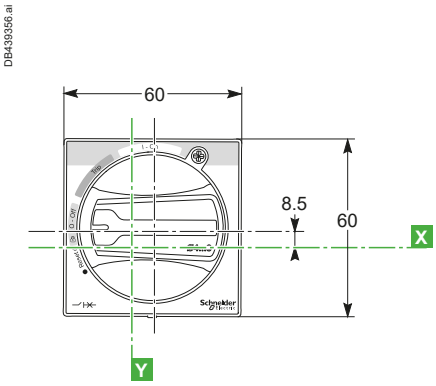
4P

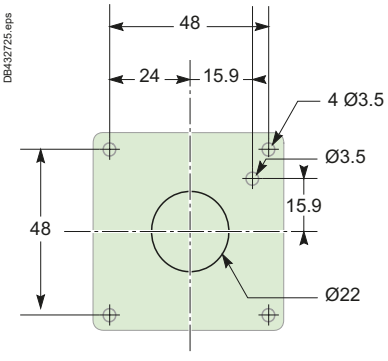


3P/4P



Dimensions and Front-Panel Cutout





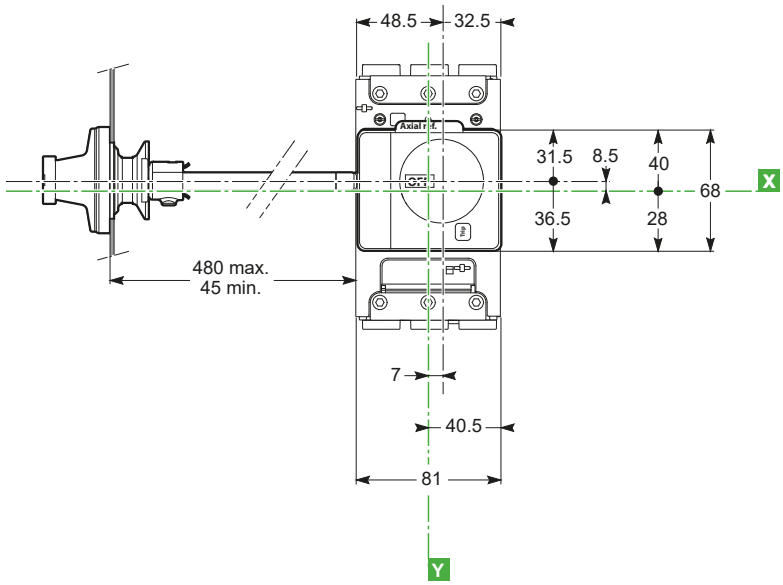
E

ComPacT NSXm Dimensions and Mounting
Circuit Breaker and Switch-Disconnector

Side Rotary Handle

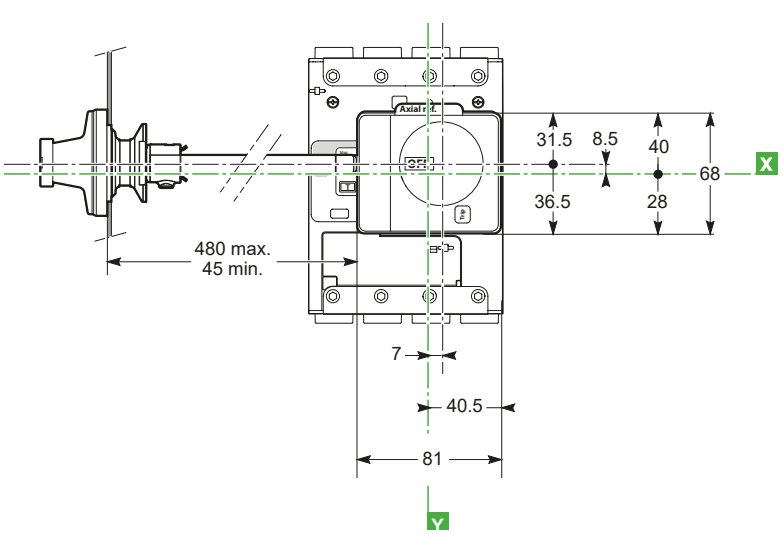
3P - Extended

DB438239.ai

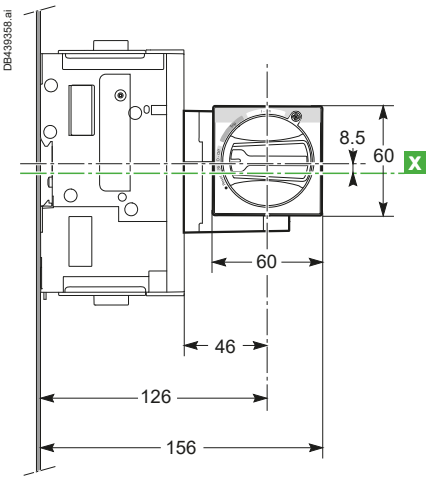


4P - Extended

DB438240.ai

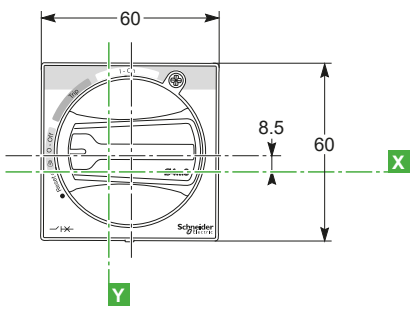


DB439358.ai



Dimensions Side Rotary Handle Cutout

DB439357.ai



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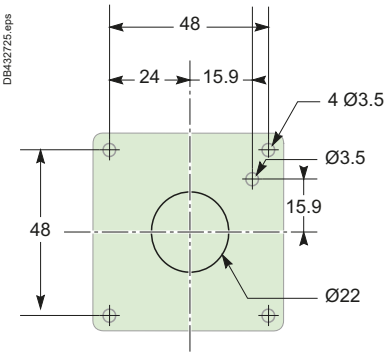
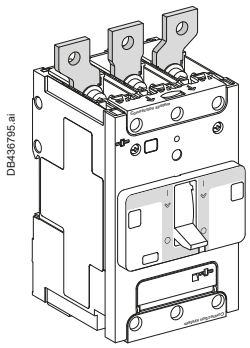


ComPacT NSXm Dimensions and Mounting

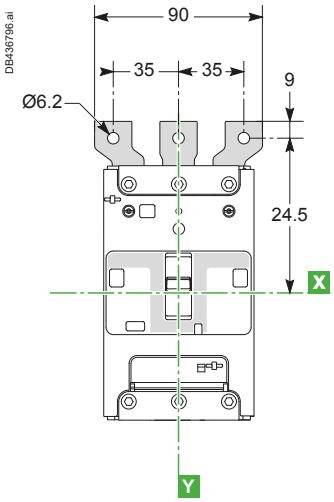
Circuit Breaker and Switch-Disconnector

Connection with Accessories

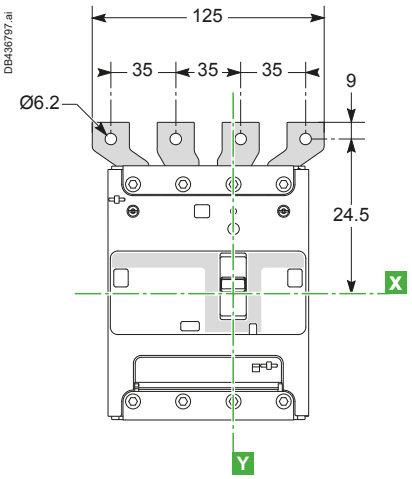
Spreaders



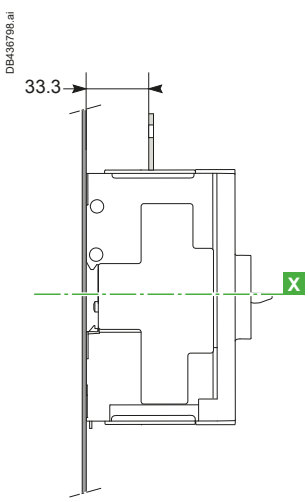
3P



4P



Side View

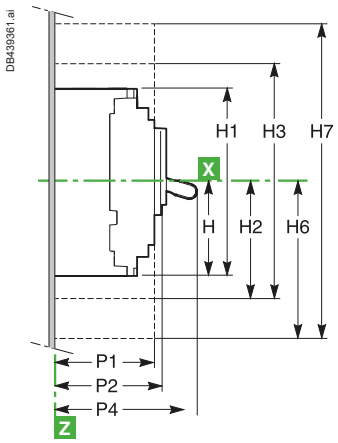


E

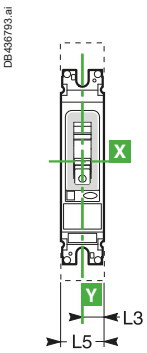
ComPacT NSX Dimensions and Mounting

ComPacT NSX100 to NSX250 Fixed Version, 1P-2P

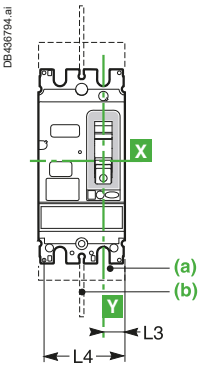
Dimensions



1 pole



2 poles

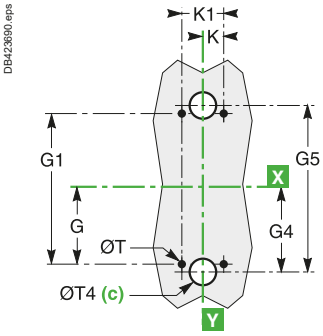


(a) Short terminal shields.
(b) Interphase barriers.

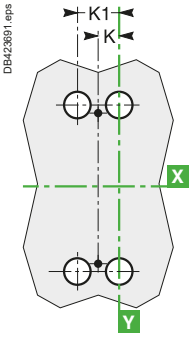
Mounting

On Backplate

1 pole



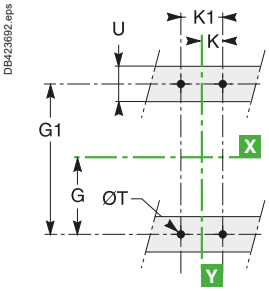
2 poles



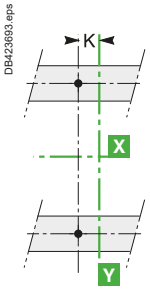
(c) For rear connection only.

On Rails

1 pole



2 poles

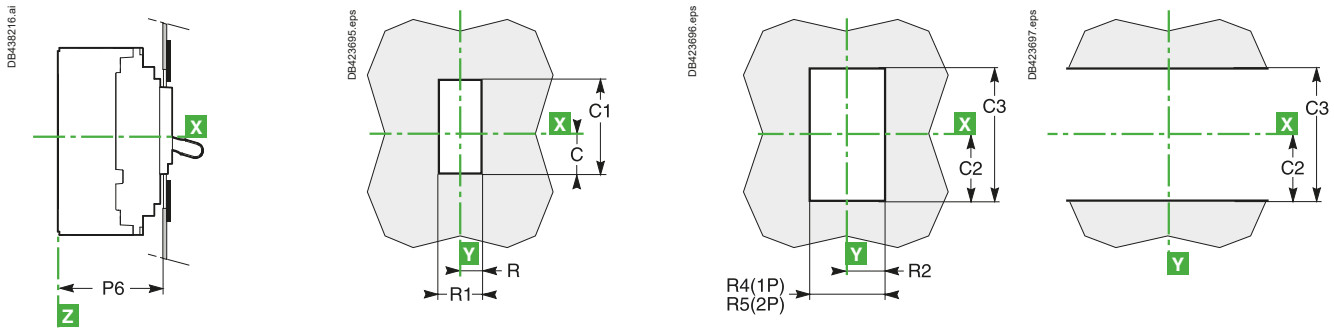


ComPacT NSX Dimensions and Mounting

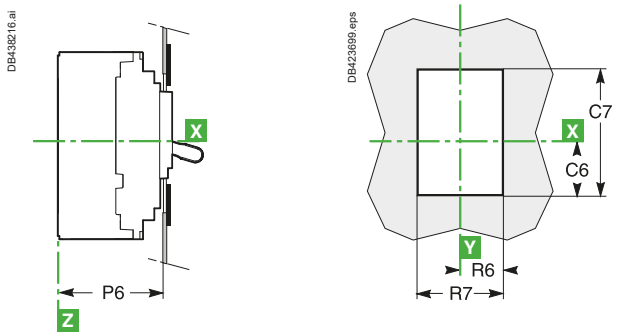
ComPacT NSX100 to NSX250 Fixed Version, 1P-2P

Front-Panel Cutout

On Backplate



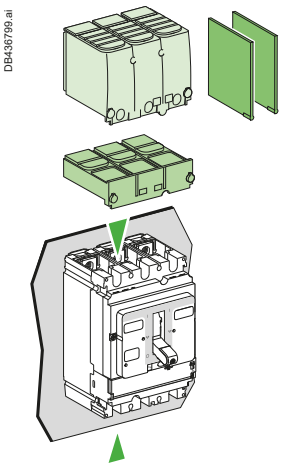
With Escutcheon

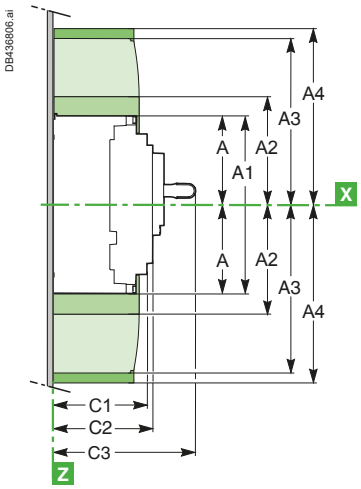


Dimensions (mm)											
Type	**C**	**C1**	**C2**	**C3**	**C6**	**C7**	**G**	**G1**	**G4**	**G5**	**H**
NSX100/250	29	76	54	108	43	104	62.5	125	70	140	80.5
Type	**H1**	**H2**	**H3**	**H4**	**H6**	**H7**	**K**	**K1**	**L3**	**L4**	**L5**
NSX100/250	161	94	188	160.5	178.5	357	17.5	35	17.5	70	35
Type	**P1**	**P2**	**P4**	**P5**	**P6**	**R**	**R1**	**R2**	**R4**	**R5**	**R6**
NSX100/250	81	86	111	83	88	14.5	29	19	38	73	29
Type	**R7**	**ØT**	**ØT4**	**U**							
NSX100/250	58	6	22	⩽ 32							

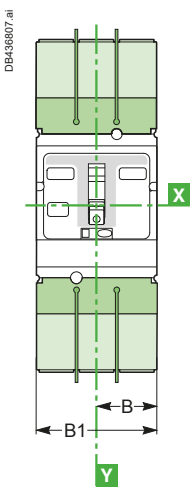
ComPacT NSX Dimensions and Mounting
ComPacT NSX100 to 630 Fixed Version

Dimensions

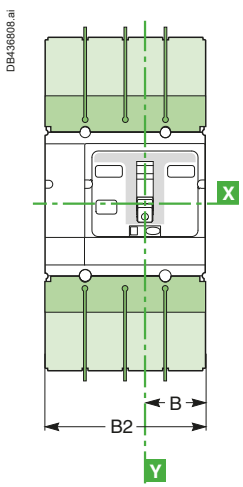




3P



4P

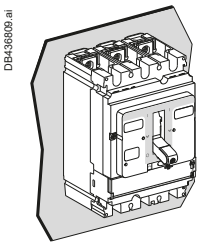


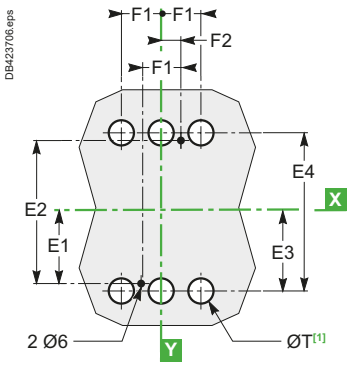
Interphase barriers.
Short terminal shields.
Long terminal shields (also available for NSX400/630 spreaders with 52.5 mm pitch: B1 = 157.5 mm, B2 = 210 mm).

Mounting

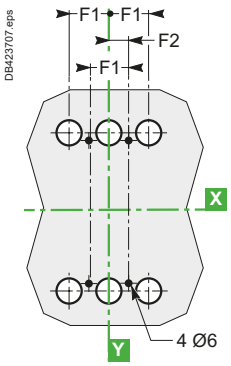
On Backplate

NSX100 to 250 — 3P

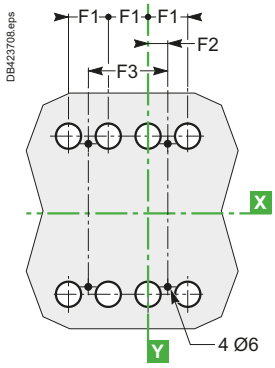




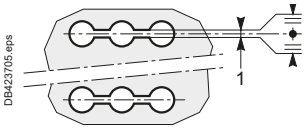
NSX400/630 [2] — 3P



NSX100 to 630 [2] — 4P



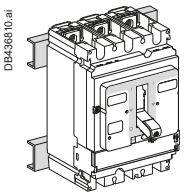
[2] For 630 A only:

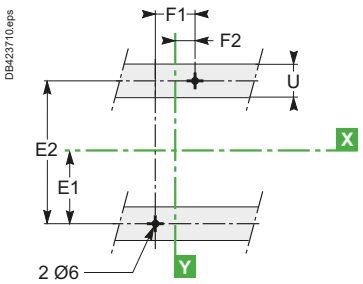


[1] The ØT holes are required for rear connection only.
For two-pole circuit breakers, the middle holes are not required.

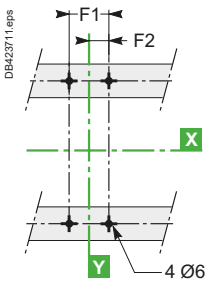
On Rails

NSX100 to 250 — 3P

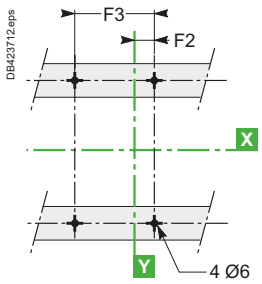




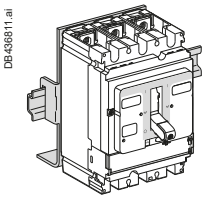
NSX400/630 [2] — 3P

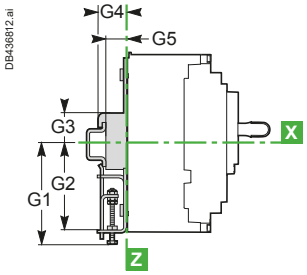


NSX100 to 630 [2] — 4P



On DIN Rail with Adapter Plate (NSX100 to 250)

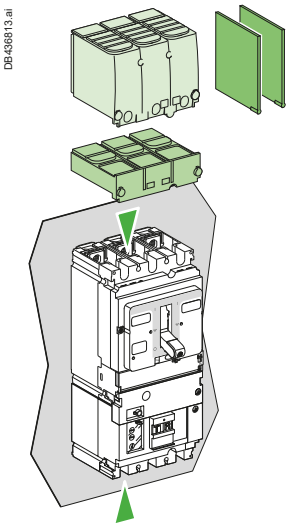




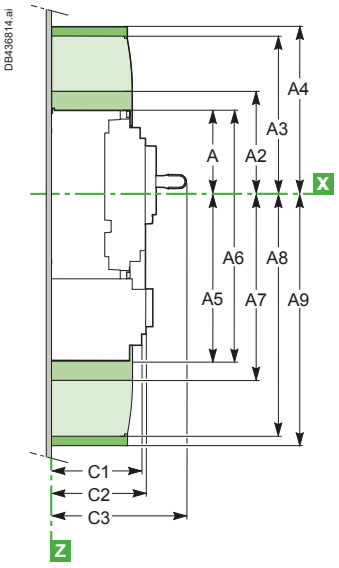
ComPacT NSX Dimensions and Mounting

ComPacT NSX100 to 630 VigiPacT Add-on Fixed Version

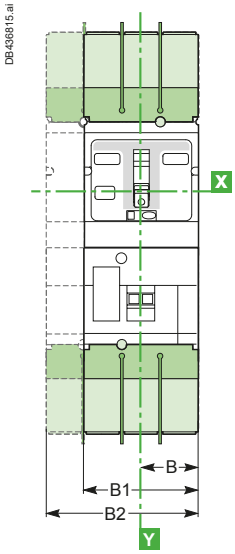
Dimensions

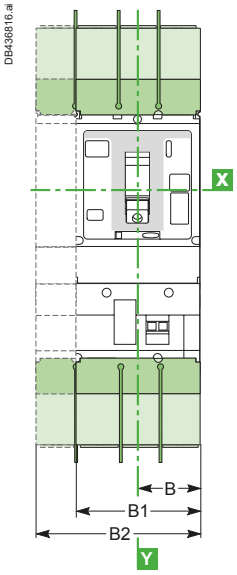


3/4P
NSX100 to 250



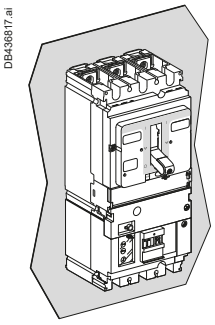
3/4P
NSX400/630



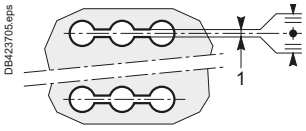


Mounting

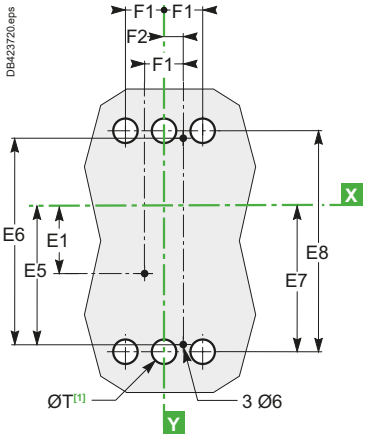
On Backplate



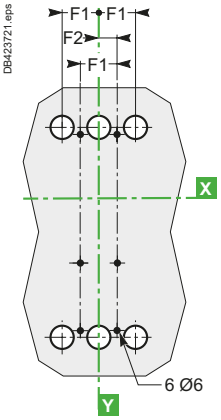
[2] For 630 A only:



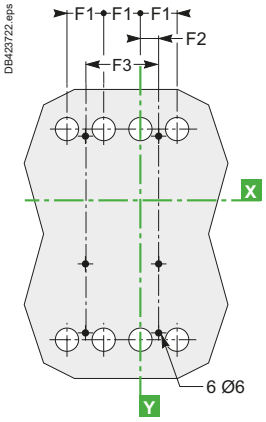
NSX100 to 250
3P



NSX400/630 [2]
3P

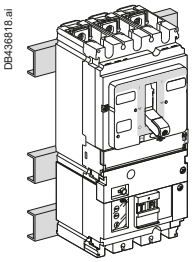


NSX100 to 630 [2]
4P

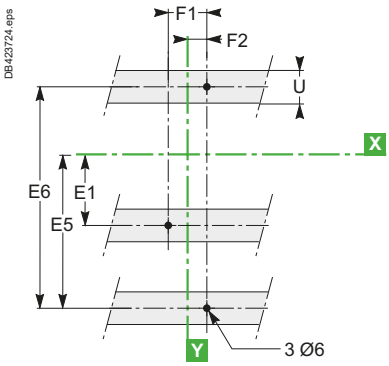


[1] The ØT holes are required for rear connection only.
For two-pole circuit breakers, the middle holes are not required.

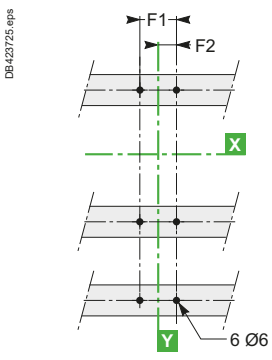
On Rails



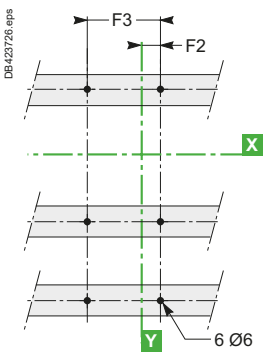
3P



3P



4P



Type	A	A1	A2	A3	A4	A5	A6	A7	A8	A9	B	B1	B2	C1	C2	C3	E1
NSX100/160/250	80.5	161	94	145	178.5	155.5	236	169	220	253.5	52.5	105	140	81	86	126	62.5
NSX400/630	127.5	255	142.5	200	237	227.5	355	242.5	300	337	70	140	185	105	110	168	100
Type	**E2**	**E3**	**E4**	**E5**	**E6**	**E7**	**E8**	**F1**	**F2**	**F3**	**G1**	**G2**	**G3**	**G4**	**G5**	**ØT**	**U**
NSX100/160/250	125	70	140	137.5	200	145	215	35	17.5	70	95	75	13.5	23	17.5	24	⩽ 32
NSX400/630	200	113.5	227	200	300	213.5	327	45	22.5	90	-	-	-	-	-	32	⩽ 35

E

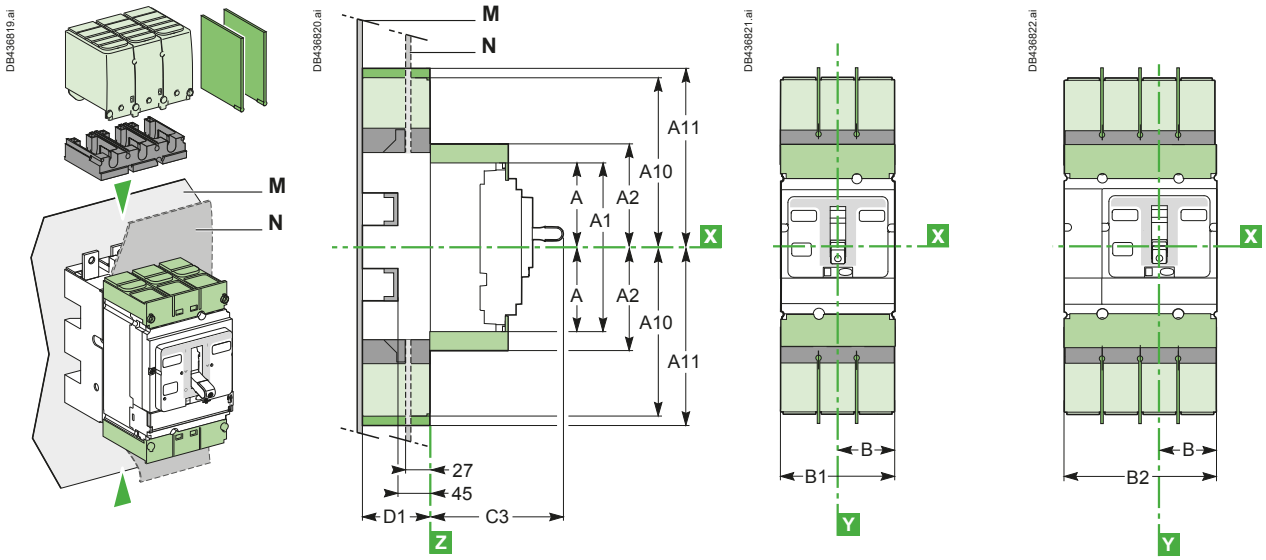
ComPacT NSX Dimensions and Mounting

ComPacT NSX100 to 630 Plug-in Version

Dimensions

3P

4P



Interphase barriers for base.
Short terminal shields on circuit breaker.

Long terminal shields (also available for NSX400/630 spreaders with 52.5 mm pitch: B1 = 157.5 mm, B2 = 210 mm).
Adapter for base, required to mount long terminal shields or interphase barriers.

Mounting

Through Front Panel (N)

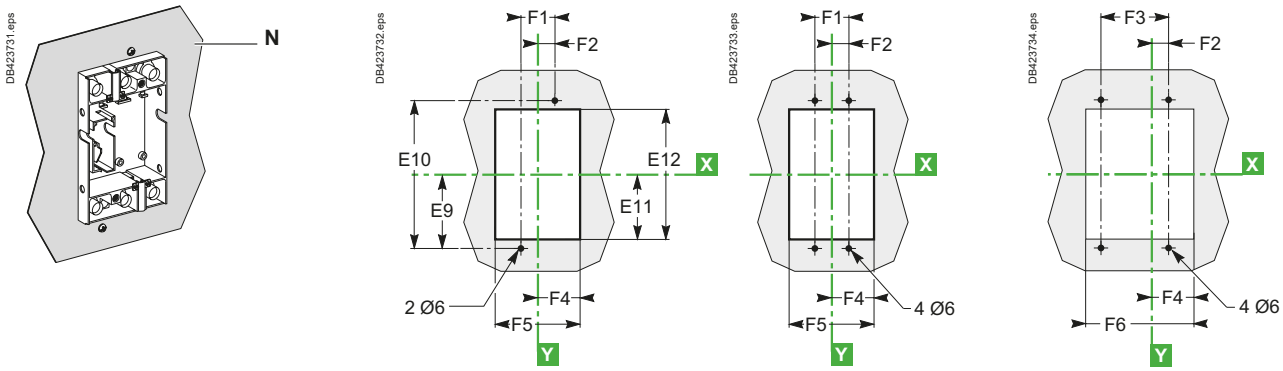
3P

3P

NSX400/630

4P

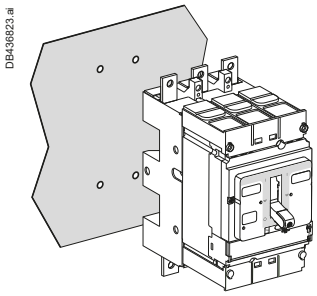
NSX100 to 630

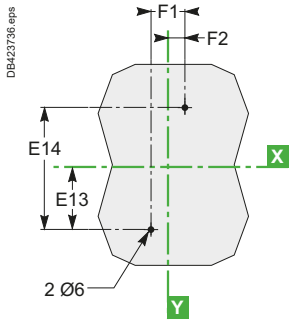


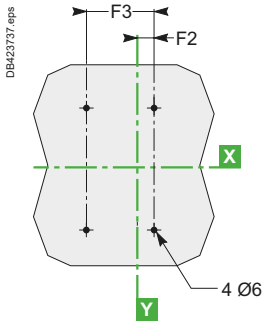
ComPacT NSX Dimensions and Mounting
ComPacT NSX100 to 630 Plug-in Version

On Backplate (M) — 3P — 4P

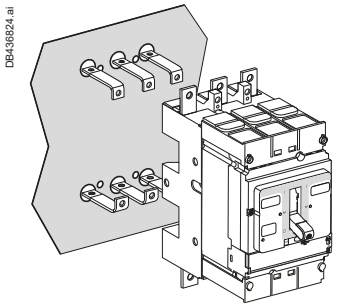
Front connection (an insulating screen is supplied with the base and must be fitted between the base and the backplate)

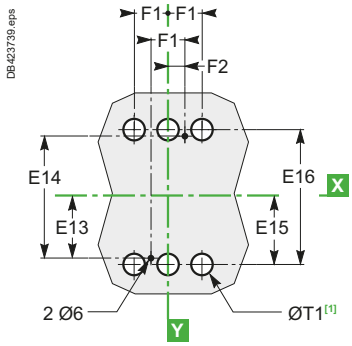


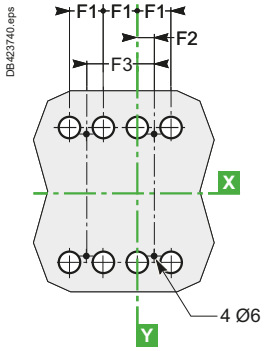




Connection by exterior-mounted rear connectors

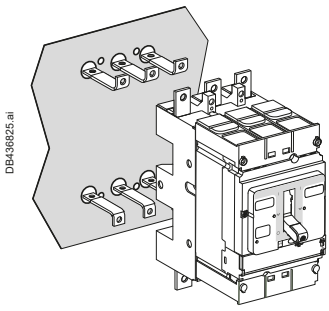


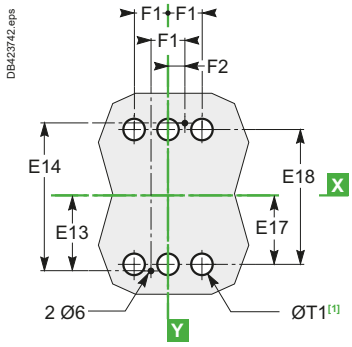


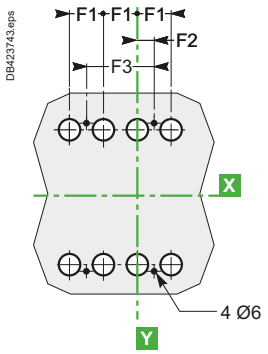


[1] The ØT1 holes are required for rear connection only (for two-pole circuit breakers, the middle holes are not required).

Connection by interior-mounted rear connectors

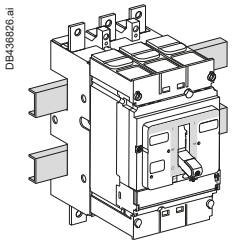


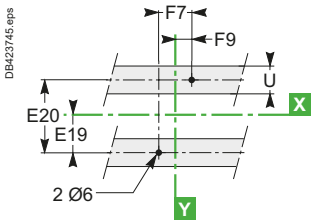


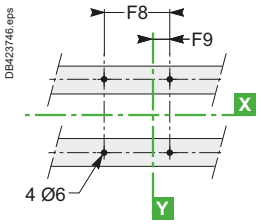


[1] The ØT1 holes are required for rear connection only (for two-pole circuit breakers, the middle holes are not required).

On Rails — 3P — 4P







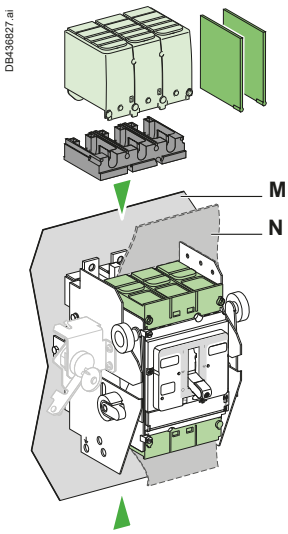
Type	A	A1	A2	A10	A11	B	B1	B2	C3	D1	E9	E10	E11	E12	E13	E14	E15
NSX100/160/250	80.5	161	94	175	210	52.5	105	140	126	75	95	190	87	174	77.5	155	79
NSX400/630	127.5	255	142.5	244	281	70	140	185	168	100	150	300	137	274	125	250	126

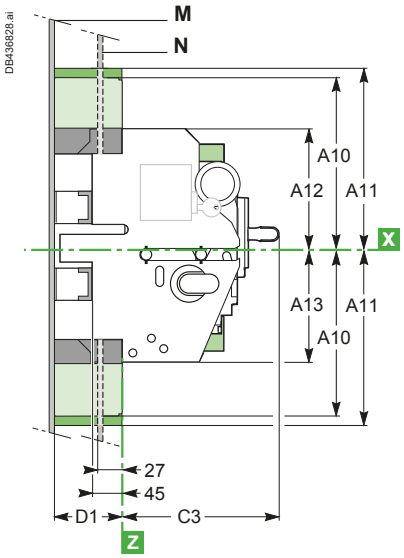
Type	E16	E17	E18	E19	E20	F1	F2	F3	F4	F5	F6	F7	F8	F9	ØT1	U
NSX100/160/250	158	61	122	37.5	75	35	17.5	70	54.5	109	144	70	105	35	24	⩽ 32
NSX400/630	252	101	202	75	150	45	22.5	90	71.5	143	188	100	145	50	33	⩽ 35

ComPacT NSX Dimensions and Mounting

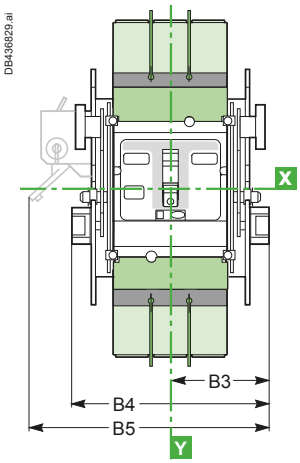
ComPacT NSX100 to 630 Withdrawable Version

Dimensions

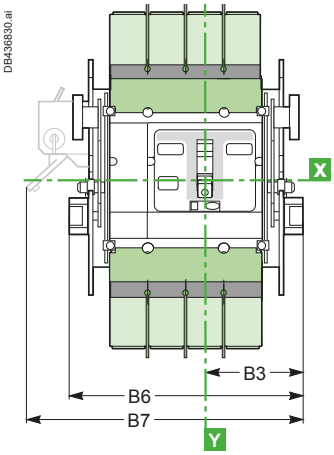


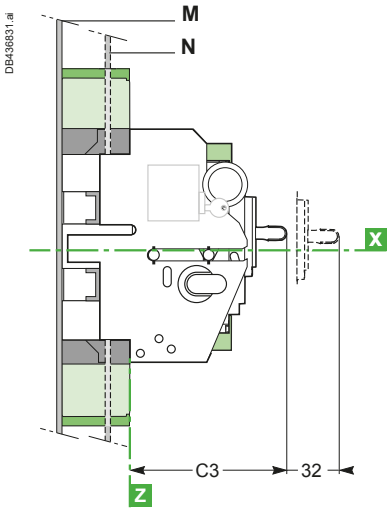


3P



4P

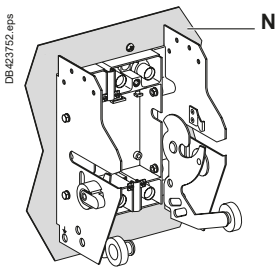




Interphase barriers for base.
Short terminal shields on circuit breaker.
Long terminal shields.
Adapter for base, required to mount long terminal shields or interphase barriers.

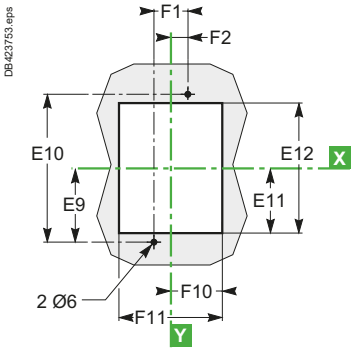
Mounting

Through Front Panel (N)



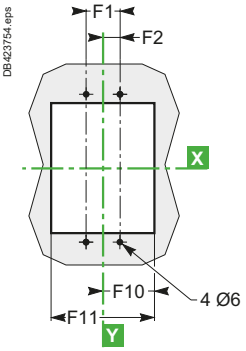
2/3P

NSX100 to 250



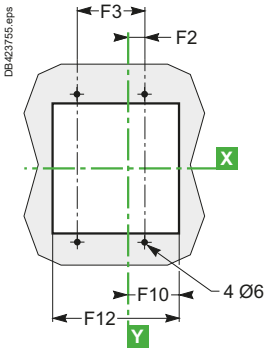
3P

NSX400/630



4P

NSX100 to 630

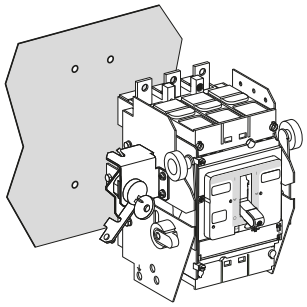


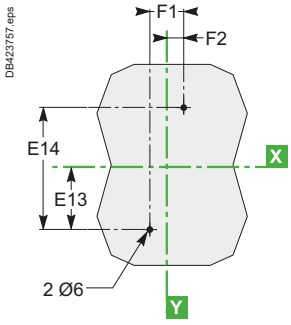
ComPacT NSX Dimensions and Mounting
ComPacT NSX100 to 630 Withdrawable Version

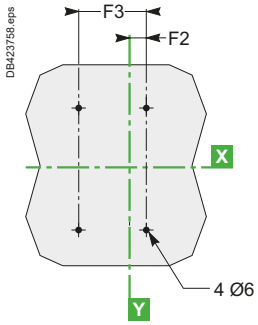
On Backplate (M)

3P 4P

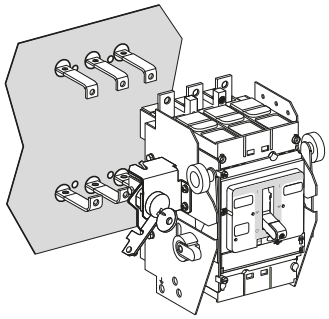
Front connection (an insulating screen is supplied with the base and must be fitted between the base and the backplate)

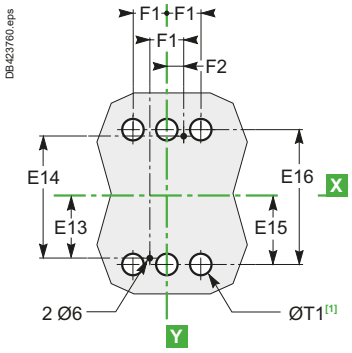


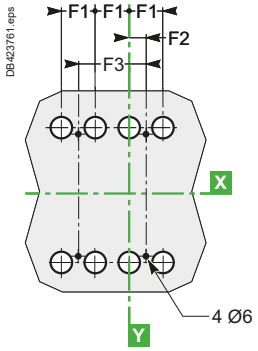




Connection by exterior-mounted rear connectors

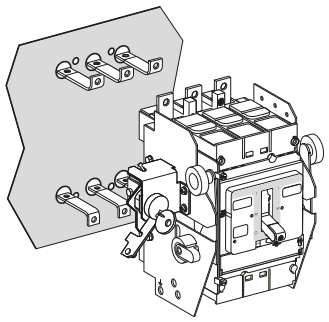


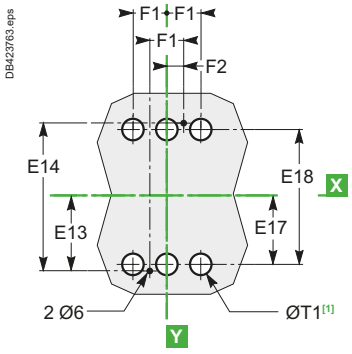


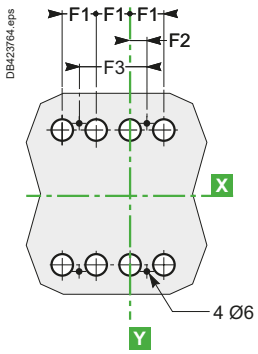


[1] The ØT1 holes are required for rear connection only (for two-pole circuit breakers, the middle holes are not required).

Connection by interior-mounted rear connectors



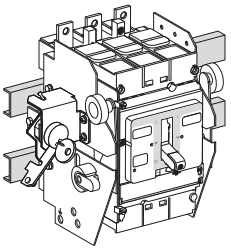


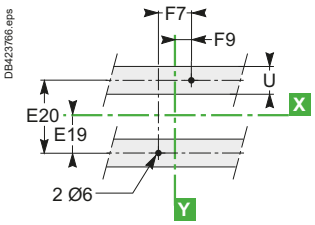


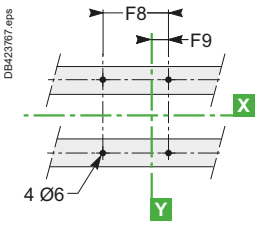
[1] The ØT1 holes are required for rear connection only (for two-pole circuit breakers, the middle holes are not required).

On Rails

3P 4P







Type	A10	A11	A12	A13	B3	B4	B5	B6	B7	C3	D1	E9	E10	E11	E12	E13	E14
NSX100/160/250	175	210	106.5	103.5	92.5	185	216	220	251	126	75	95	190	87	174	77.5	155
NSX400/630	244	281	140	140	110	220	250	265	295	168	100	150	300	137	274	125	250
Type	**E15**	**E16**	**E17**	**E18**	**E19**	**E20**	**F1**	**F2**	**F3**	**F7**	**F8**	**F9**	**F10**	**F11**	**F12**	**ØT1**	**U**
NSX100/160/250	79	158	61	122	37.5	75	35	17.5	70	70	105	35	74	148	183	24	⩽ 32
NSX400/630	126	252	101	202	75	150	45	22.5	90	100	145	50	91.5	183	228	33	⩽ 35

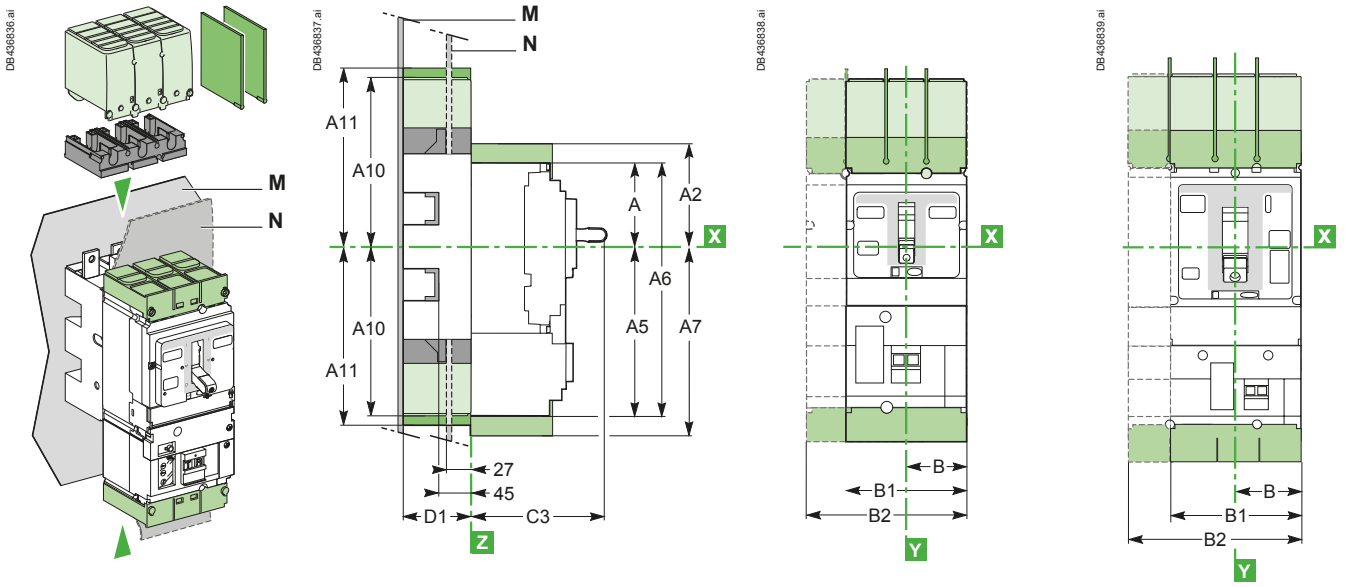
ComPacT NSX Dimensions and Mounting

ComPacT NSX100 to 630 VigiPacT Add-on Plug-in and Withdrawable Versions

Dimensions - Plug-in Version

NSX100 to 250 — 3/4P

NSX400/630 — 3/4P



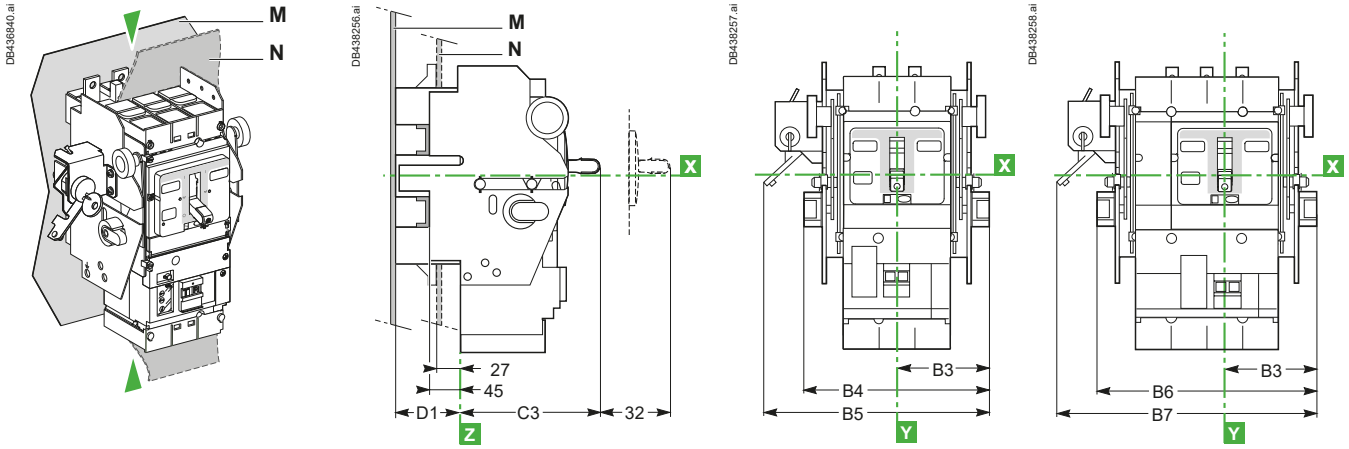
Interphase barriers for base.
Short terminal shields on circuit breaker.

Long terminal shields (also available for NSX400/630 spreaders with 52.5 mm pitch: B1 = 157.5 mm, B2 = 210 mm).
Adapter for base, required to mount long terminal shields or interphase barriers.

Dimensions - Withdrawable Version

NSX100 to 630

3P — 4P



E

Mounting
Through front panel (N)
See ComPacT NSX100 to 630 plug-in version, page E-38, or withdrawable version, page E-40
On backplate (M)
See ComPacT NSX100 to 630 plug-in version, page E-39, or withdrawable version, page E-41
On rails
See ComPacT NSX100 to 630 plug-in version, page E-39, or withdrawable version, page E-41

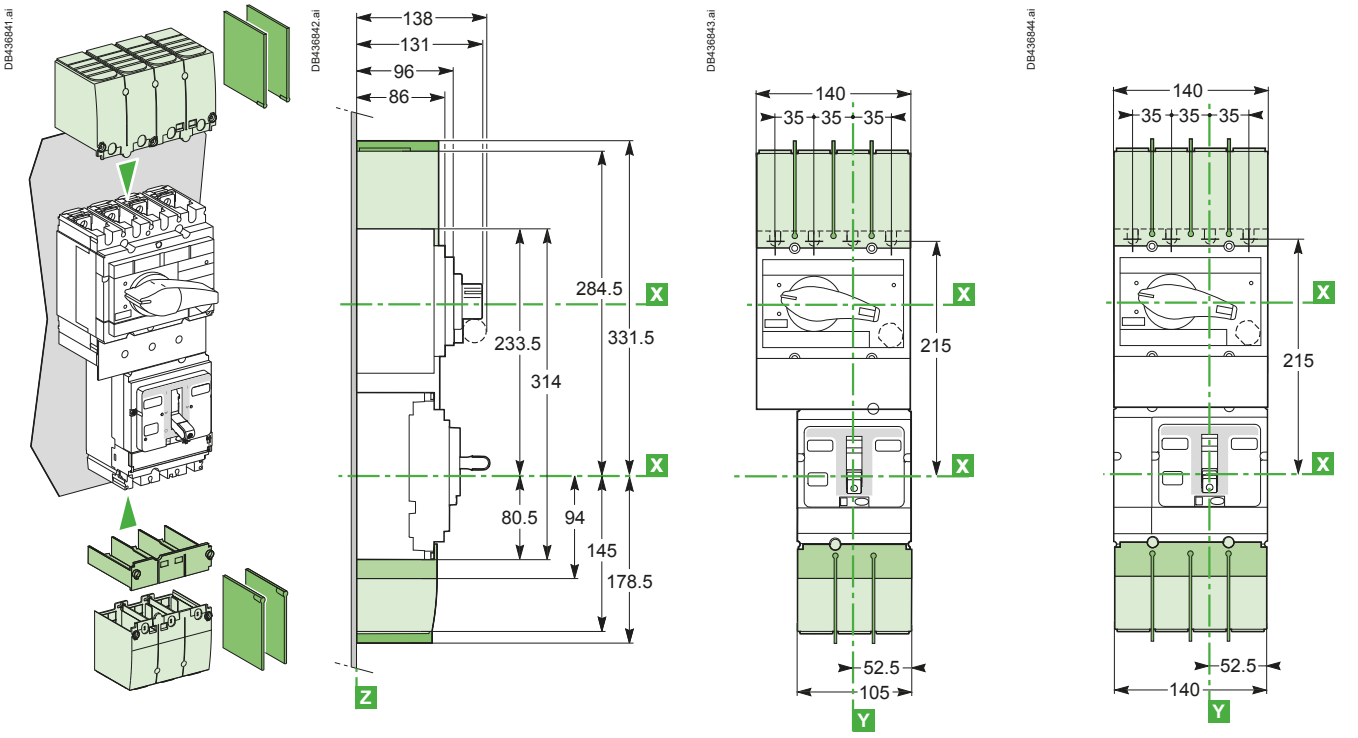
Type	A	A2	A5	A6	A7	A10	A11	B	B1	B2	B3	B4	B5	B6	B7	C3	D1
NSX100/160/250	80.5	94	155.5	236	169	175	210	52.5	105	140	92.5	185	216	220	251	126	75
NSX400/630	127.5	142.5	227.5	355	242.5	244	281	70	140	185	110	220	250	265	295	168	100

ComPacT NSX Dimensions and Mounting

Visu Function for ComPacT NSX100 to 250 Fixed Version

Dimensions - Combination with ComPacT INV100 to 250

3P 4P

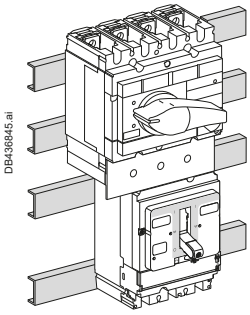


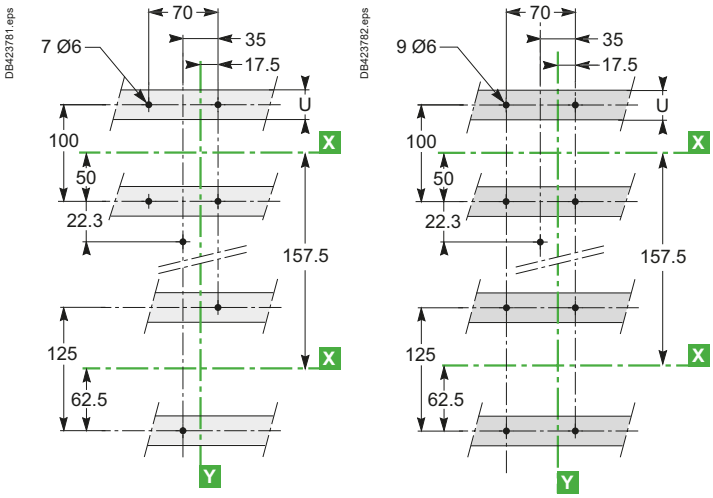
Interphase barriers.
Short terminal shields.
Long terminal shields.

Mounting

3P 4P

On Rails or Backplate





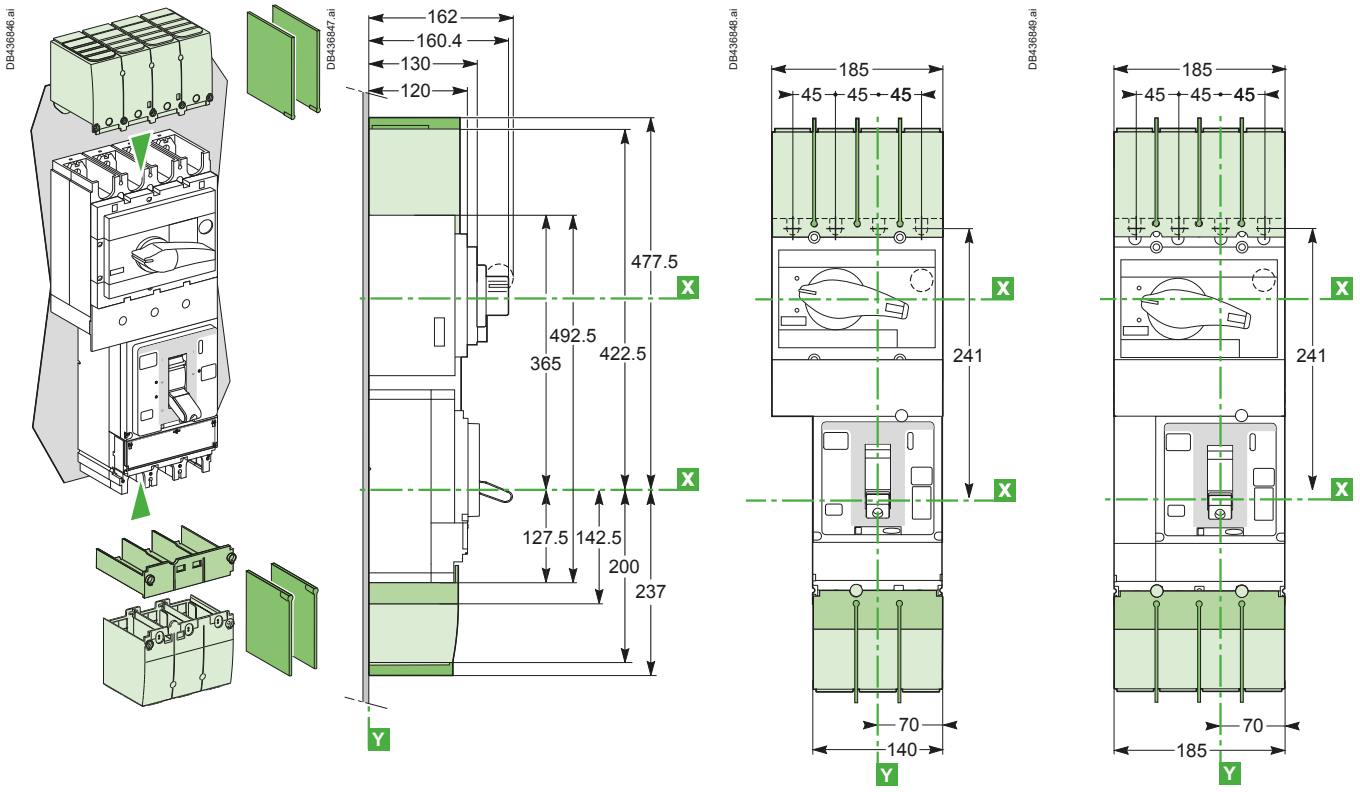
U ≤ 32

ComPacT NSX Dimensions and Mounting

Visu Function for ComPacT NSX400/630 Fixed Version

Dimensions - Combination with ComPacT INV400 to 630

3P 4P

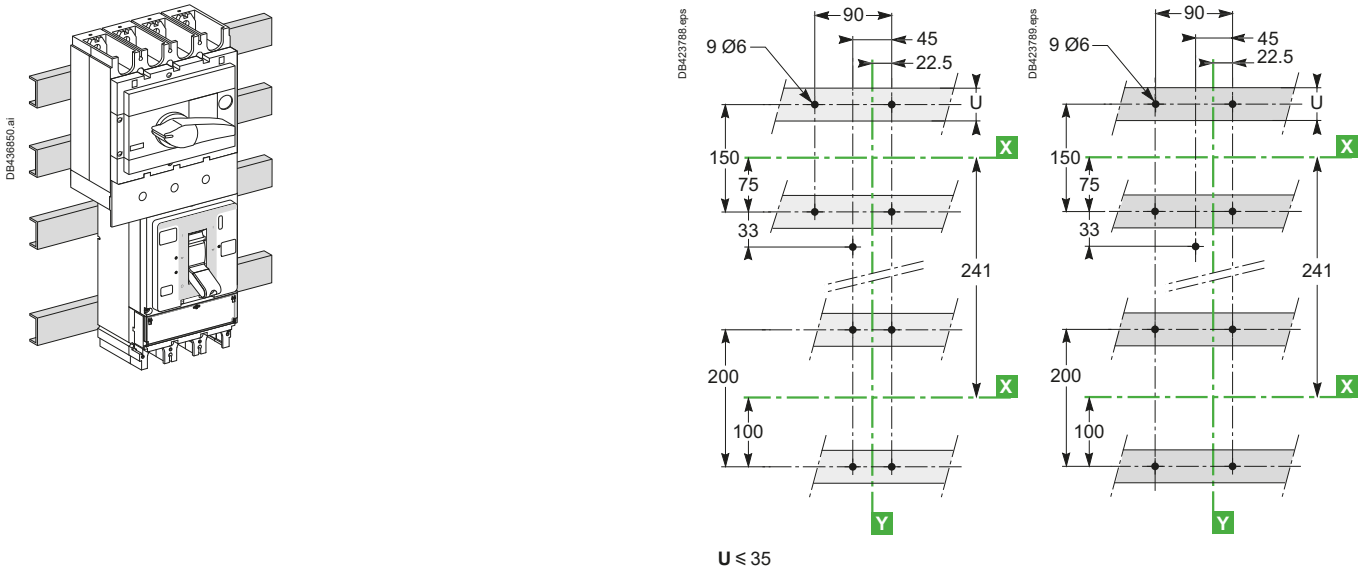


Interphase barriers for base.
Short terminal shields.
Long terminal shields.

Mounting

3P 4P

On Rails or Backplate



U ≤ 35

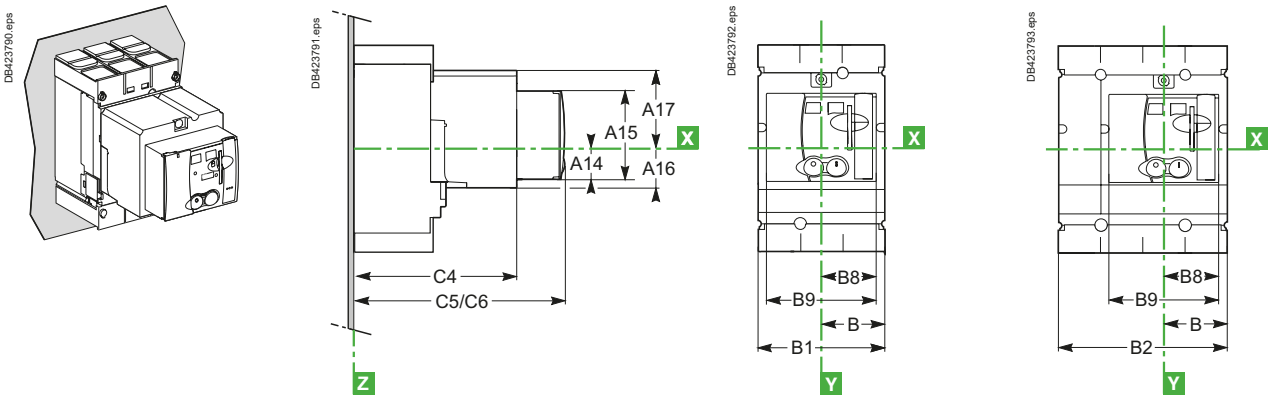
ComPacT NSX Dimensions and Mounting

Motor Mechanism Module for ComPacT NSX100 to 630

Dimensions

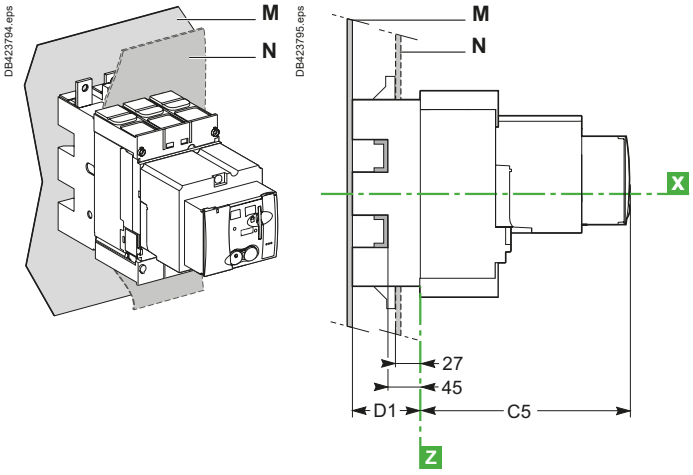
3P 4P

Fixed Circuit Breaker

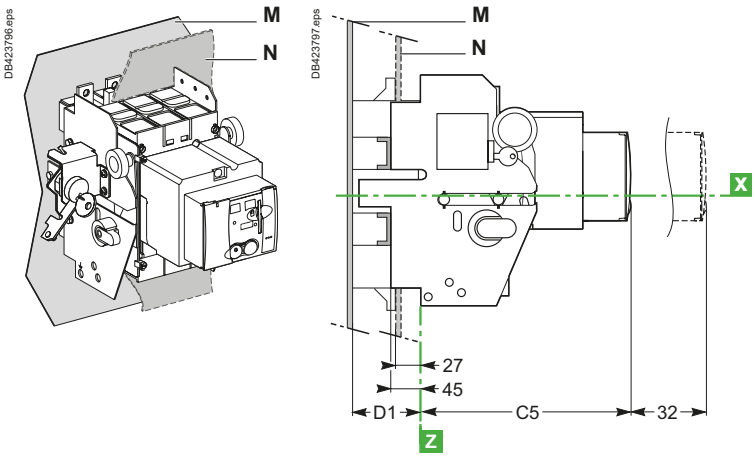


C5: without keylock
C6: with keylock

Plug-in Circuit Breaker



Withdrawable Circuit Breaker



Type	A14	A15	A16	A17	B	B1	B2	B8	B9	C4	C5	C6	D1
NSX100/160/250	27.5	73	34.5	62.5	52.5	105	140	45.5	91	143	182	209.5	75
NSX400/630	40	123	52	100	70	140	185	61.5	123	215	256	258	100

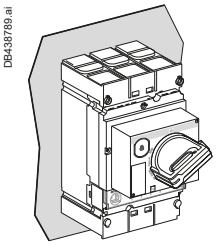
ComPacT NSX Dimensions and Mounting

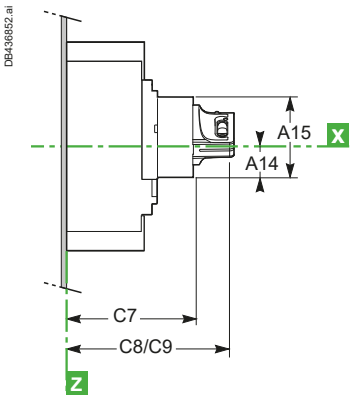
Direct Rotary Handle for ComPacT NSX100 to 630

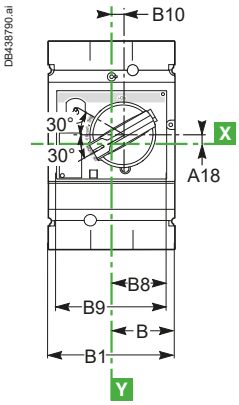
Dimensions

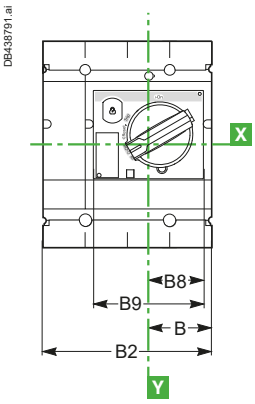
3P 4P

Fixed Circuit Breaker



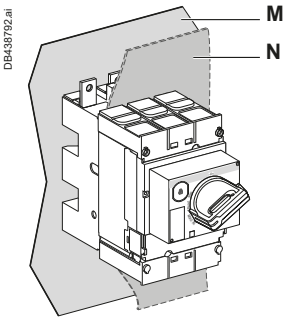


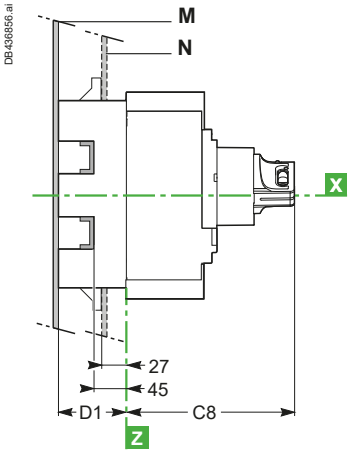




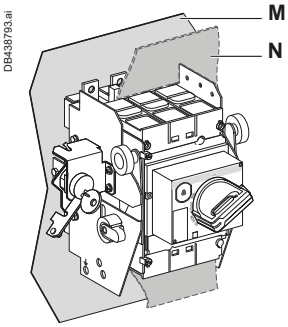
C8: without keylock
C9: with keylock

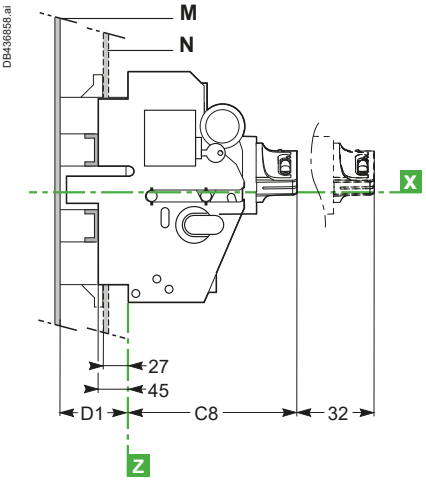
Plug-in Circuit Breaker





Withdrawable Circuit Breaker





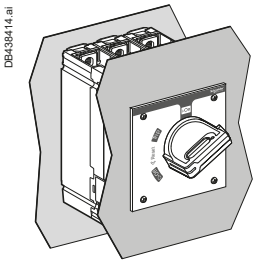
Type	A14	A15	A18	B	B1	B2	B8	B9	B10	C7	C8	C9	D1
NSX100/160/250	27.5	73	9	52.5	105	140	45.5	91	9.25	121	158.5	167.5	75
NSX400/630	40	123	24.6	70	140	185	61.5	123	5	145	182.5	191.5	100

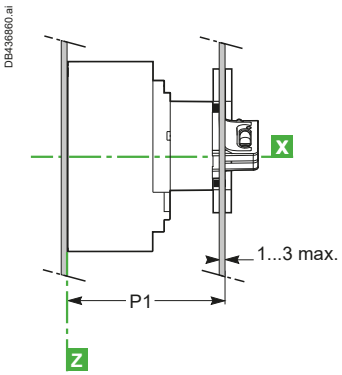
ComPacT NSX Dimensions and Mounting

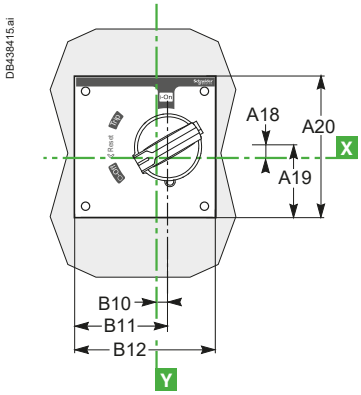
MCC and CNOMO Type Direct Rotary Handles for ComPacT NSX100 to 630 Fixed Version

Dimensions

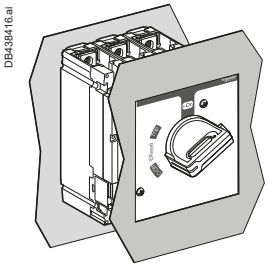
MCC Type Direct Rotary Handle

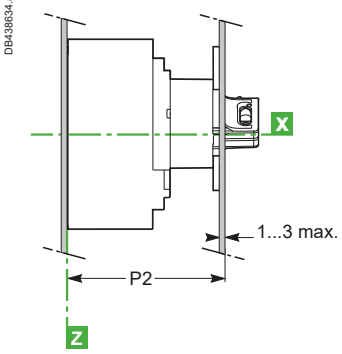


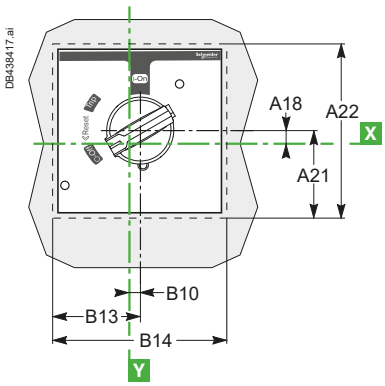




CNOMO Type Direct Rotary Handle





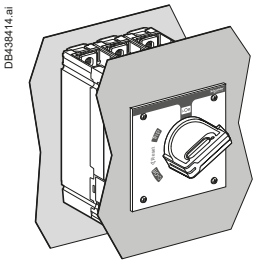


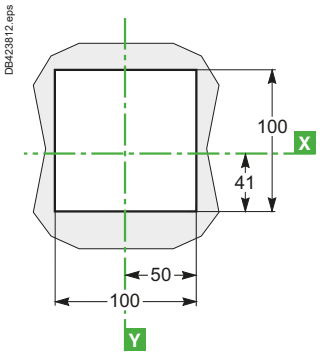
Front-Panel Cutout

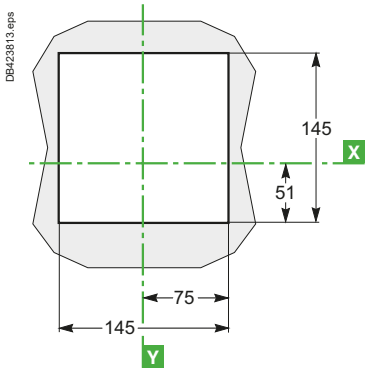
NSX100 to 250

NSX400/630

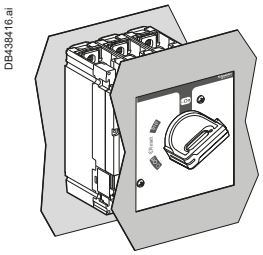
MCC Type Direct Rotary Handle

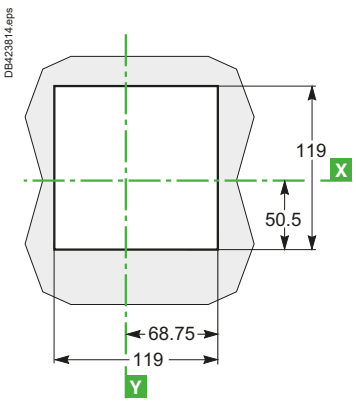


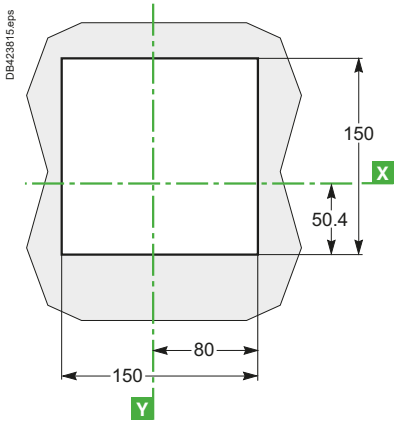




CNOMO Type Direct Rotary Handle







Type	A18	A19	A20	A21	A22	B10
NSX100/160/250	9	60	120	65	130	9.25
NSX400/630	24.6	83	160	82	164	5
Type	**B11**	**B12**	**B13**	**B14**	**P1**	**P2**
NSX100/160/250	69	120	65	130	125	135
NSX400/630	85	160	82	164	149	158

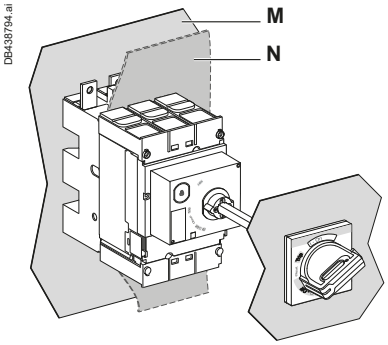
E

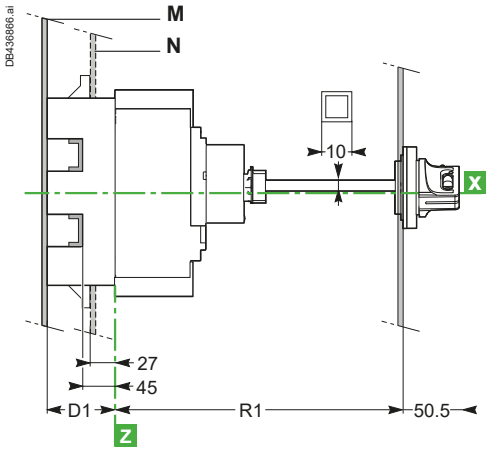
ComPacT NSX Dimensions and Mounting

Extended Rotary Handle for ComPacT NSX100 to 630

Dimensions

Fixed and Plug-in Circuit Breakers

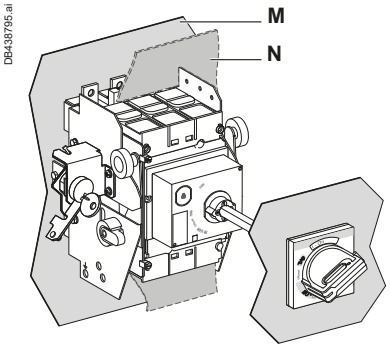


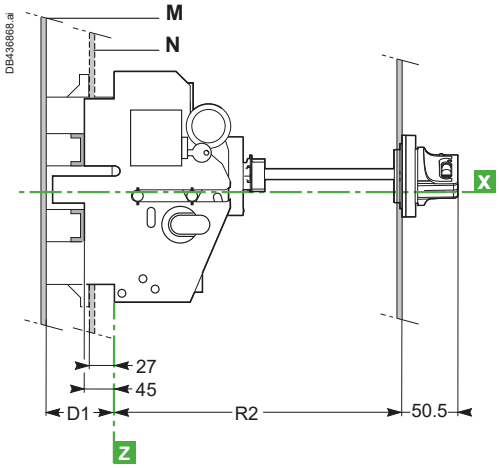


Cutout for shaft (mm)

Type	R1
NSX100/160/250	min. 171 max. 600
NSX400/630	min. 195 max. 600

Withdrawable Circuit Breaker

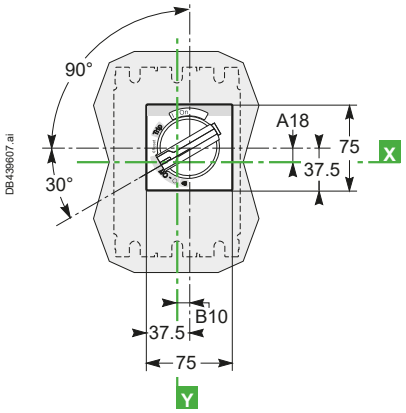


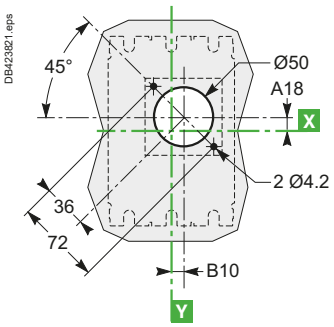


Cutout for shaft (mm)

Type	R2
NSX100/160/250	min. 248 max. 600
NSX400/630	min. 272 max. 600

Dimensions and Front-Panel Cutout





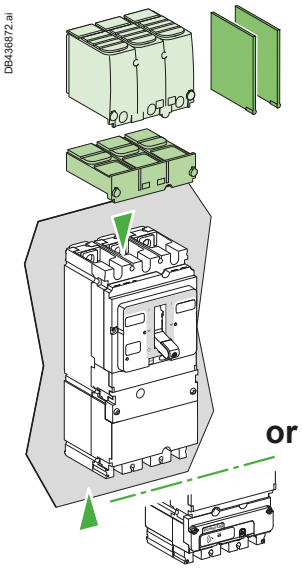
Type	A18	B10	D1
NSX100/160/250	9	9.25	75
NSX400/630	24.6	5	100

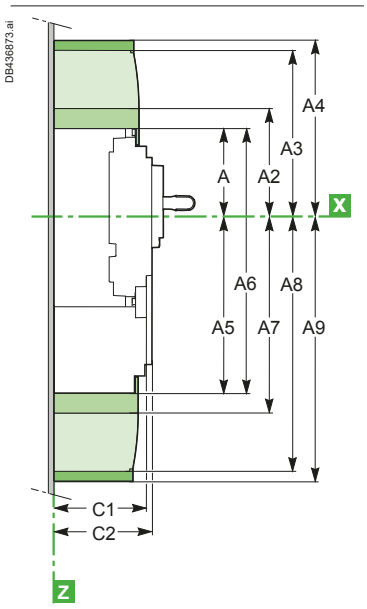
ComPacT NSX Dimensions and Mounting

Indication and Measurement Modules for ComPacT NSX100 to 630 Fixed Version

Dimensions of Circuit Breaker with

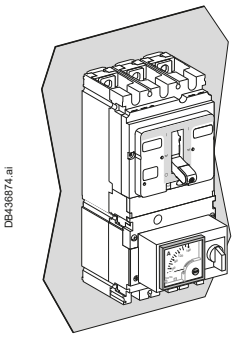
Current-Transformer/PowerLogic PowerTag NSX Module



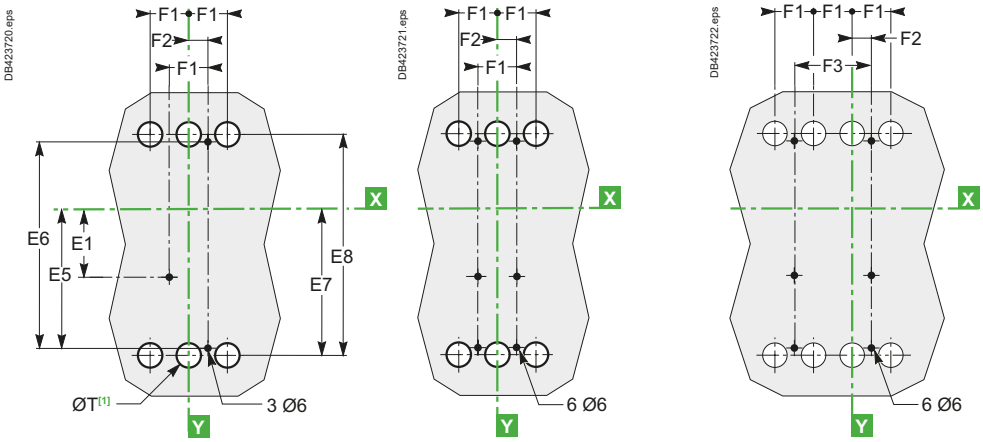


Mounting

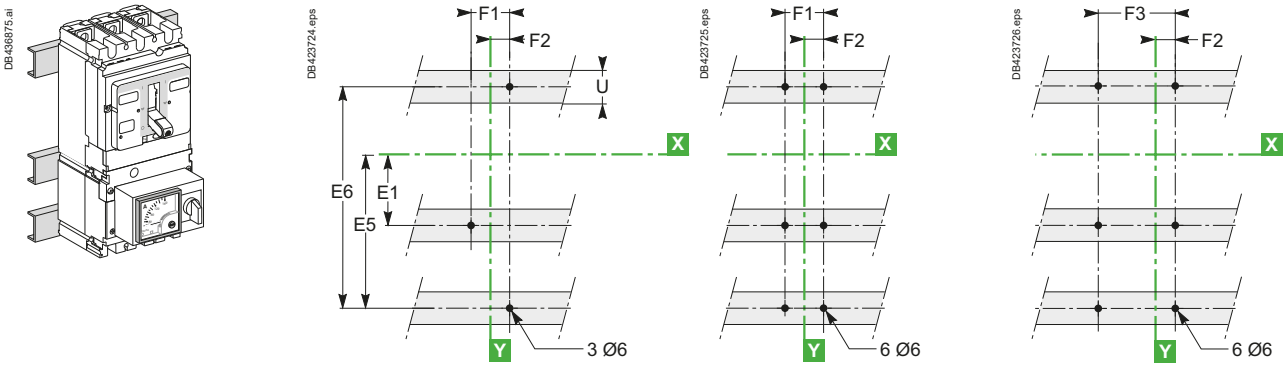
	NSX100 to 250	NSX400/630	NSX100 to 630
On Backplate	2/3P	3P	4P



[1] The ØT holes are required for rear connection only.
For two-pole circuit breakers, the middle holes are not required.



	2/3P	3P	4P
On Rails			



Type	A	A2	A3	A4	A5	A6	A7	A8	A9	C1	C2	C11	E1	E5	E6	E7	E8	F1
NSX100/160/250	80.5	94	145	178.5	155.5	236	169	220	253.5	81	86	137	62.5	137.5	200	145	215	35
NSX400/630	127.5	142.5	200	237	227.5	355	242.5	300	337	95.5	110	162	100	200	300	213.5	327	45

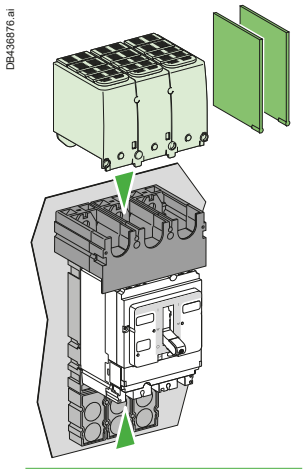
Type	F2	F3	ØT	U	Type	A5	A6	A7	A8	A9	E5	E6	E7	E8
NSX100/160/250	17.5	70	24	≤ 32	NSX100/160/250 with PowerTag NSX	120.5	201	134	185	219.5	102.5	165	110	180
NSX400/630	22.5	90	32	≤ 35	NSX400/630 with PowerTag NSX	192.5	320	207.5	265	302.5	165	265	178.5	192

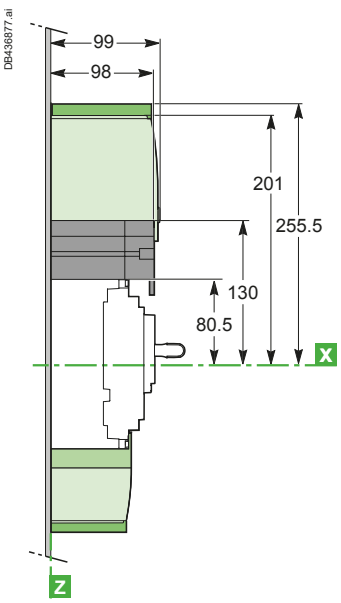
ComPacT NSX Dimensions and Mounting

One-Piece Spreader for ComPacT NSX100 to 250 Fixed Version

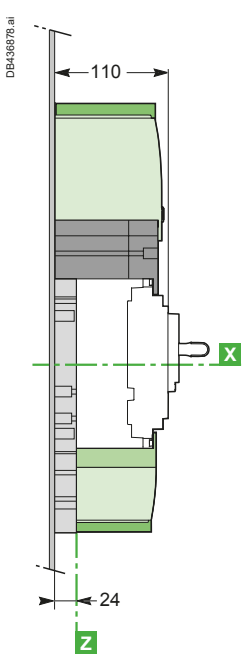
Dimensions

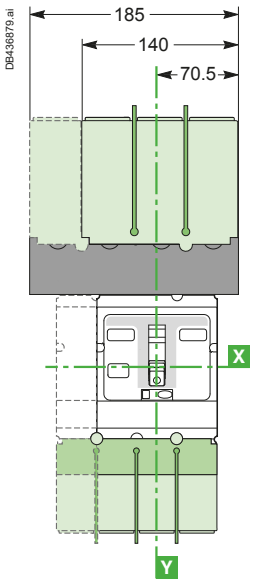
Rear Alignment





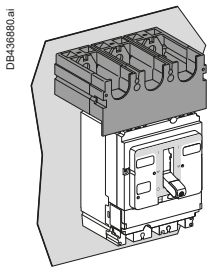
Front Alignment



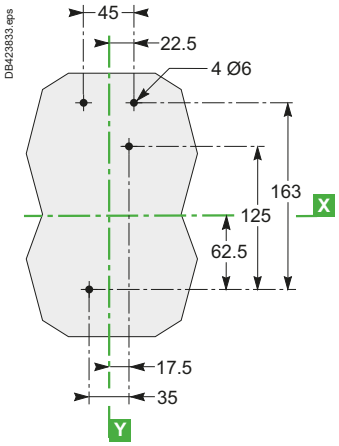


Mounting

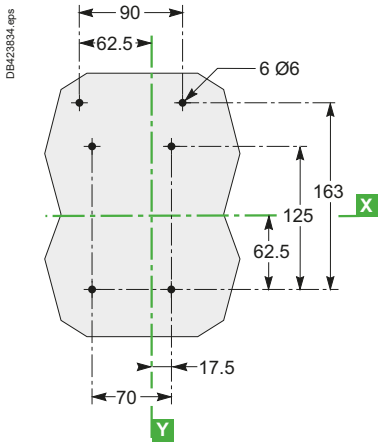
Rear Alignment



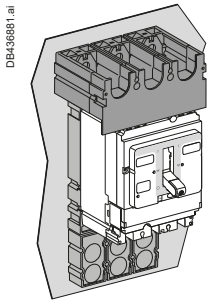
2/3P



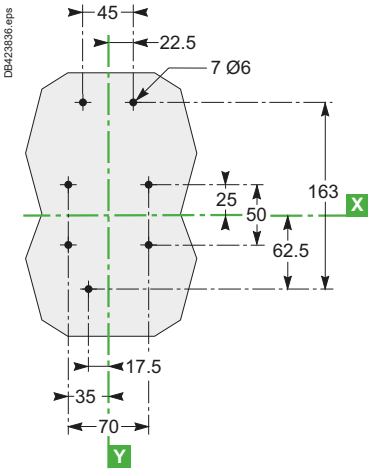
4P



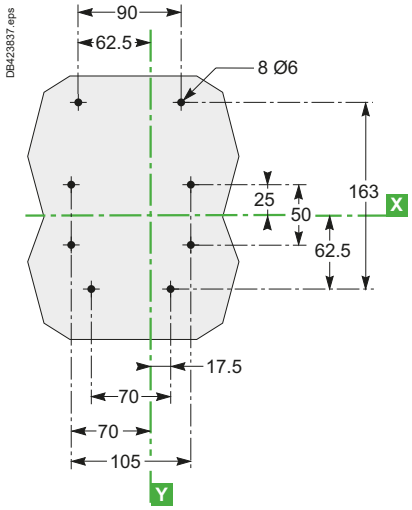
Front Alignment



2/3P

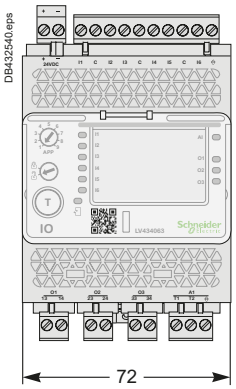


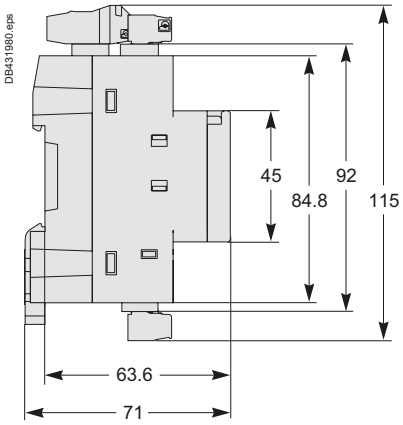
4P



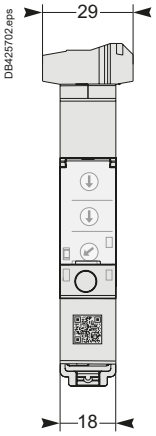
ComPacT NSX Dimensions and Mounting
External Modules

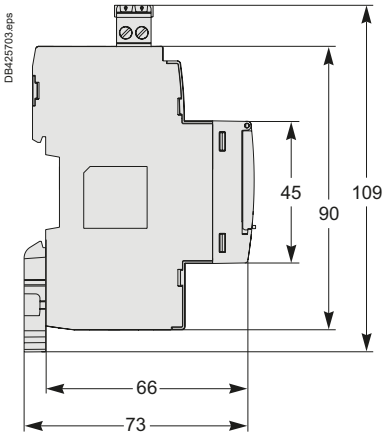
I/O (Input/Output) Application Module



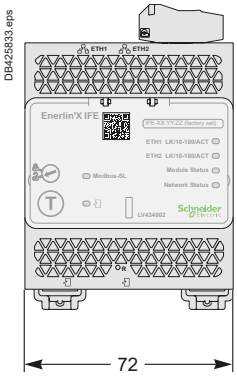


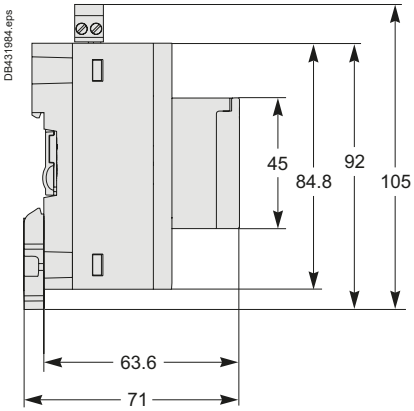
IFM - Modbus-SL Interface



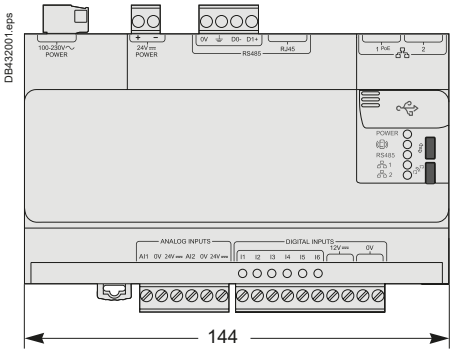


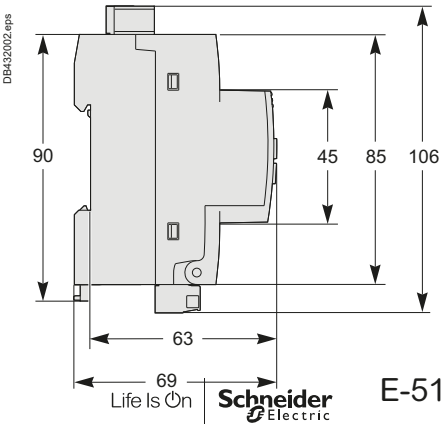
IFE - Ethernet Interface





Com'X 500/510



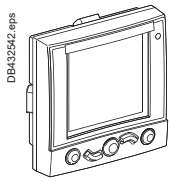


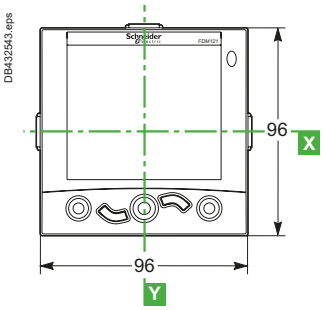
E

ComPacT NSX Dimensions and Mounting

FDM121 Switchboard Display

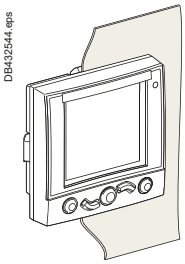
Dimensions

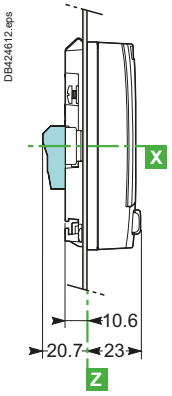


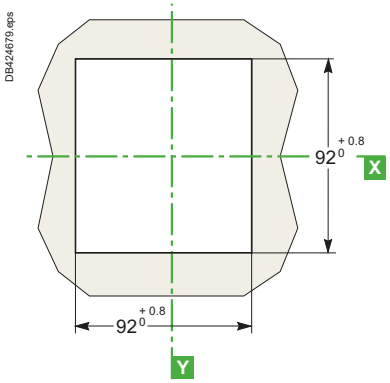


Mounting

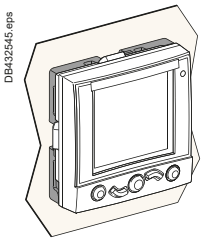
Through Panel

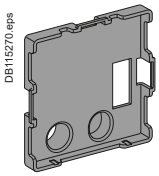


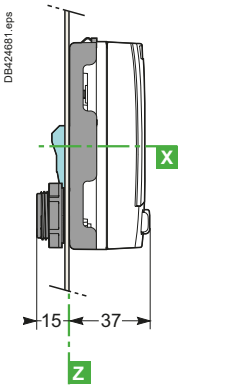


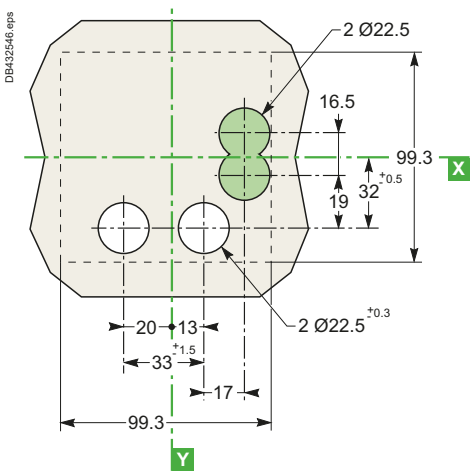


On Panel





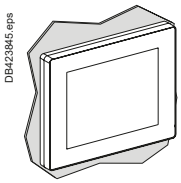


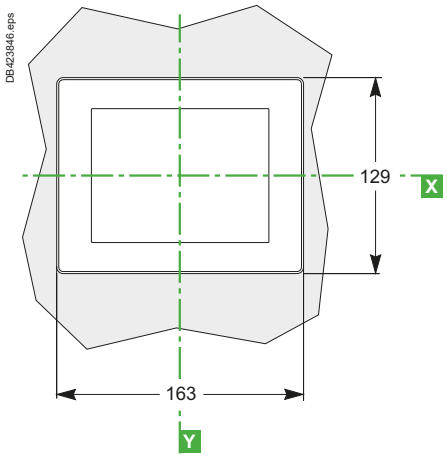


E

ComPacT NSX Dimensions and Mounting
FDM128 Switchboard Display

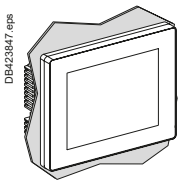
Dimensions

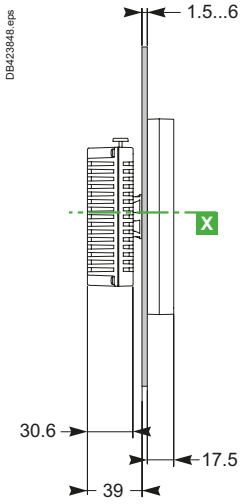


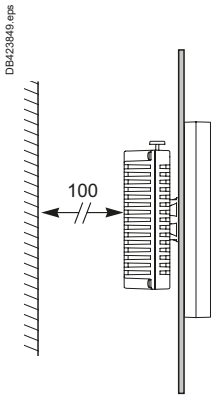


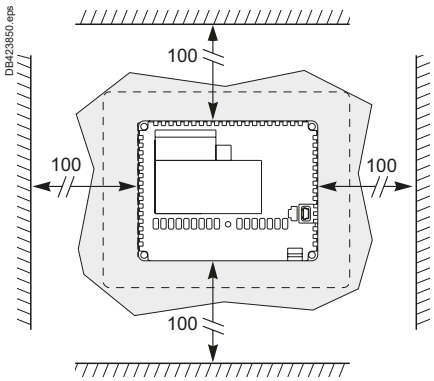
Mounting

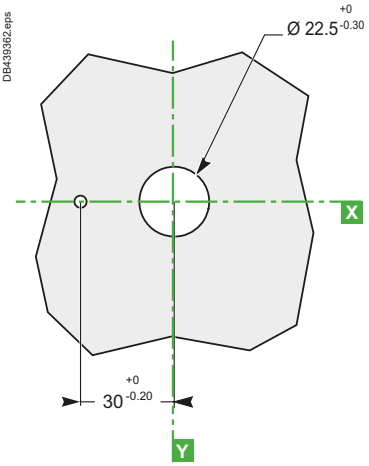
On Panel









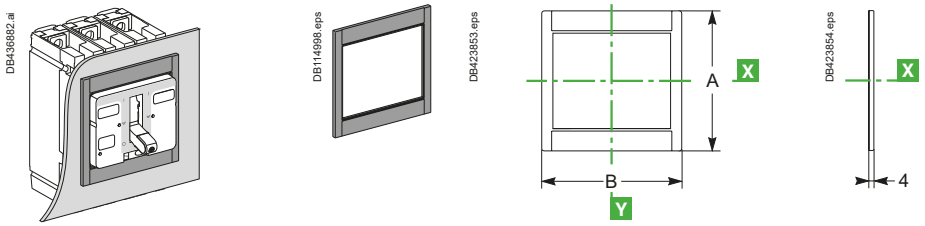


E

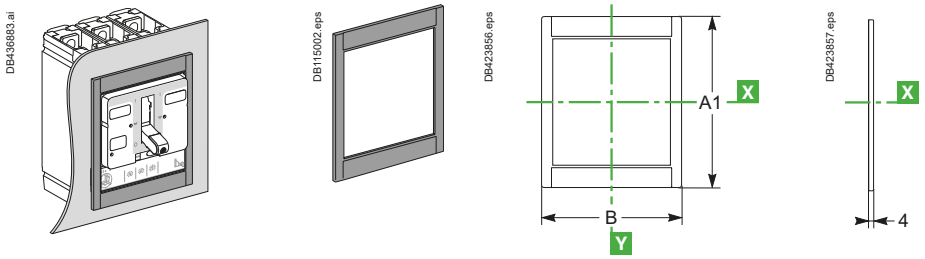
ComPacT NSX Front-Panel Accessories
ComPacT NSX100 to 630

IP30 Front-Panel Escutcheons

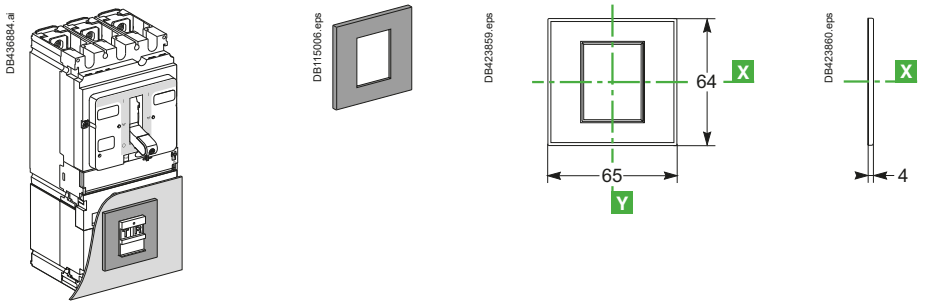
For Toggle, Rotary Handle or Motor Mechanism Module



For Toggle or Rotary Handle with Access to Trip Unit

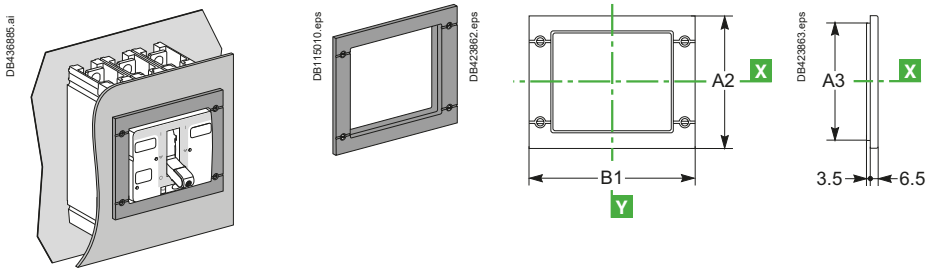


For VigiPacT Add-on

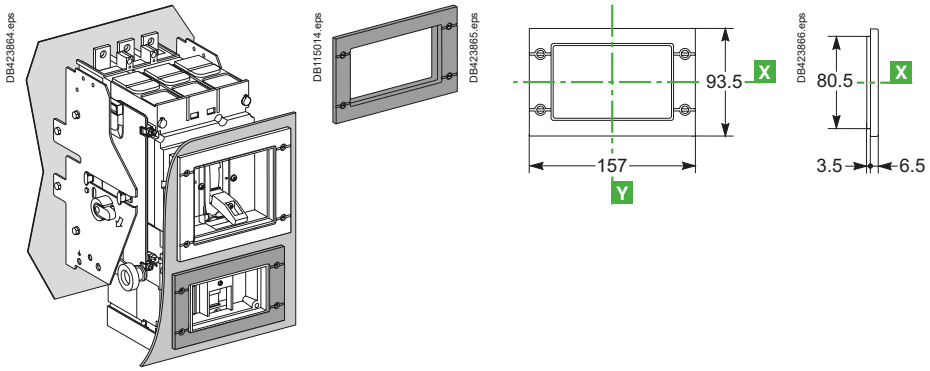


IP40 Front-Panel Escutcheons

For Toggle, Rotary Handle or Motor Mechanism Module and Protection Collar



For VigiPacT Add-on with Protection Collar

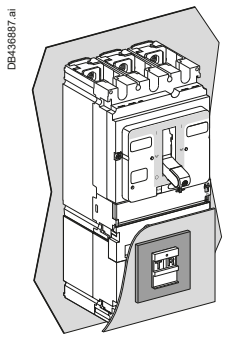


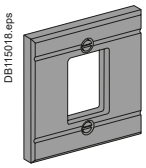
E

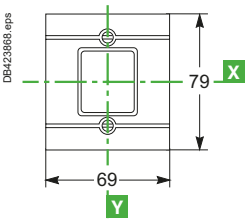
ComPacT NSX Front-Panel Accessories
ComPacT NSX100 to 630

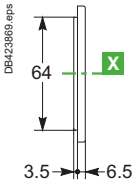
IP40 Front-Panel Escutcheons (Cont.)

For VigiPacT Add-on



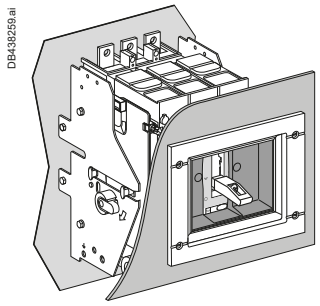


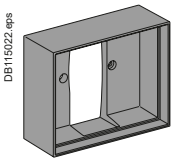


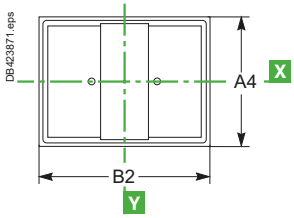


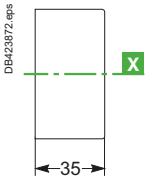
Protection Collars for IP40 Front-Panel Escutcheons

For Toggle

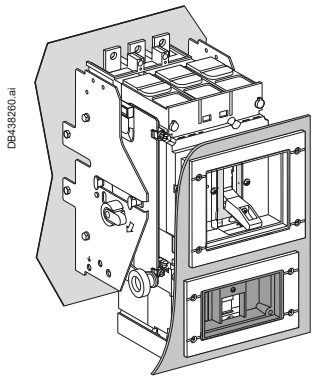


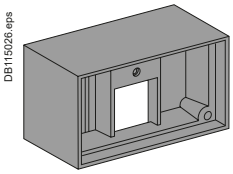


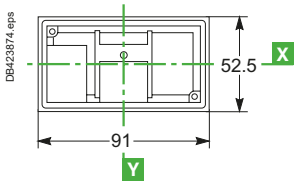


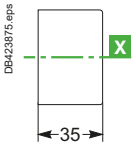


For VigiPacT Add-on

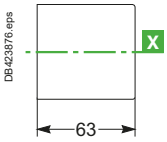






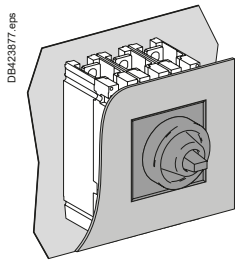


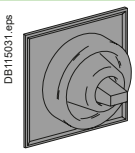
Circuit breaker with toggle or rotary handle.

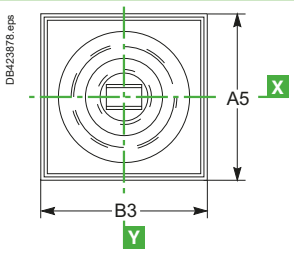


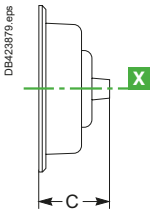
Circuit breaker with motor-mechanism module.

IP43 Toggle Cover







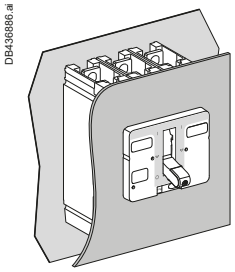


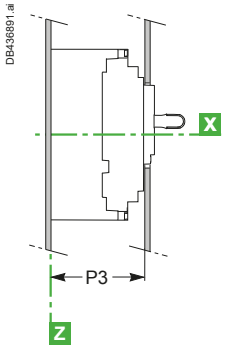
Type	A	A1	A2	A3	A4	A5	B	B1	B2	B3	C
NSX100/160/250	113	138	114	101	73	85	113	157	91	103	40
NSX400/630	163	211	164	151	122.5	138	163	189	122.5	138	60

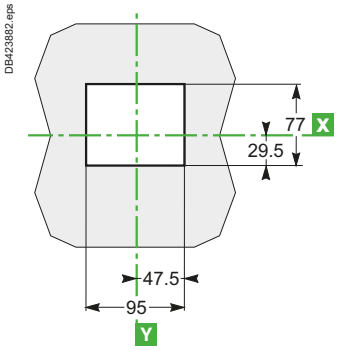
ComPacT NSX Front-Panel Cutouts
ComPacT NSX100 to 630 Fixed Version

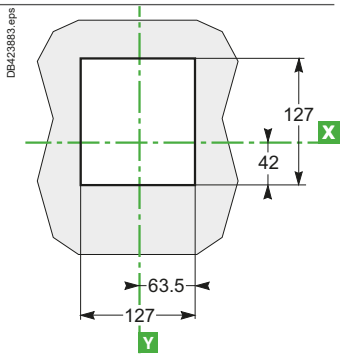
Bare Sheet Metal — NSX100 to 250 — NSX400/630

For Toggle

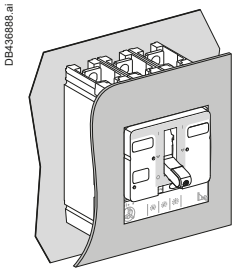


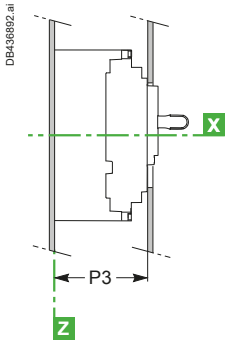


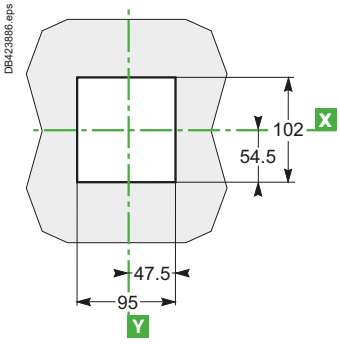


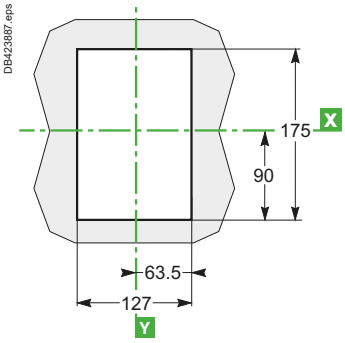


For Toggle with Access to Trip Unit



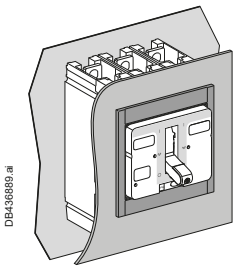


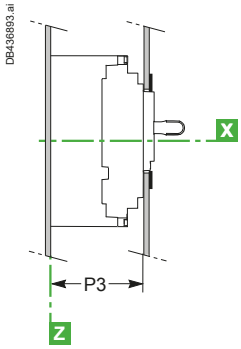


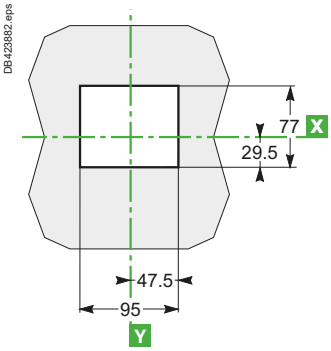


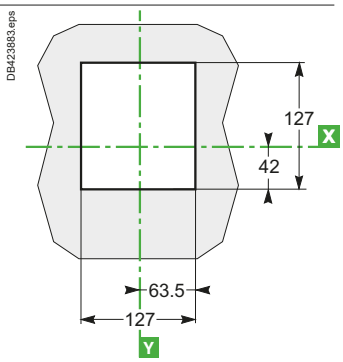
With IP30 Front-Panel Escutcheon — NSX100 to 250 — NSX400/630

For Toggle

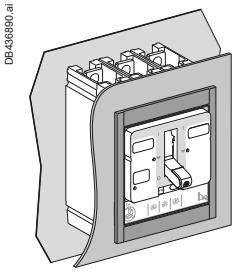


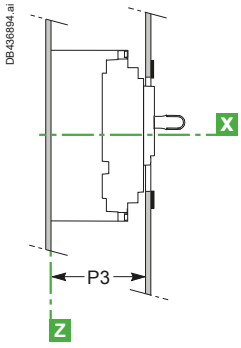


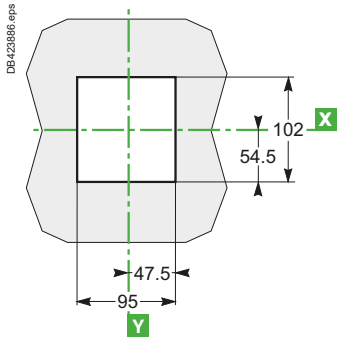


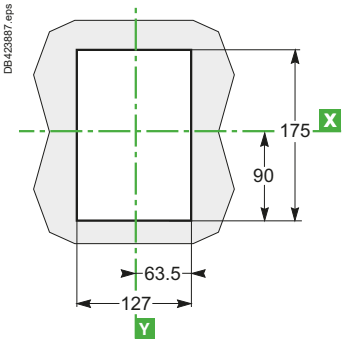


For Toggle with Access to Trip Unit









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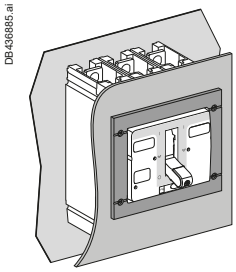
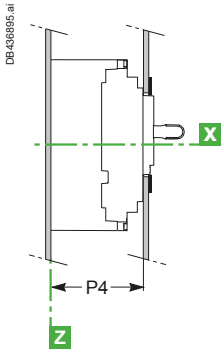
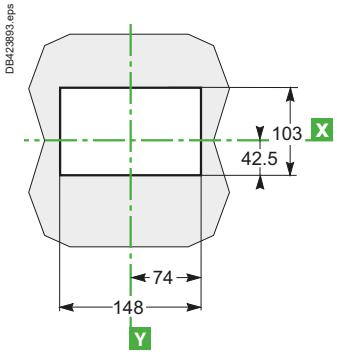
ComPacT NSX Front-Panel Cutouts
ComPacT NSX100 to 630 Fixed Version

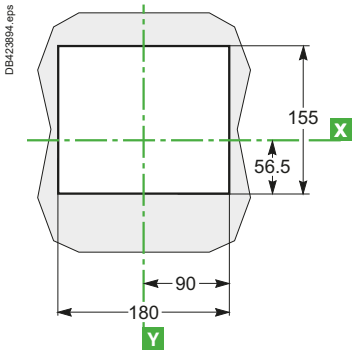
With IP40 Front-Panel Escutcheon — NSX100 to 250 — NSX400/630

For Toggle



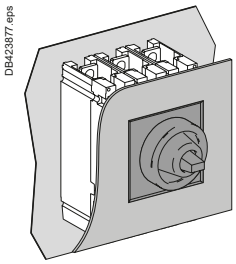


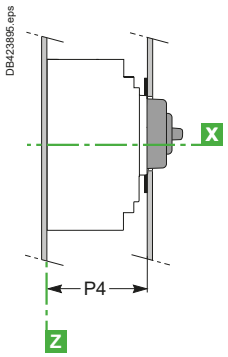


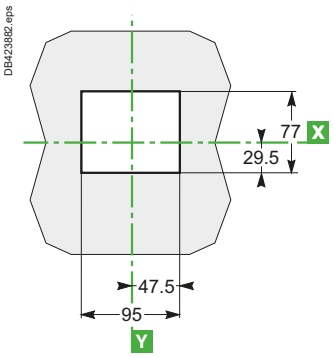


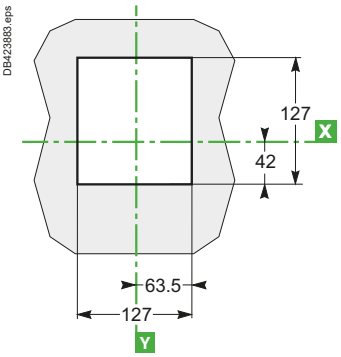
With IP43 Toggle Cover — NSX100 to 250 — NSX400/630

For Toggle



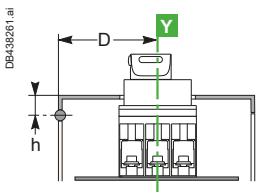






Type	P3	P4
NSX100/160/250	88	89
NSX400/630	112	113

Note: Door cutout dimensions are given for a device position in the enclosure where D u 100 + (h x 5) with respect to the door hinge.

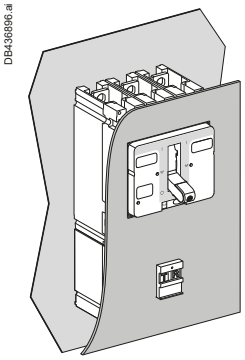


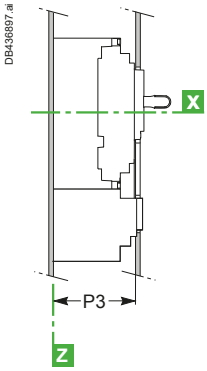
ComPacT NSX Front-Panel Cutouts

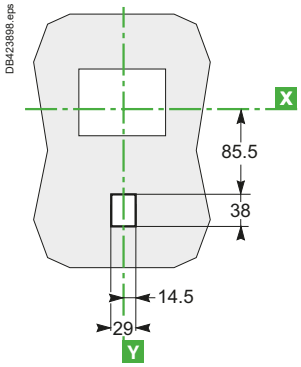
ComPacT NSX100 to 630 VigiPacT Add-on Fixed Version

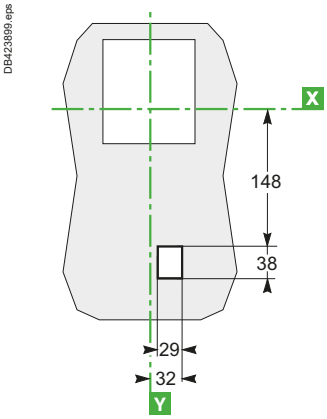
Bare Sheet Metal — NSX100 to 250 — NSX400/630

For Toggle

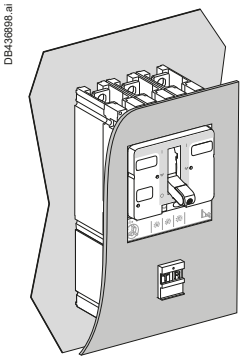


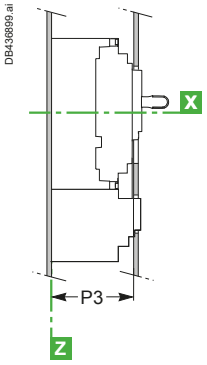


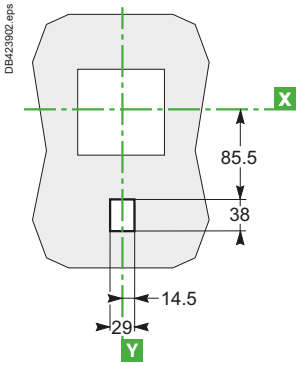


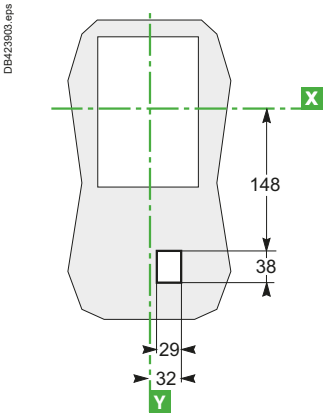


For Toggle with Access to Trip Unit



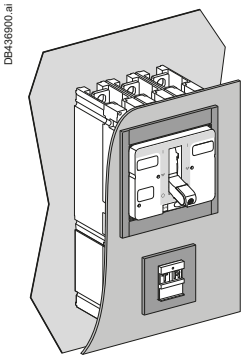


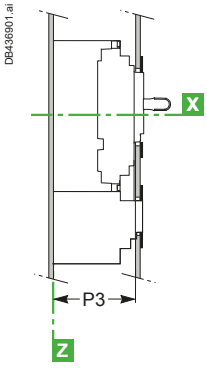


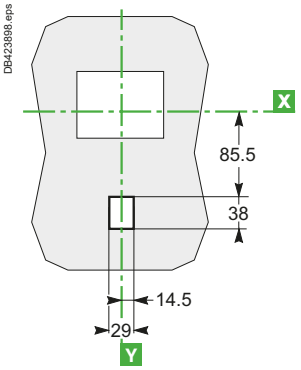


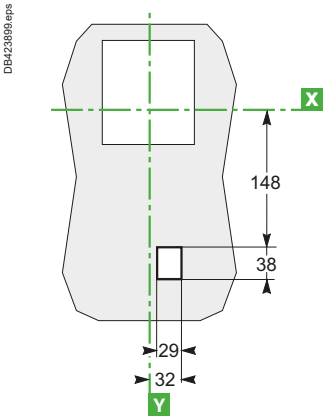
With IP30 Front-Panel Escutcheon — NSX100 to 250 — NSX400/630

For Toggle









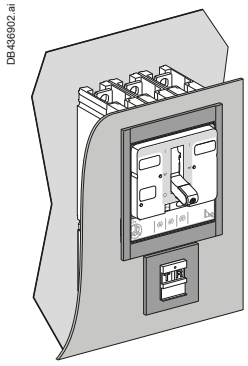
E

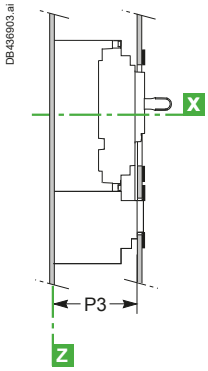
ComPacT NSX Front-Panel Cutouts

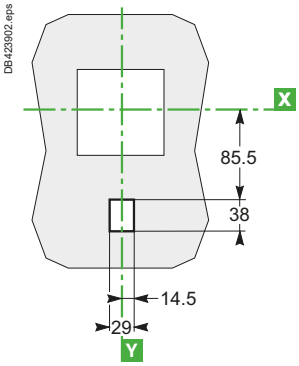
ComPacT NSX100 to 630 VigiPacT Add-on Fixed Version

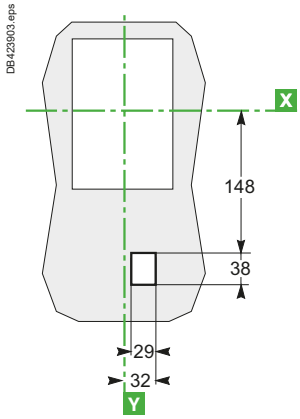
With IP30 Front-Panel Escutcheon — NSX100 to 250 — NSX400/630

For Toggle with Access to Trip Unit



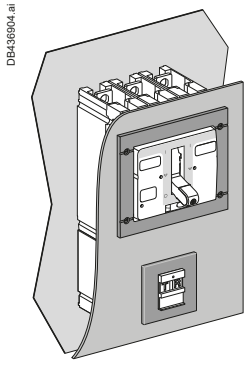


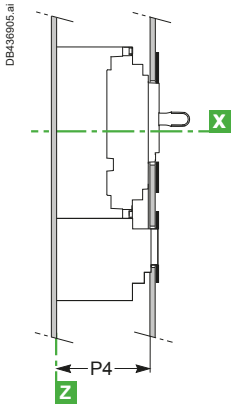


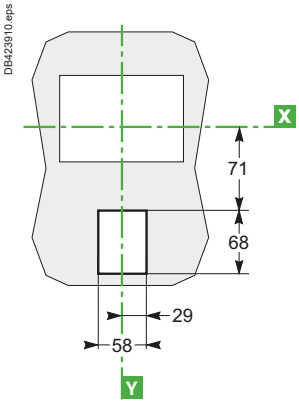


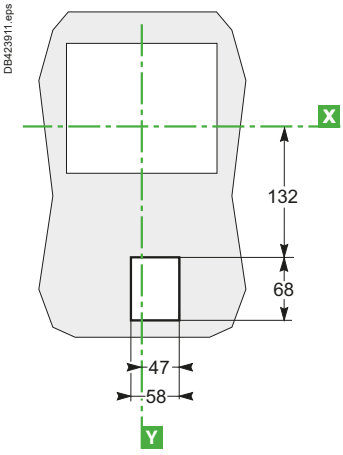
With IP40 Front-Panel Escutcheon — NSX100 to 250 — NSX400/630

For Toggle



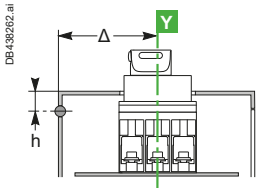






Type	P3	P4
NSX100/160/250	88	89
NSX400/630	112	113

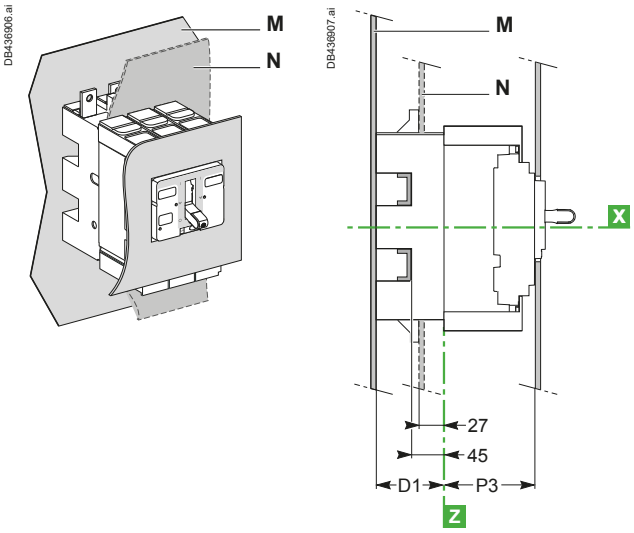
Note: Door cutout dimensions are given for a device position in the enclosure where Δ ≥ 100 + (h x 5) with respect to the door hinge.



ComPacT NSX Front-Panel Cutouts

ComPacT NSX100 to 630 Plug-in and Withdrawable Versions

Plug-in Version



Bare sheet metal

See ComPacT NSX100 to 630 fixed version, page E-56

With IP30 front-panel escutcheon

See ComPacT NSX100 to 630 fixed version, page E-56

With IP40 front-panel escutcheon

See ComPacT NSX100 to 630 fixed version, page E-57

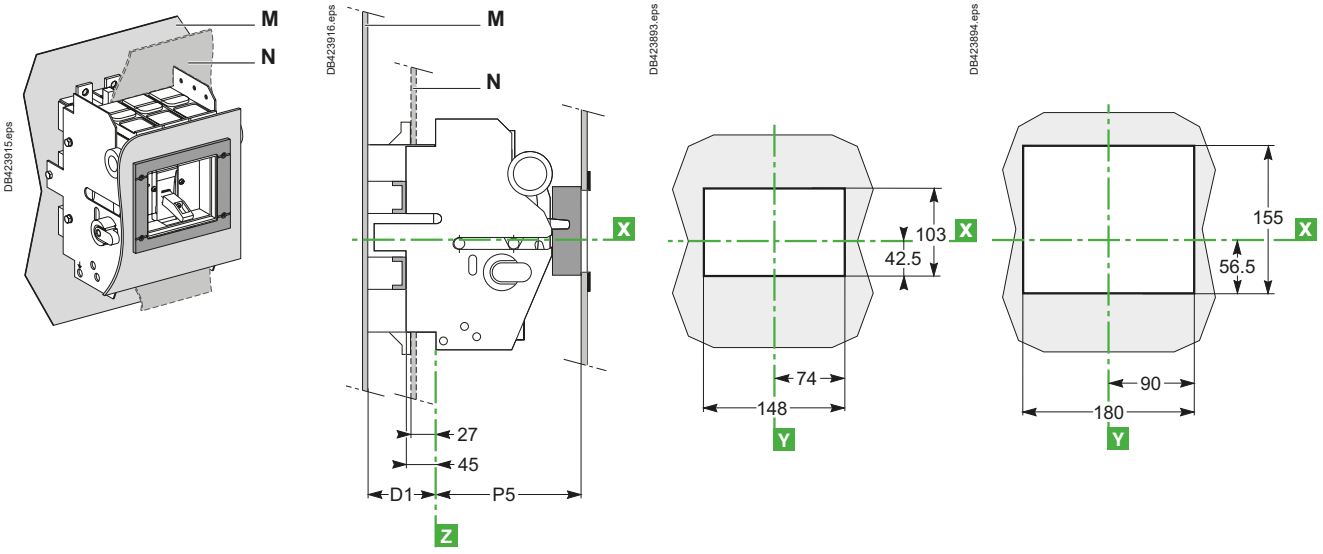
With toggle cover

See ComPacT NSX100 to 630 fixed version, page E-57

E

Withdrawable Version NSX100 to 250 NSX400/630

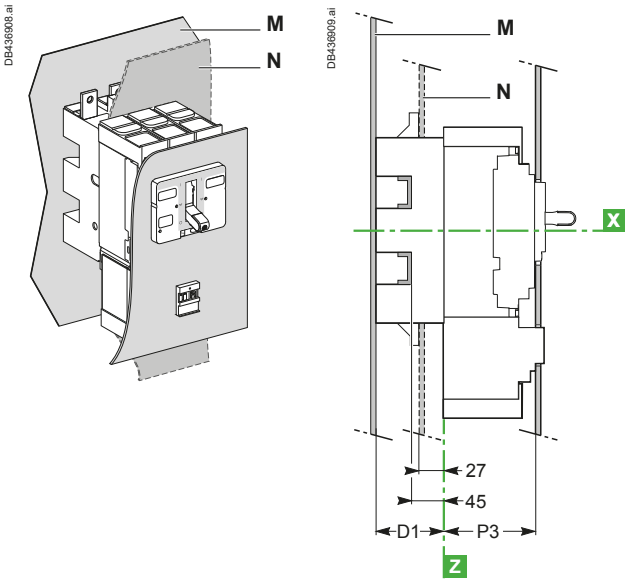
With Protection Collar and IP40 Front-Panel Escutcheon



ComPacT NSX Front-Panel Cutouts

ComPacT NSX100 to 630 VigiPacT Add-on Plug-in and Withdrawable Versions

Plug-in Version



Bare sheet metal

See ComPacT NSX100 to 630 fixed version, page E-58

With IP30 front-panel escutcheon

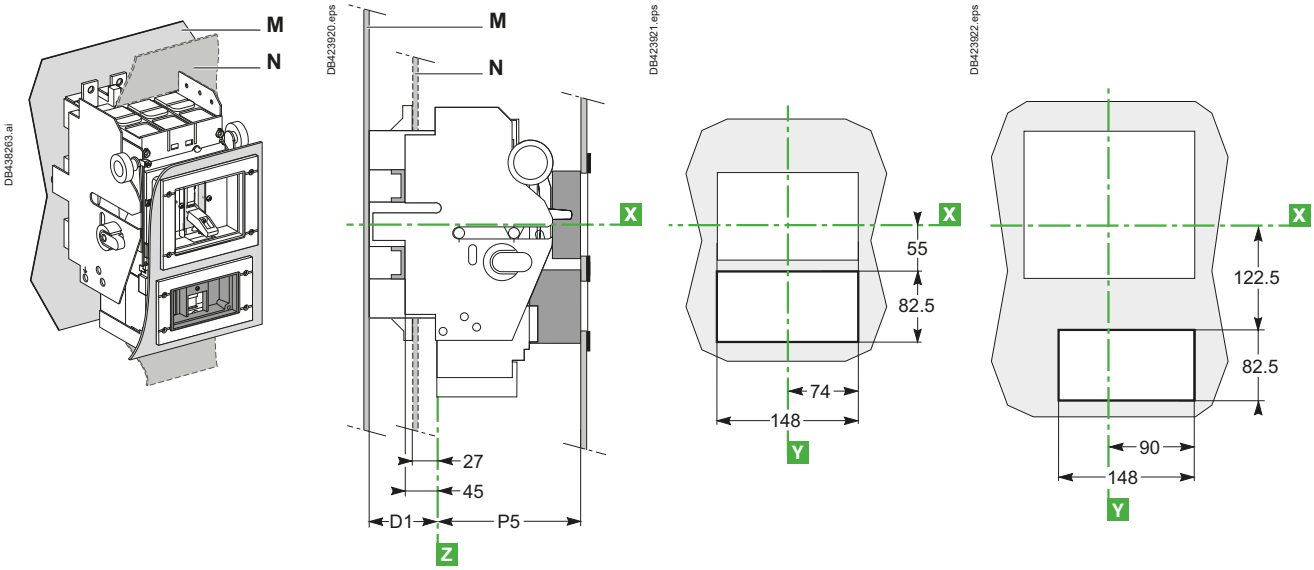
See ComPacT NSX100 to 630 fixed version, page E-58

With IP40 front-panel escutcheon

See ComPacT NSX100 to 630 fixed version, page E-59

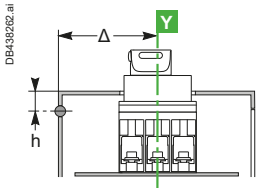
Withdrawable Version NSX100 to 250 NSX400/630

With Protection Collar and IP40 Front-Panel Escutcheon



Type	D1	P3	P5
NSX100/160/250	75	88	123
NSX400/630	100	112	147

Note: Door cutout dimensions are given for a device position in the enclosure where Δ ≥ 100 + (h x 5) with respect to the door hinge.



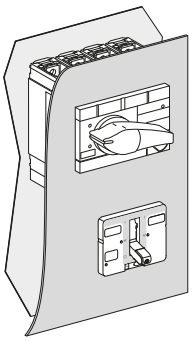
ComPacT NSX Front-Panel Cutouts

Visu Function for ComPacT NSX100 to 630 Fixed Version

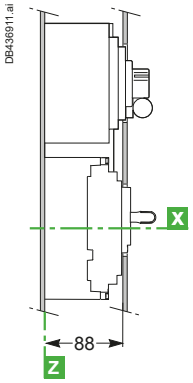
ComPacT NSX100 to 250 with ComPacT INV100 to 250 Visu Function

Bare Sheet Metal

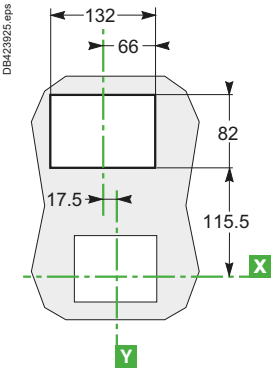
DB436910.ai



DB436911.ai

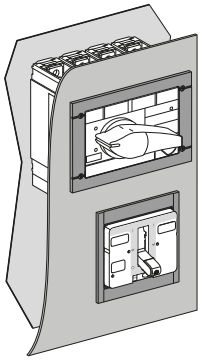


DB423925.eps

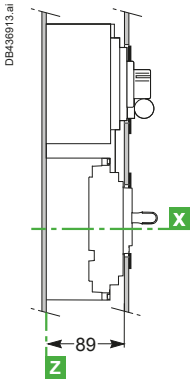


With IP40 Front-Panel Escutcheon

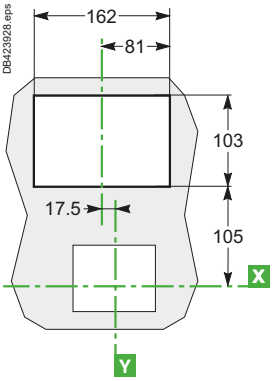
DB436912.ai



DB436913.ai



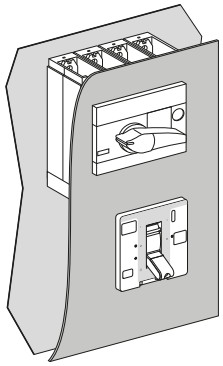
DB423928.eps



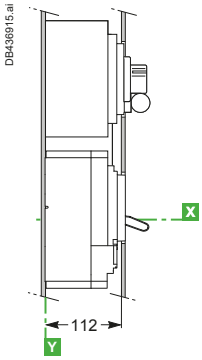
ComPacT NSX400/630 with ComPacT INV400 to 630 Visu Function

Bare Sheet Metal

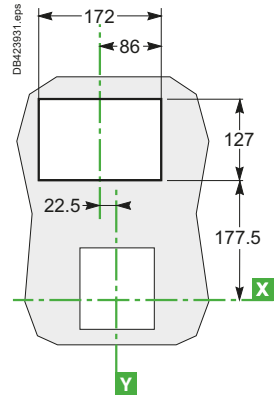
DB436914.ai



DB436915.ai

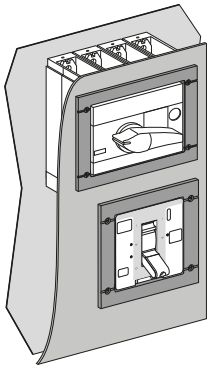


DB423931.eps

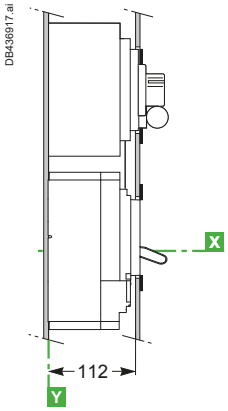


With IP40 Front-Panel Escutcheon

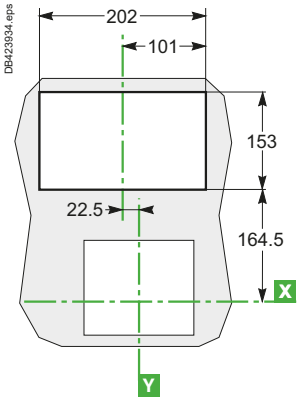
DB436916.ai



DB436917.ai



DB423934.eps



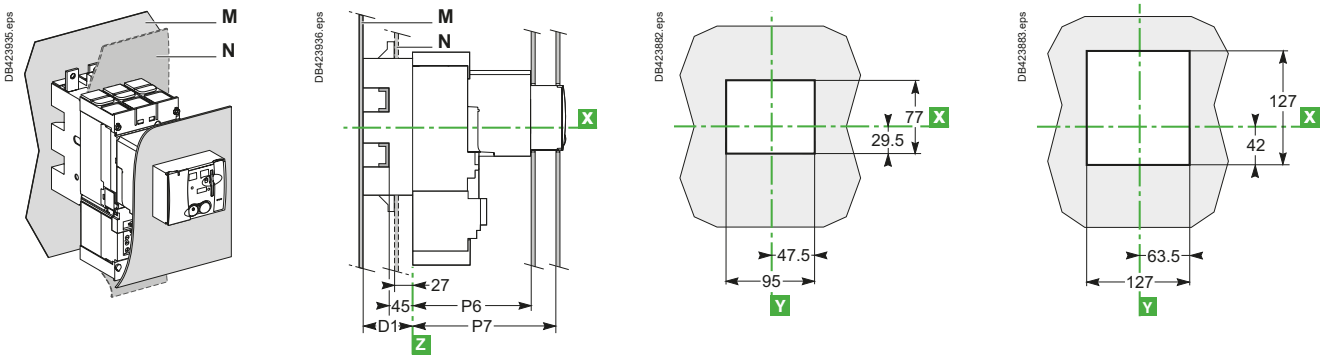
E

ComPacT NSX Front-Panel Cutouts

Motor Mechanism Module for ComPacT NSX100 to 630 with/ without VigiPacT Add-on

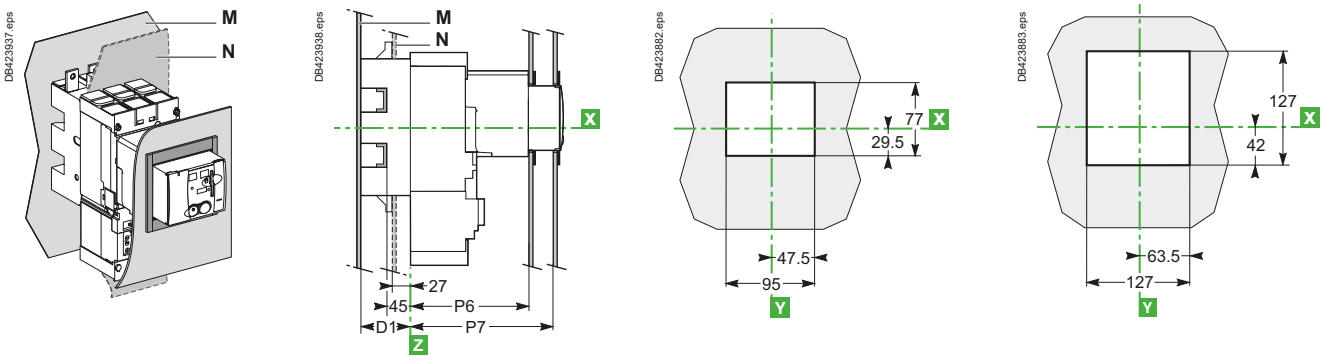
Bare Sheet Metal — NSX100 to 250 — NSX400/630

Fixed, Plug-in or Withdrawable Circuit Breaker



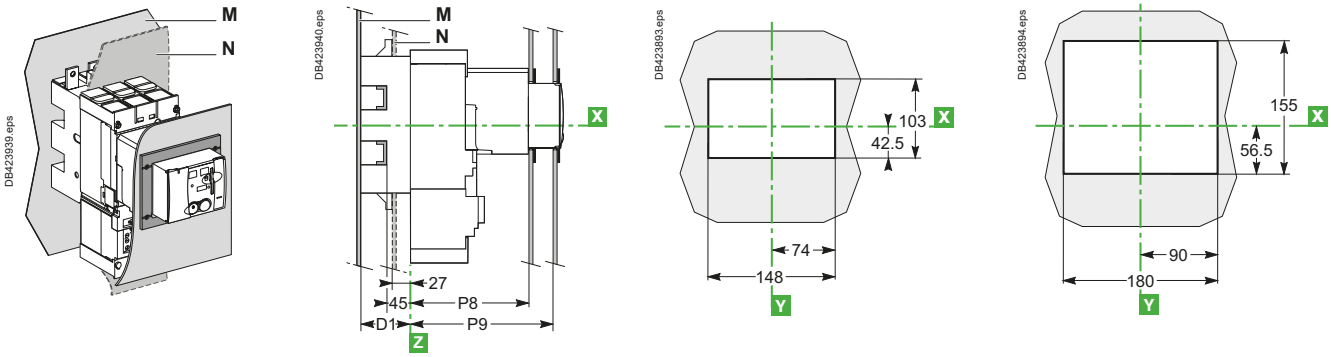
With IP30 Front-Panel Escutcheon — NSX100 to 250 — NSX400/630

Fixed, Plug-in or Withdrawable Circuit Breaker

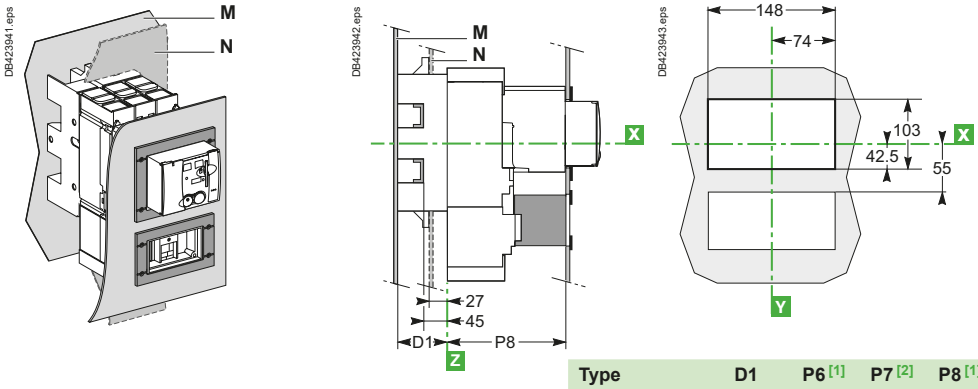


With IP40 Front-Panel Escutcheon — NSX100 to 250 — NSX400/630

Fixed, Plug-in or Withdrawable Circuit Breaker without Access to VigiPacT Add-on



Fixed or Plug-in Circuit Breaker with Access to VigiPacT Add-on



Type	D1	P6 [1]	P7 [2]	P8 [1]	P9 [2]
NSX100/160/250	75	145	177	146	178

[1] Plug-in version.

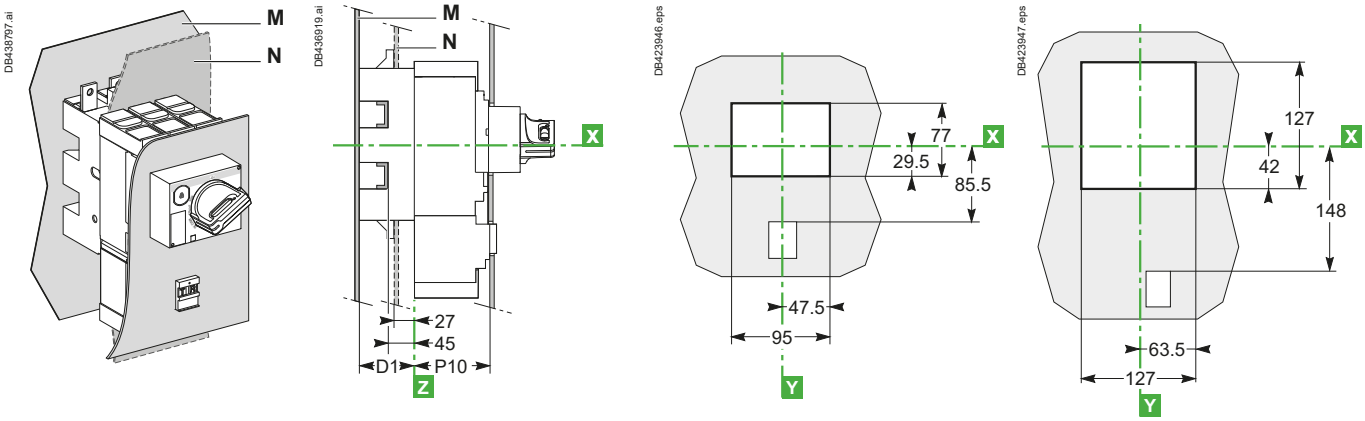
[2] Withdrawable version.

ComPacT NSX Front-Panel Cutouts

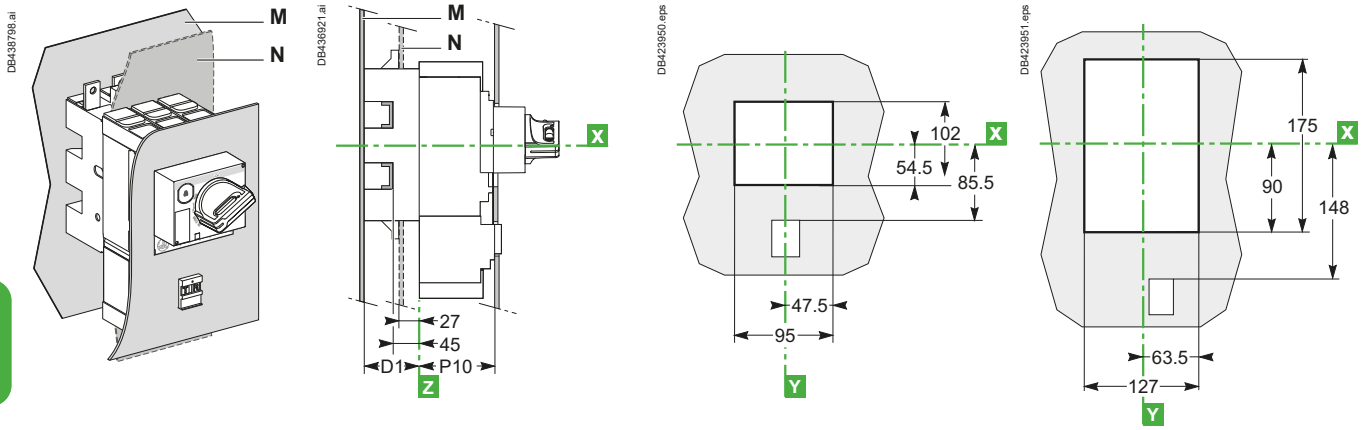
Direct Rotary Handle for ComPacT NSX100 to 630 with/without VigiPacT Add-on

Fixed or Plug-in Circuit Breakers — NSX100 to 250 — NSX400/630

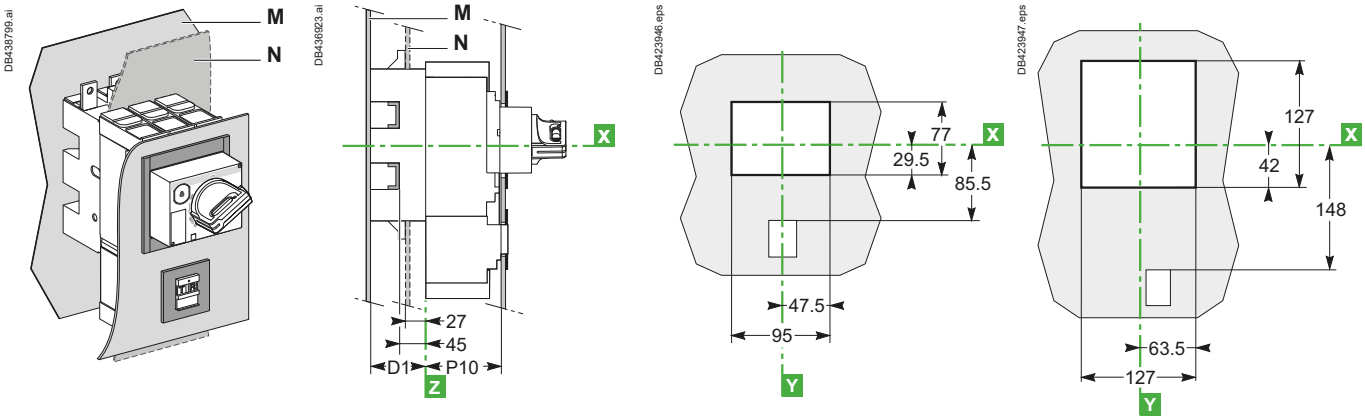
Bare Sheet Metal



Bare Sheet Metal with Access to the Trip Unit



With IP30 Front-Panel Escutcheon

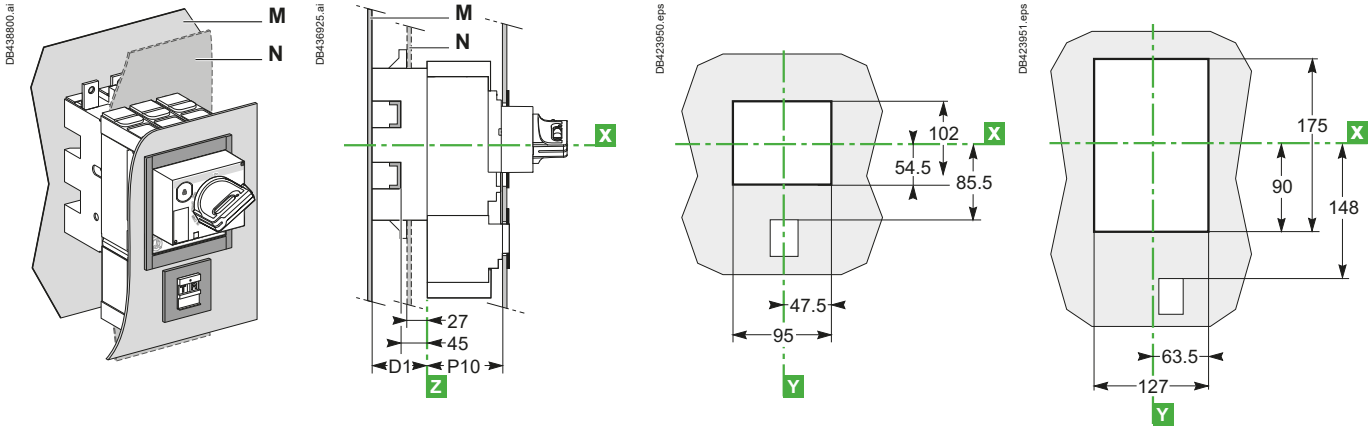


ComPacT NSX Front-Panel Cutouts

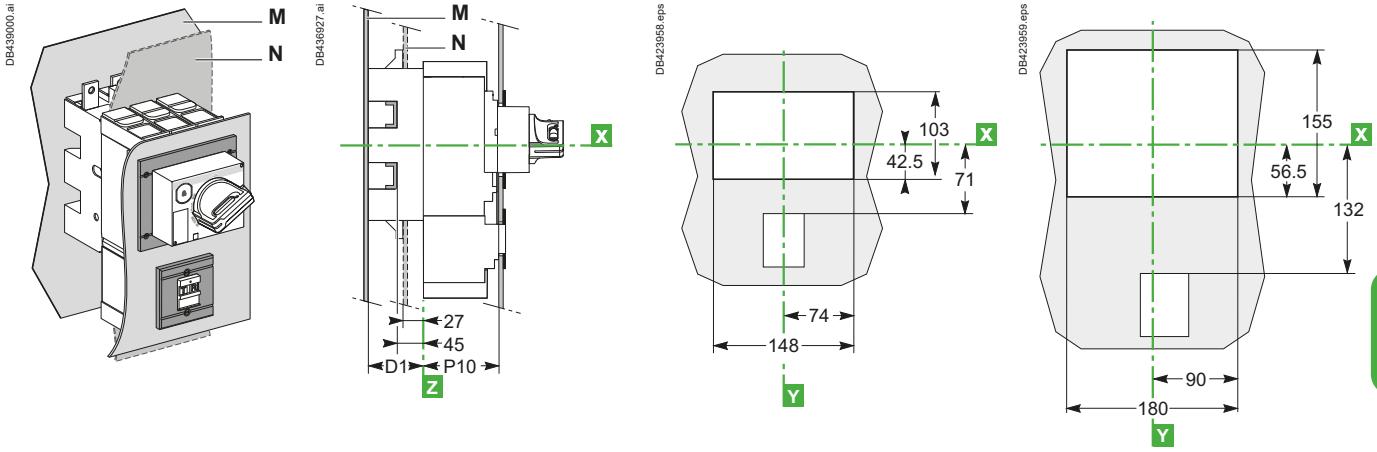
Direct Rotary Handle for ComPacT NSX100 to 630 with/without VigiPacT Add-on

Fixed or Plug-in Circuit Breakers — NSX100 to 250 — NSX400/630

With IP30 Front-Panel Escutcheon with Access to the Trip Unit

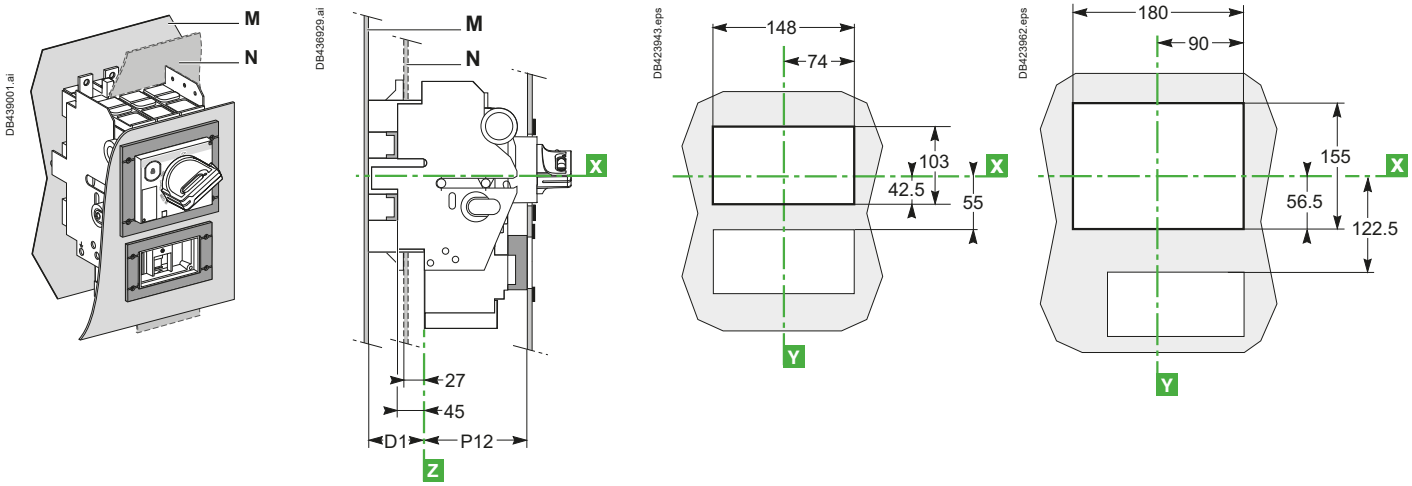


With IP40 Front-Panel Escutcheon



Fixed or Withdrawable Circuit Breakers — NSX100 to 250 — NSX400/630

With IP40 Front-Panel Escutcheon

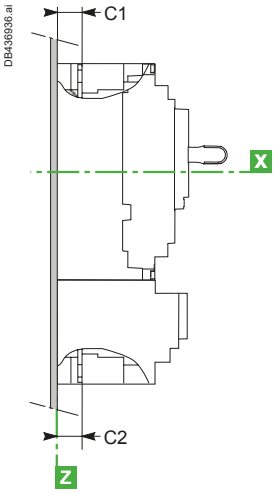


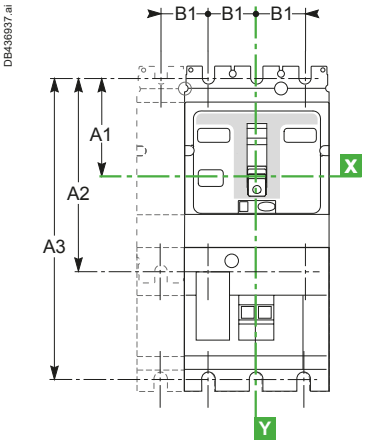
Type	D1	P10	P11	P12
NSX100/160/250	75	89	90	123
NSX400/630	100	112	113	147

ComPacT NSX Power Connections

ComPacT NSX100 to 630 with/without VigiPacT Add-on Fixed Version

Connection Locations

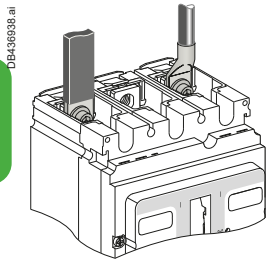




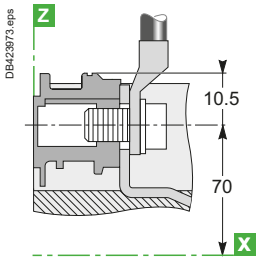
Type	A1	A2	B1	C1	C2
NSX100/160	70	140	35	19.5	19.5
NSX250	70	140	35	21.5	19.5
NSX400/630	113.5	227	45	26	26

Type	A1	A3	B1	C1	C2
NSX100/160 + Vigi	70	215	35	19.5	21.5
NSX250 + Vigi	70	215	35	21.5	21.5
NSX400/630 + Vigi	113.5	327	45	26	26

Front Connection without Accessories

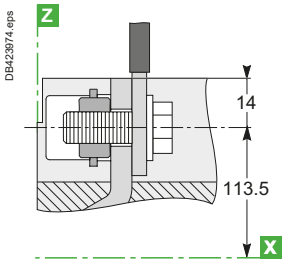


NSX100 to 250



Cables with lugs/bars

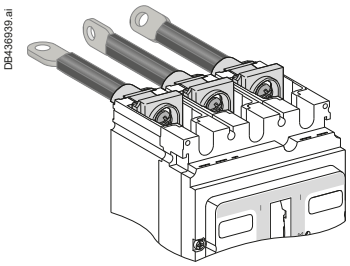
NSX400/630



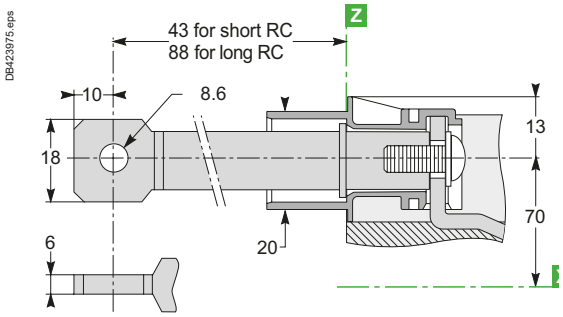
Bars/cables with lugs

Connection with Accessories

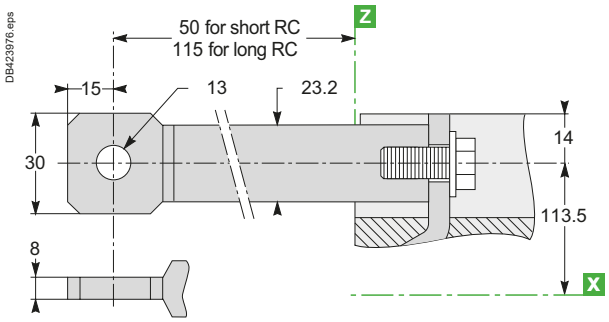
Long and Short Rear Connectors



NSX100 to 250



NSX400/630



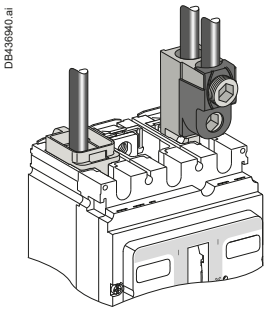
ComPacT NSX Power Connections

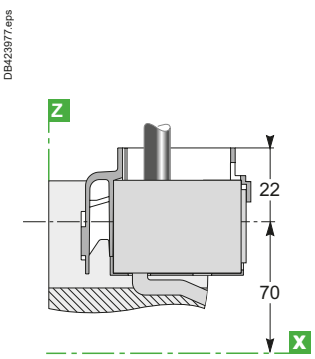
ComPacT NSX100 to 630 with/without VigiPacT Add-on Fixed Version

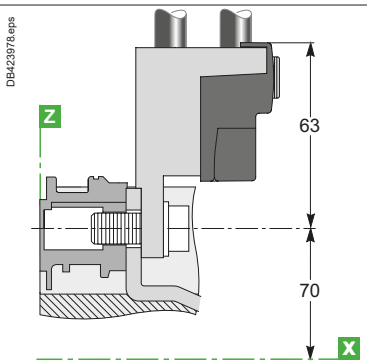
Connection with Accessories

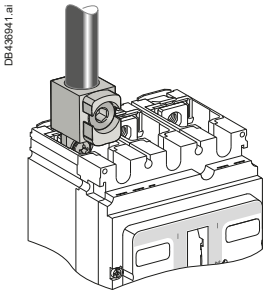
Bare-Cable Connectors

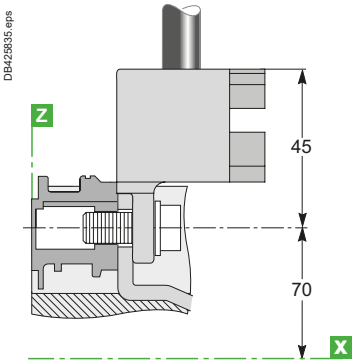
NSX100 to 250



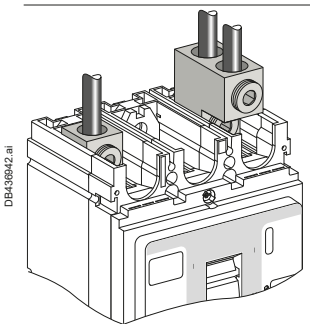


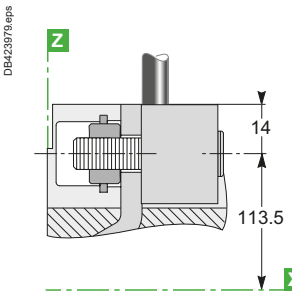


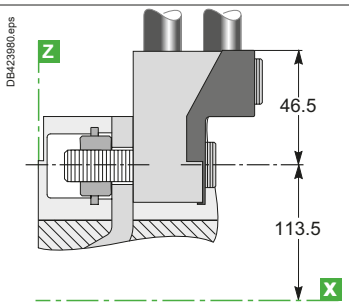




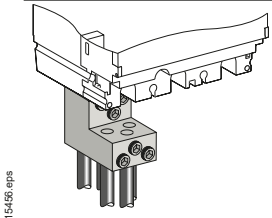
NSX400/630



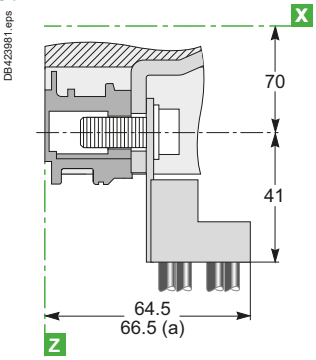




Distribution Connectors (for NSX100 to 250 Only)



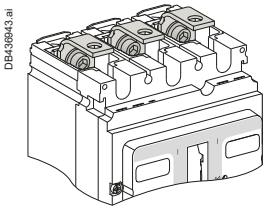
[a] VigiPacT add-on or NSX250



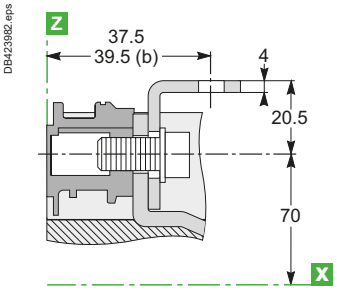
Right-Angle Terminal Extensions (Upstream Only)

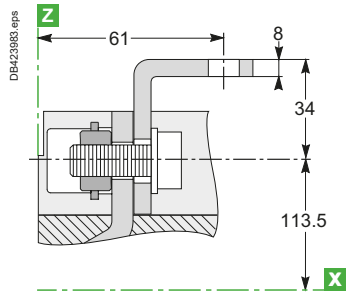
NSX100 to 250

NSX400/630



[b] NSX250





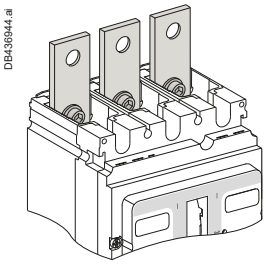
E

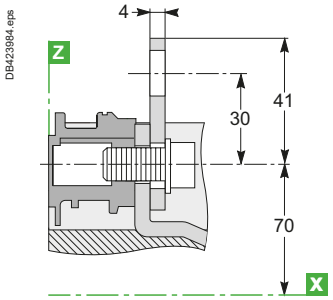
ComPacT NSX Power Connections

ComPacT NSX100 to 630 with/without VigiPacT Add-on Fixed Version

Connection with Accessories

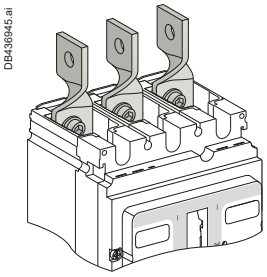
Straight Terminal Extensions (for NSX100 to 250 Only)

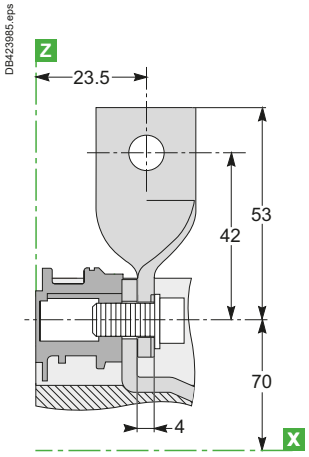




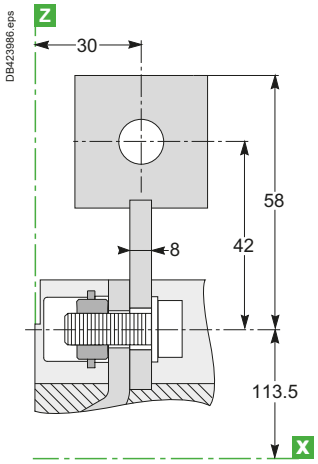
Edgewise Terminal Extensions

NSX100 to 250



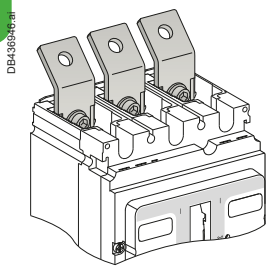


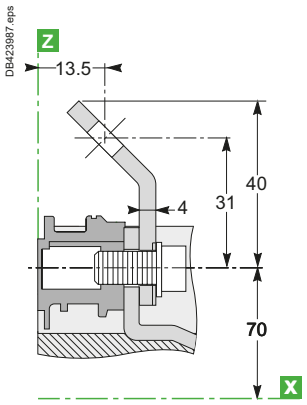
NSX400/630



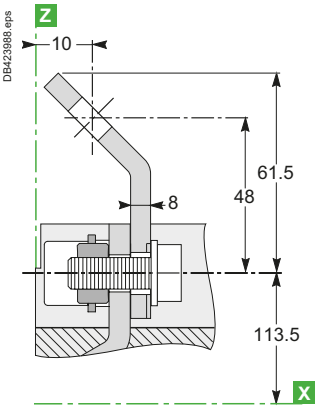
45° Terminal Extensions

NSX100 to 250



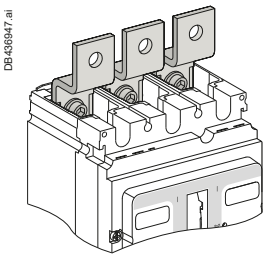


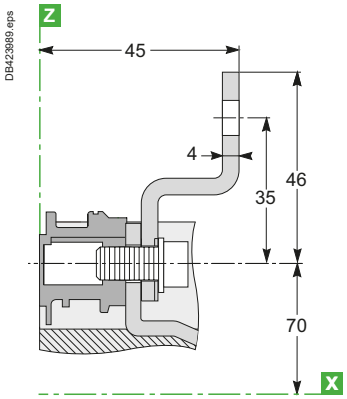
NSX400/630



Double-L Terminal Extensions

NSX100 to 250



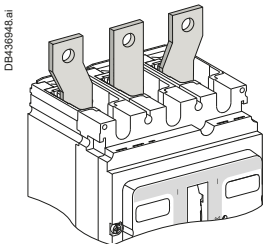


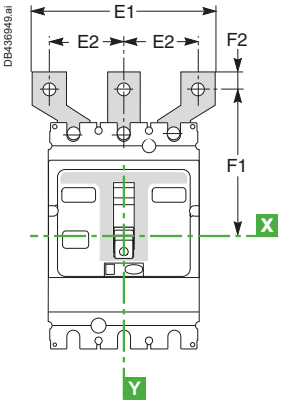
ComPacT NSX Power Connections

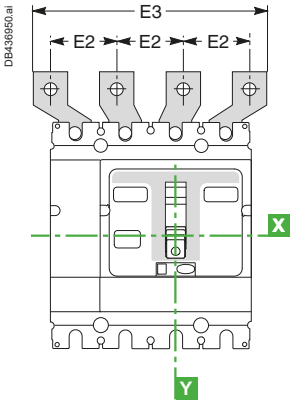
ComPacT NSX100 to 630 with/without VigiPacT Add-on Fixed Version

Connection with Accessories

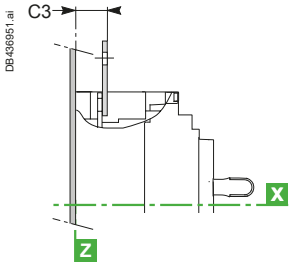
Spreaders 3P 4P



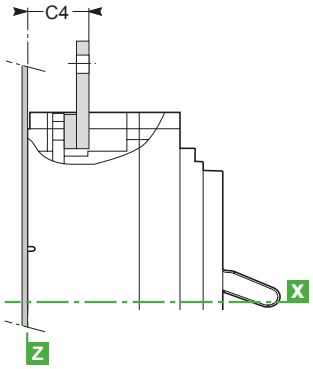




NSX100 to 250

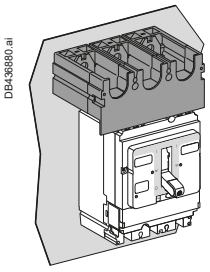


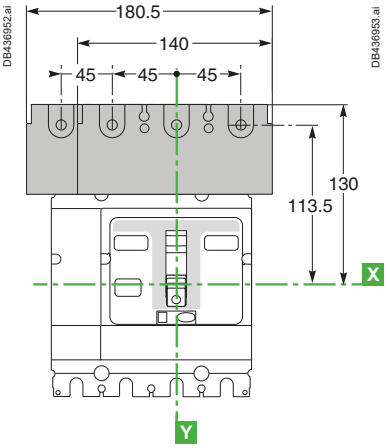
NSX400/630

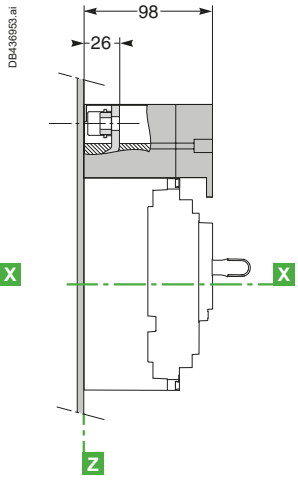


Type	C3	C4	E1	E2	E3	F1	F2
NSX100/160	23.5	-	114	45	159	100	11
NSX250	25.5	-	114	45	159	100	11
NSX400/630	-	44	135 170	52.5 70	187.5 240	152.5 166	15 15

One-Piece Spreader (for NSX100 to 250 Only)





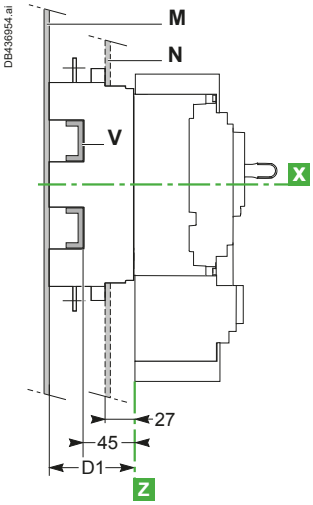


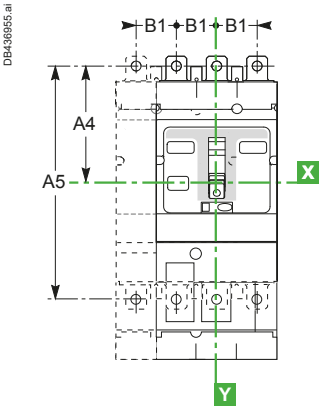
E

ComPacT NSX Power Connections

ComPacT NSX100 to 630 with/without VigiPacT Add-on Plug-in and Withdrawable Versions

Connection Locations





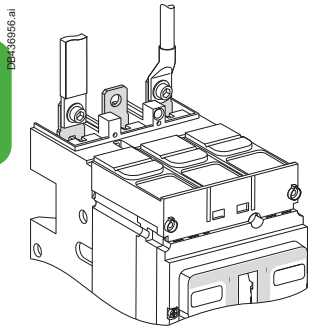
Type	A4	A5	B1	D1
NSX100 to 250	100	200	35	75
NSX400/630	156.5	313	45	100

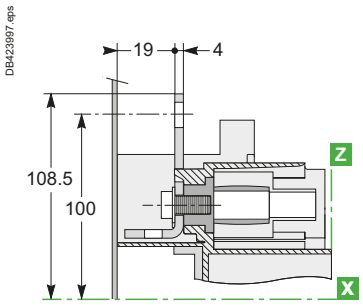
Note:
- For mounting on a backplate, the insulating screen supplied with the plug-in base must be installed.
- For withdrawable versions, terminal shields are recommended.

Connection without Accessories

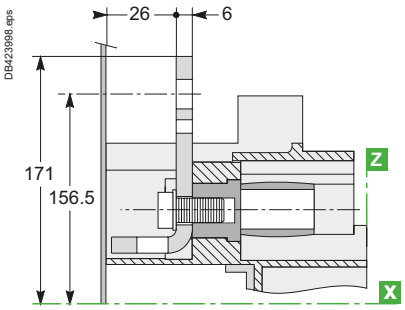
Front Connection: Mounting on Backplate (M) or Rails (V)

NSX100 to 250



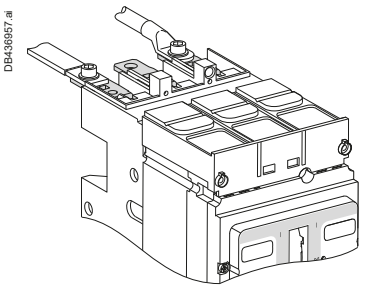


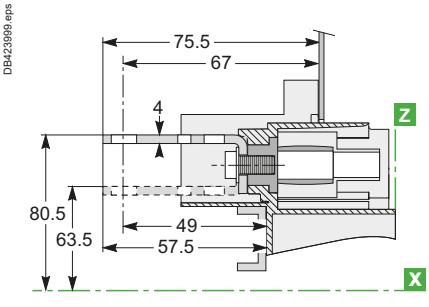
NSX400/630

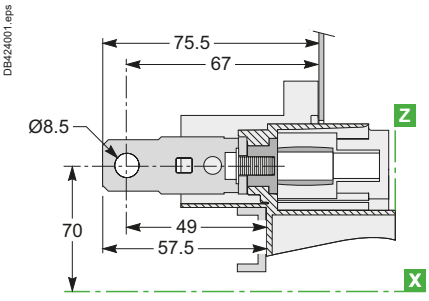


Rear Connection: Mounting Through Front Panel (N) or on Rails (V)

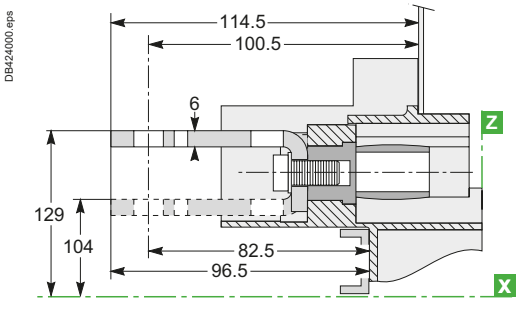
NSX100 to 250

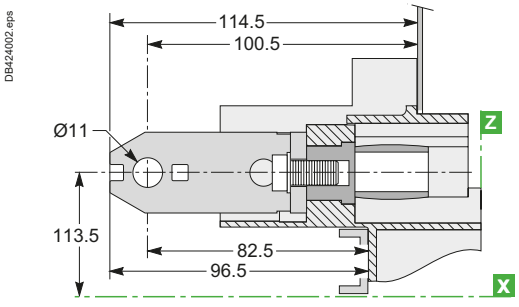






NSX400/630





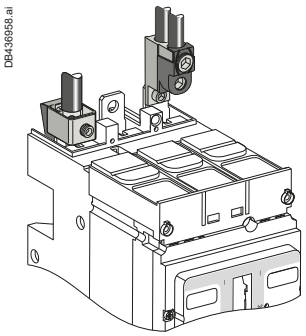
ComPacT NSX Power Connections

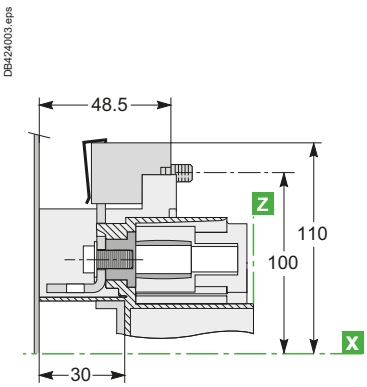
ComPacT NSX100 to 630 with/without VigiPacT Add-on Plug-in and Withdrawable Versions

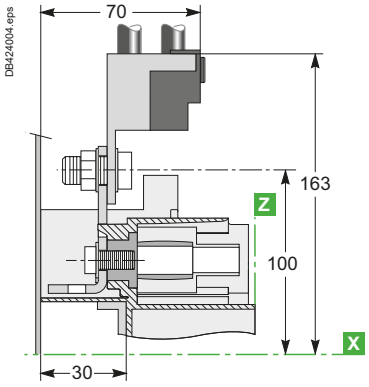
Connection with Accessories

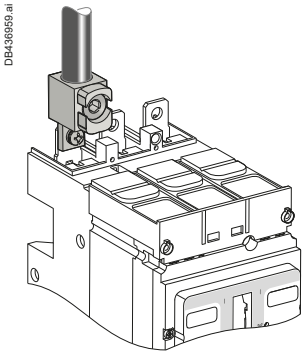
Bare-Cable Connectors: Mounting on Backplate (M) or Rails (V)

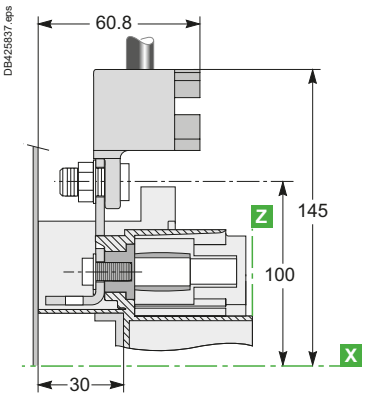
NSX100 to 250



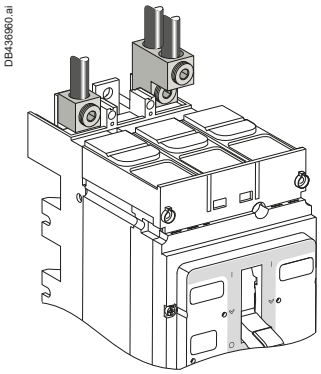


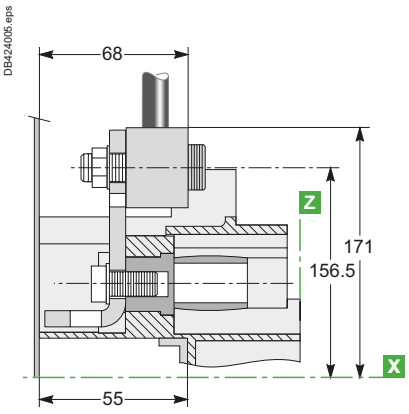


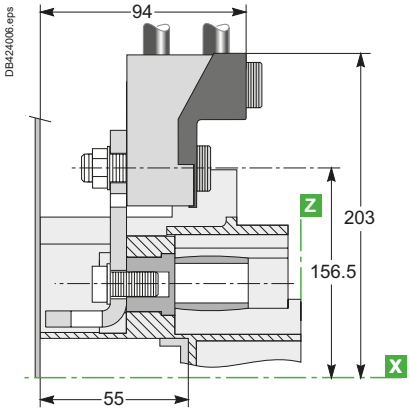




NSX400/630

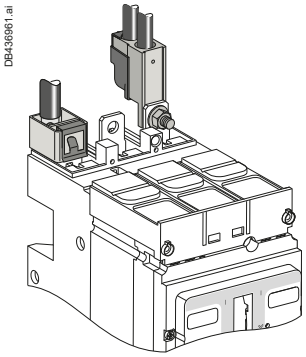


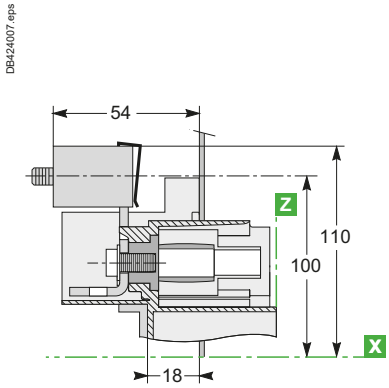


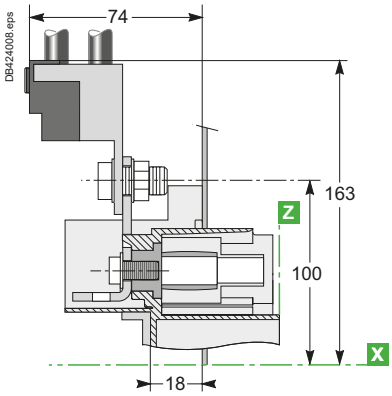


Bare-Cable Connectors: Mounting Through Front Panel (N) or on Rails (V)

NSX100 to 250







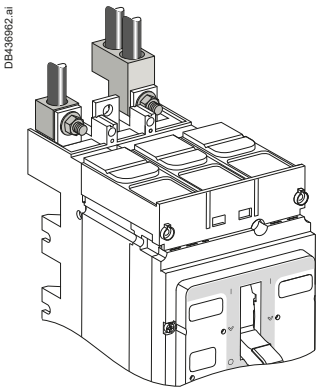
E

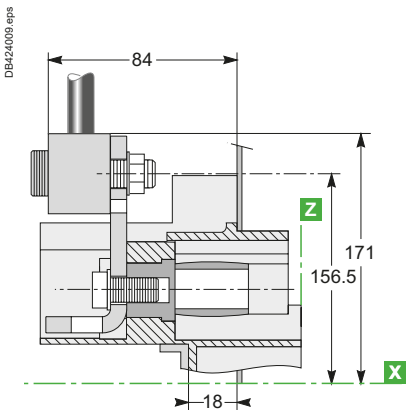
ComPacT NSX Power Connections

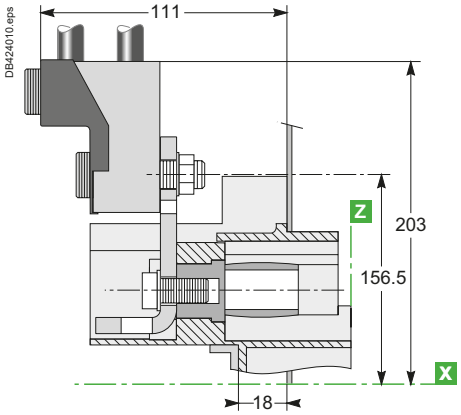
ComPacT NSX100 to 630 with/without VigiPacT Add-on Plug-in and Withdrawable Versions

Bare-Cable Connectors: Mounting Through Front Panel (N) or on Rails (V)

NSX400/630



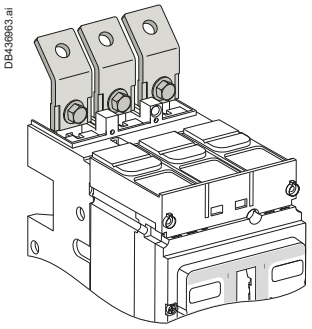


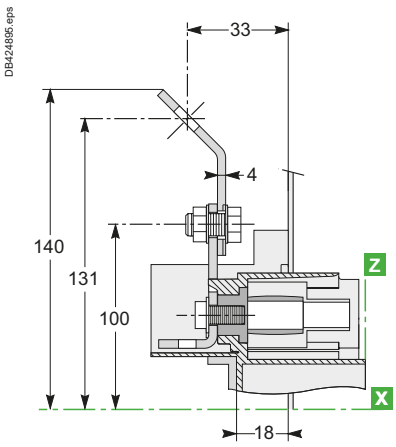


Connection with Accessories

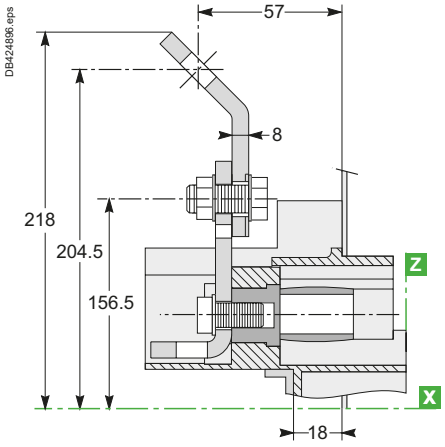
45° Extensions: Mounting Through Front Panel (N) or on Rails (V)

NSX100 to 250



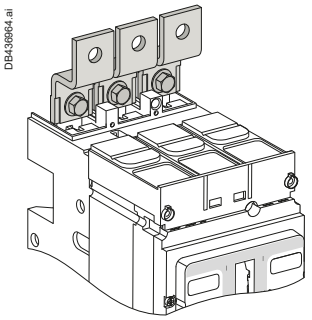


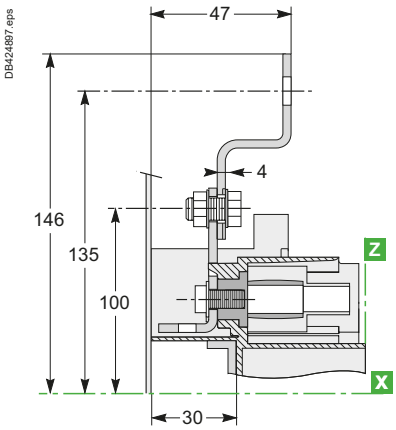
NSX400/630



Double-L Extensions: Mounting on Backplate (M) or Rails (V)

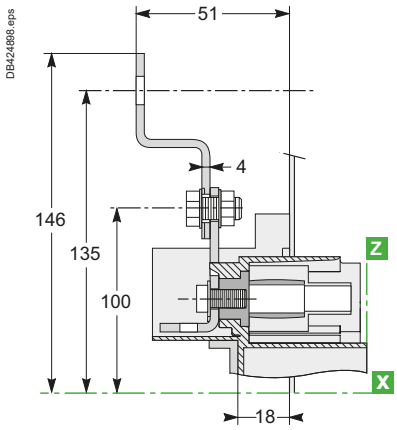
NSX100 to 250





Double-L Extensions: Mounting Through Front Panel (N) or on Rails (V)

NSX100 to 250

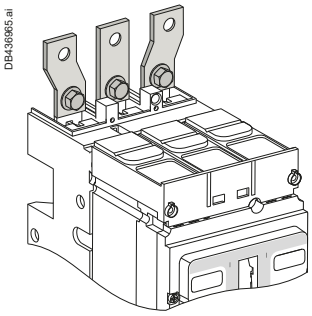


ComPacT NSX Power Connections

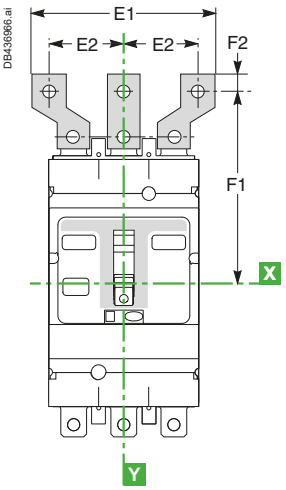
ComPacT NSX100 to 630 with/without VigiPacT Add-on Plug-in and Withdrawable Versions

Connection with Accessories

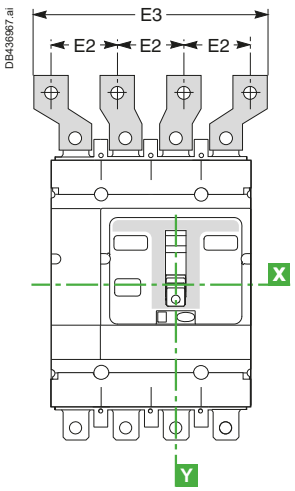
Spreaders: Mounting on Backplate (M) or Rails (V)



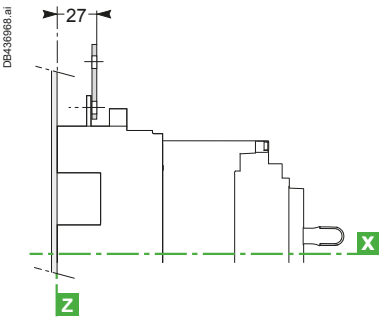
3P



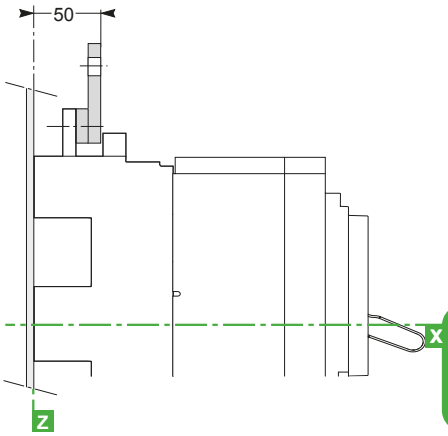
4P



NSX100 to 250



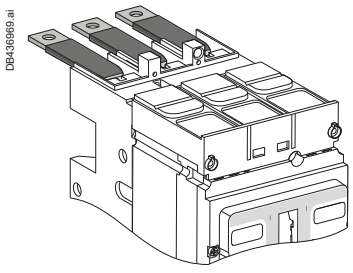
NSX400/630



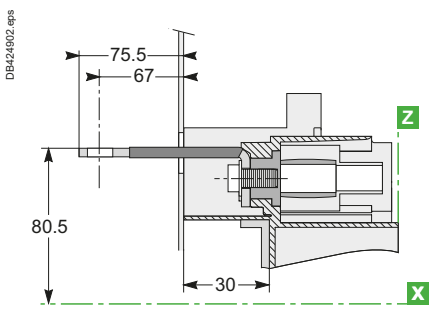
Type	E1	E2	E3	F1	F2
NSX100 to 250	114	45	159	130	11
NSX400/630	135 170	52.5 70	187.5 240	195.5 209	15 15

Long Insulated Rear Connectors: Mounting on Backplate (M) or Rails (V)

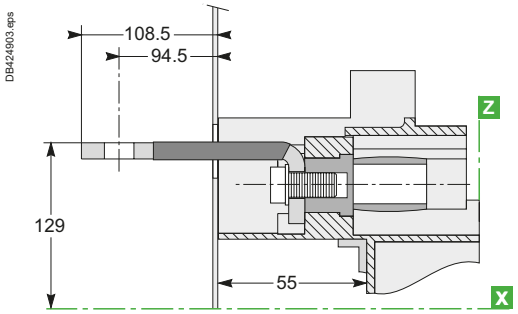
Exterior-mounted rear connectors



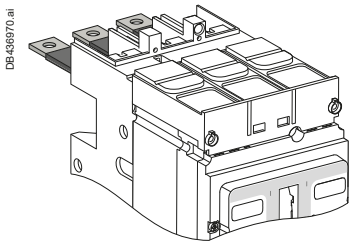
NSX100 to 250



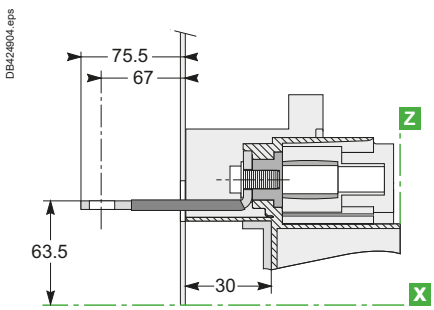
NSX400/630



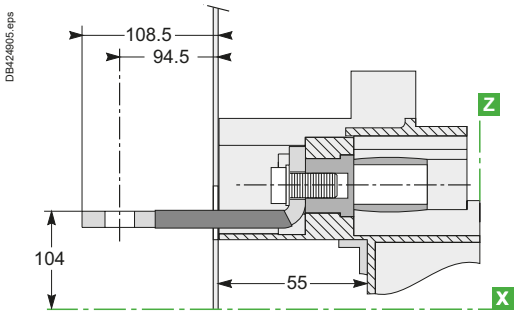
Interior-mounted rear connectors



NSX100 to 250



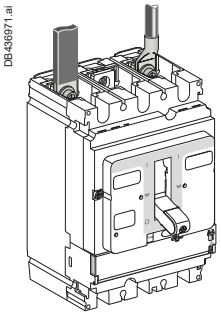
NSX400/630

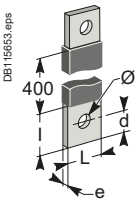


Long, insulated connectors are mandatory.

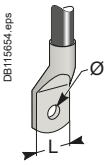
ComPacT NSX Power Connections

Connection of Insulated Bars or Cables with Lugs to ComPacT NSX100 to 630 with/without VigiPacT Add-on





Bar.



Lug.

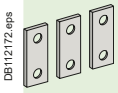
Direct Connection for NSX100 to 630

Dimensions		NSX100	NSX160/250	NSX400/630
Bars	L (mm)	⩽ 25	⩽ 25	⩽ 32
	l (mm)	d + 10	d + 10	d + 15
	d (mm)	⩽ 10	⩽ 10	⩽ 15
	e (mm)	⩽ 6	⩽ 6	3 ⩽ e ⩽ 10
	Ø (mm)	6.5	8.5	10.5
Lugs	L (mm)	⩽ 25	⩽ 25	⩽ 32
	Ø (mm)	6.5	8.5	10.5
Torque (Nm) [1]		10	15	50
Torque (Nm) [2]		5/5	5/5	20/11
Torque (Nm) [3]		8	8	20

[1] Tightening torque on the circuit breaker for lugs or bars.
[2] Tightening torque on fixed devices for rear connectors//tightening torque on plug-in or withdrawable devices for power connectors.
[3] Tightening torque on the plug-in base for terminal extensions.

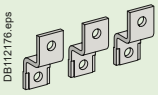
Accessories for NSX100 to 250

Straight terminal extensions



Tinned copper

Double-L terminal extensions

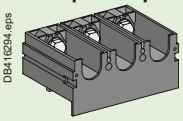


Tinned copper

Spreaders: separate parts

Tinned copper

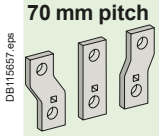
one-piece spreader



For U > 600 V, the mandatory insulation kit is not compatible with spreaders made up of separate parts. The one-piece spreader must be used.

Accessories for NSX400 and 630

Spreaders made up of separate parts for 52.5 and 70 mm pitch

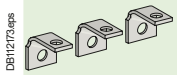


Tinned copper

For U > 600 V, use of the 52.5 mm pitch spreaders requires a specific insulation kit.
The 70 mm pitch spreaders may not be used.

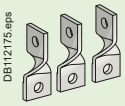
Accessories for NSX100 to 630

Right-angle terminal extensions



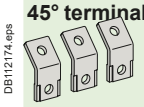
Tinned copper
To be mounted on upstream side.

Edgewise terminal extensions



Tinned copper

45° terminal extensions

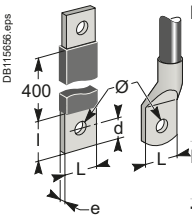


Tinned copper

Connection with Accessories for NSX100 to 250 (60228)

Pole pitch	
Without spreaders	35 mm
With spreaders	45 mm

Dimensions			With spreaders or terminal extensions NSX100	NSX160/250
	Bars	L (mm)	⩽ 25	⩽ 25
		l (mm)	20 ⩽ l ⩽ 25	20 ⩽ l ⩽ 25
		d (mm)	⩽ 10	⩽ 10
		e (mm)	⩽ 6	⩽ 6
		Ø (mm)	6.5	8.5
	Lugs	L (mm)	⩽ 25	⩽ 25
		Ø (mm)	6.5	8.5
	Torque (Nm) [1]		10	15
	Torque (Nm) [2]		5	5

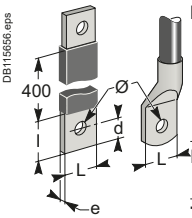


[1] Tightening torque on the circuit breaker for spreaders or terminal extensions.
[2] Tightening torque on the plug-in base for spreaders or terminal extensions.

Spreaders and straight, right-angle, 45°, double-L and edgewise terminal extensions are supplied with flexible interphase barriers.

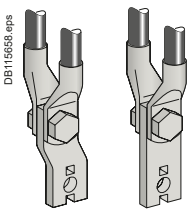
Connection with Accessories for NSX400 and 630 (60228)

Pole pitch			
Without spreaders		45 mm	
With spreaders		52.5 or 70 mm	
Dimensions		**With spreaders**	**With terminal extensions**
Bars	L (mm)	⩽ 40	⩽ 32
	l (mm)	d + 15	30 ⩽ l ⩽ 34
	d (mm)	⩽ 20	⩽ 15
	e (mm)	3 ⩽ e ⩽ 10	3 ⩽ e ⩽ 10
	Ø (mm)	12.5	10.5
Lugs	L (mm)	⩽ 40	⩽ 32
	Ø (mm)	12.5	10.5
Torque (Nm) [1]		50	50
Torque (Nm) [2]		20	20



[1] Tightening torque on the circuit breaker for spreaders or terminal extensions.
[2] Tightening torque on the plug-in base for spreaders or terminal extensions.

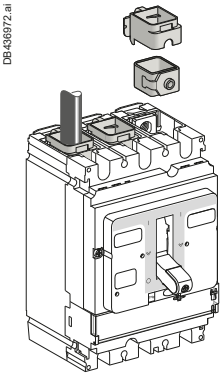
Spreaders and right-angle, 45° and edgewise terminal extensions are supplied with flexible interphase barriers.

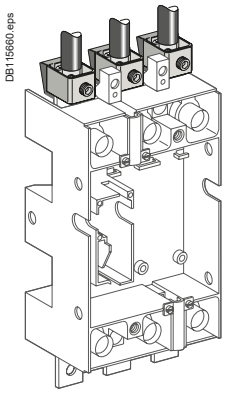


Mounting detail: 2 cables with lugs.

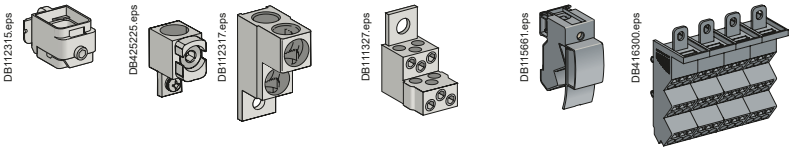
ComPacT NSX Power Connections

Connection of Bare Cables to ComPacT NSX100 to 630 with/without VigiPacT Add-on

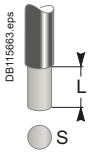




Connection for NSX100 to 250



1-cable connector | 2-cable connector | Distribution connector | Linergy DP and Linergy DX distribution block

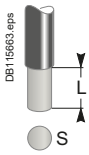


	1-cable connector	Steel ≤ 160 A	Aluminium ≤ 250 A		
L (mm)	25	25			
S (mm²) Cu/Al	1.5 to 95 [1]	25 to 50	70 to 95	120 to 240 150 max. flex.	
Torque (Nm)	12	20	26	31	
2-cable connector					
L (mm)	25 or 50				
S (mm²) Cu/Al	2 x 50 to 2 x 120				
Torque (Nm)	22				
6-cable distribution connector (copper or aluminium)					
L (mm)	15 or 30				
S (mm²) Cu/Al	1.5 to 6 [1]	8 to 35			
Torque (Nm)	4	6			
Linergy DX and Linergy DP distribution block (6 or 9 cables)					
L (mm)	12	16			
S (mm²) Cu/Al	6 x 4 to 10	3 x 6 to 16			

[1] For flexible cables from 1.5 to 4 mm², connection with crimped or self-crimping ferrules.

Connection for NSX400 and 630

1-cable connector | 2-cable connector



	1-cable connector	2-cable connector
L (mm)	30	30 or 60
S (mm²) Cu/Al	35 to 300 rigid 240 max. flex.	2 x 35 to 2 x 240 rigid 240 max. flex.
Torque (Nm)	31	31

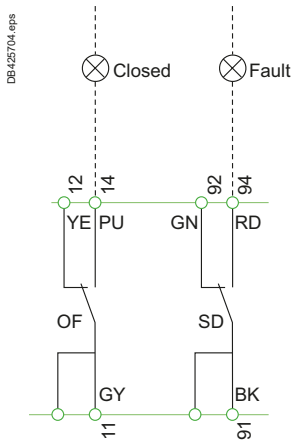
Conductor Materials and Electrodynamic Stresses

ComPacT NSX circuit breakers can be connected indifferently with bare-copper, tinned-copper and tinned-aluminium conductors (flexible or rigid bars, cables).
In the event of a short-circuit, thermal and electrodynamic stresses will be exerted on the conductors. They must therefore be correctly sized and held in place by supports.
Electrical connection points on switchgear devices (switch-disconnectors, contactors, circuit breakers, etc.) should not be used for mechanical support.
Any partition between upstream and downstream connections of the device must be made of non-magnetic material.

E

The diagram is shown with circuits de-energized, relays in normal position, and all devices open, connected, and charged. Terminal connections shown as **O** must be connected by the customer.

Indication Contacts



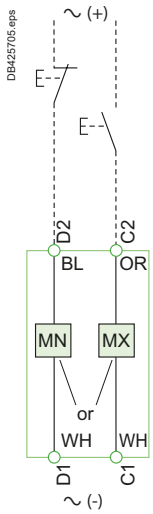
Indication Contacts

OF	Device ON/OFF indication contacts
SD	Trip indication contact

Color Code for Auxiliary Wiring

BK: Black
GN: Green
GY: Grey
RD: Red
PU: Purple
YE: Yellow

Remote Operation



Remote Operation

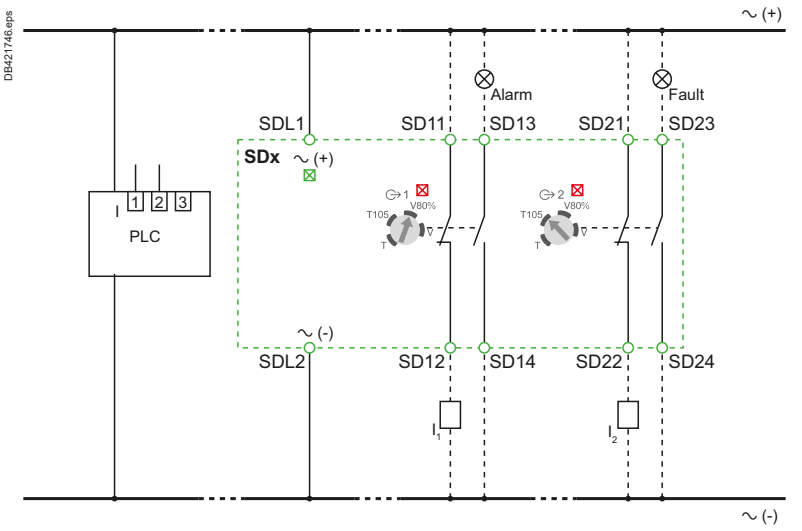
MN	Undervoltage Release
or	
MX	Shunt trip Release

Color Code for Auxiliary Wiring

BL: Blue
OR: Orange
WH: White

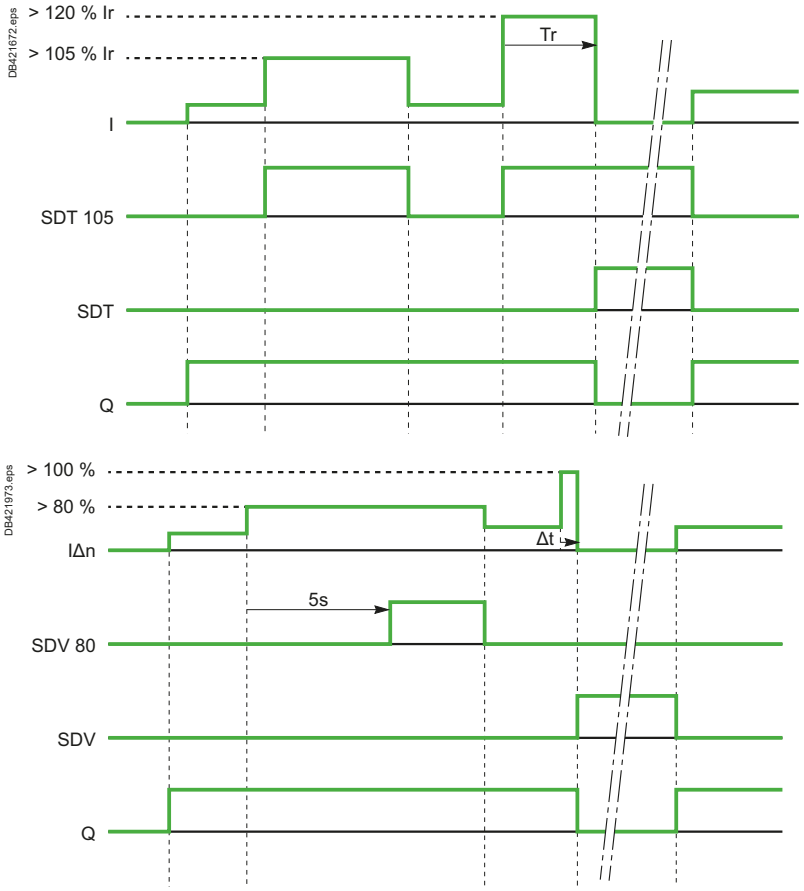
The diagram is shown with circuits de-energized, all devices open, connected and charged and relays in normal position.

Connection



Operation

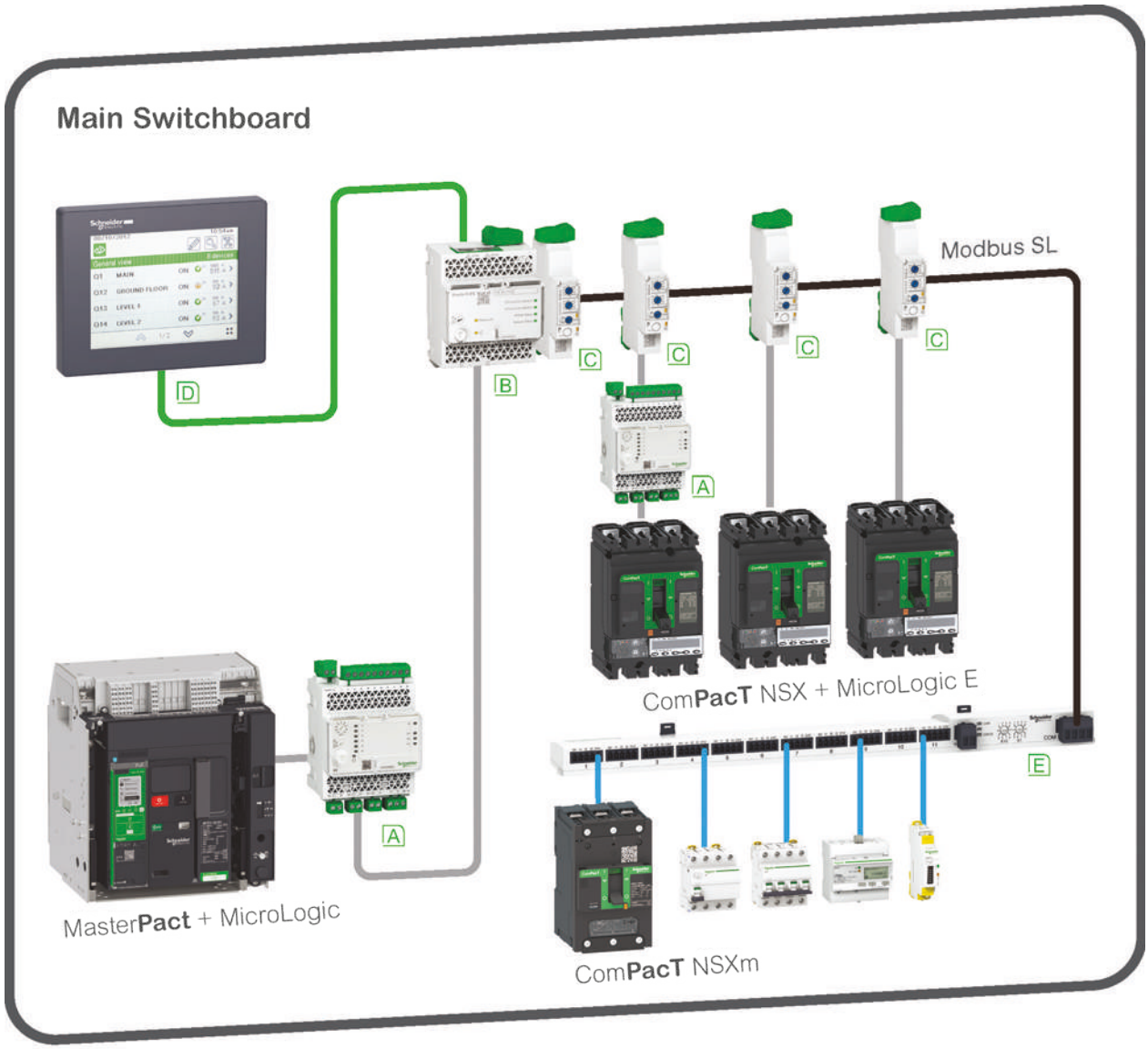
I: charge current
SDT105: overload alarm
SDT: overload trip indication
$I_{\Delta n}$: earth leakage current
SDV80: earth leakage alarm
SDV: earth leakage trip indication
Q: circuit breaker



E

Connection of Circuit Breakers to the Modbus Communication Network

PB121727.psd

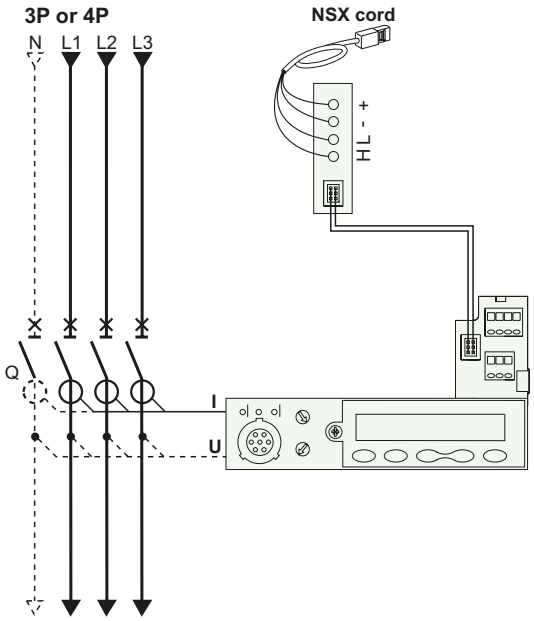


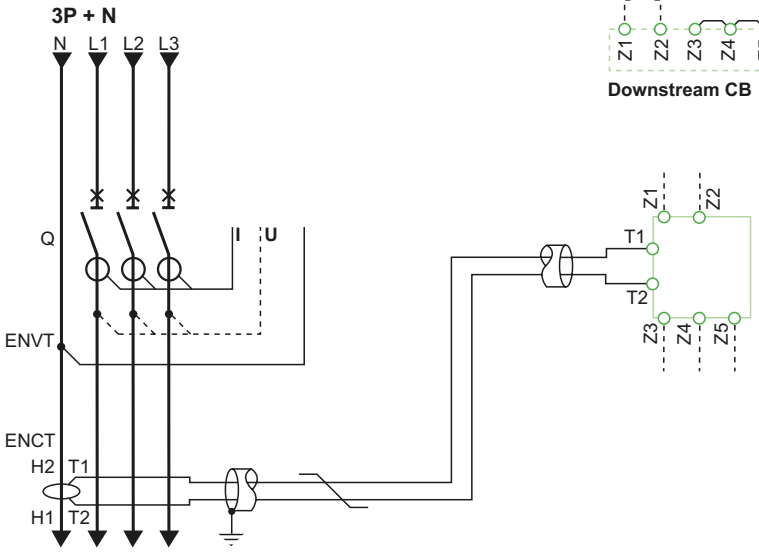
A I/O
B IFE interface + gateway
C IFM
D FDM128
E Acti9 Smartlink Modbus

Ethernet
Modbus SL
ULP
Hard wired

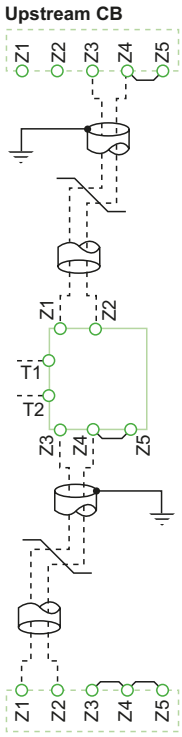
DB425443.eps

Power

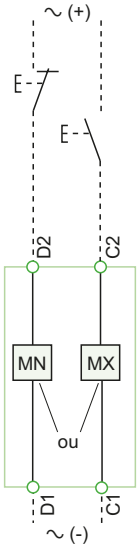


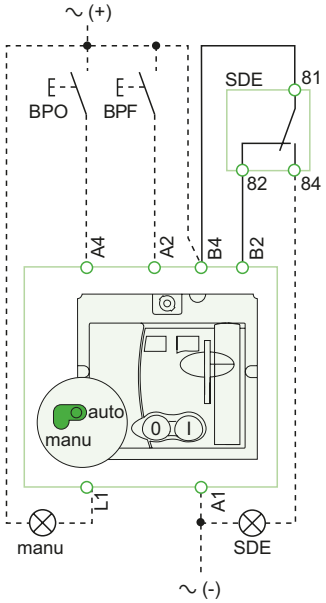


MicroLogic

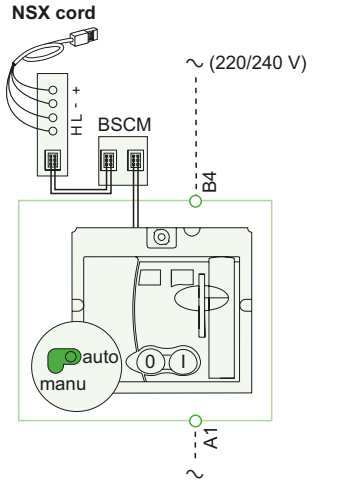


Remote Operation





Motor mechanism (MT)



Communicating motor mechanism (MTc)

MicroLogic E

Communication
H(WH), L(BL): data
- (BK), + (RD): 24 V DC power supply

ZSI (Zone Selective Interlocking)
Z1: ZSI OUT SOURCE
Z2: ZSI OUT
Z3: ZSI IN SOURCE
Z4: ZSI IN ST (short time)
Z5: ZSI IN GF (ground fault)
Note: Z3, Z4, Z5 for NSX400/630 only.

ENCT: external neutral current transformer:
- shielded cable with 1 twisted pair (T1, T2)
- shielding earthed at one end only (CT end).
Connection L = 30 cm max.
- maximum length of 10 metres
- cable size 0.4 to 1.5 mm^2
- recommended cable: Belden 8441 or equivalent.

ENVT: external neutral voltage tap for connection to the neutral via a 3P circuit breaker.

Remote operation

MN: undervoltage release
or
MX: shunt release

Motor mechanism (MT)

A4: opening order
A2: closing order
B4, A1: power supply to motor mechanism
L1: manual position (manu)
B2: SDE interlocking (mandatory for correct operation)

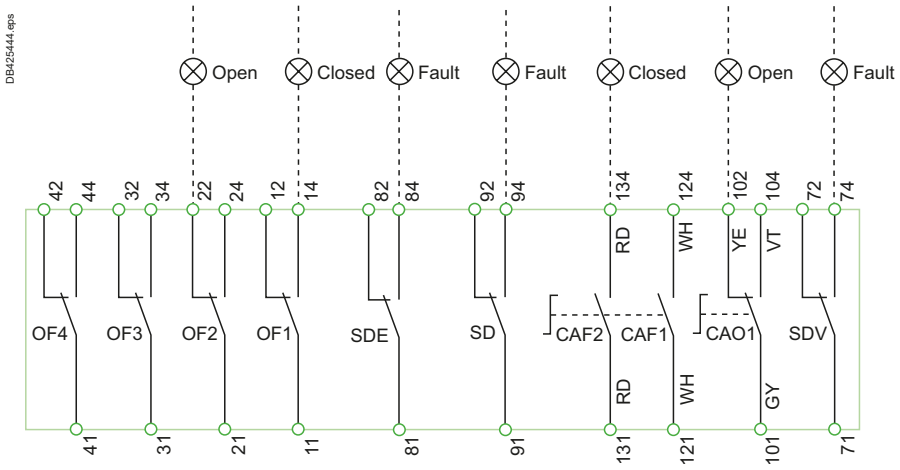
BPO: opening pushbutton
BPF: closing pushbutton

Communicating motor mechanism (MTc)

B4, A1: motor mechanism power supply
BSCM: breaker status and control module

ComPacT NSX
Fixed Circuit Breakers

Indication Contacts



The diagram is shown with circuits de-energized, all devices open, connected and charged and relays in normal position. Terminals shown in green **O** must be connected by the customer.

Indication Contacts

OF2/OF1:	device ON/OFF indication contacts
OF4/OF3:	device ON/OFF indication contacts (NSX400/630)
SDE:	fault-trip indication contact (short-circuit, overload, ground fault, earth leakage)
SD:	trip-indication contact
CAF2/CAF1:	early-make contact (rotary handle only)
CAO1:	early-break contact (rotary handle only)
SDV:	earth leakage fault trip indication contact (VigiPacT add-on)

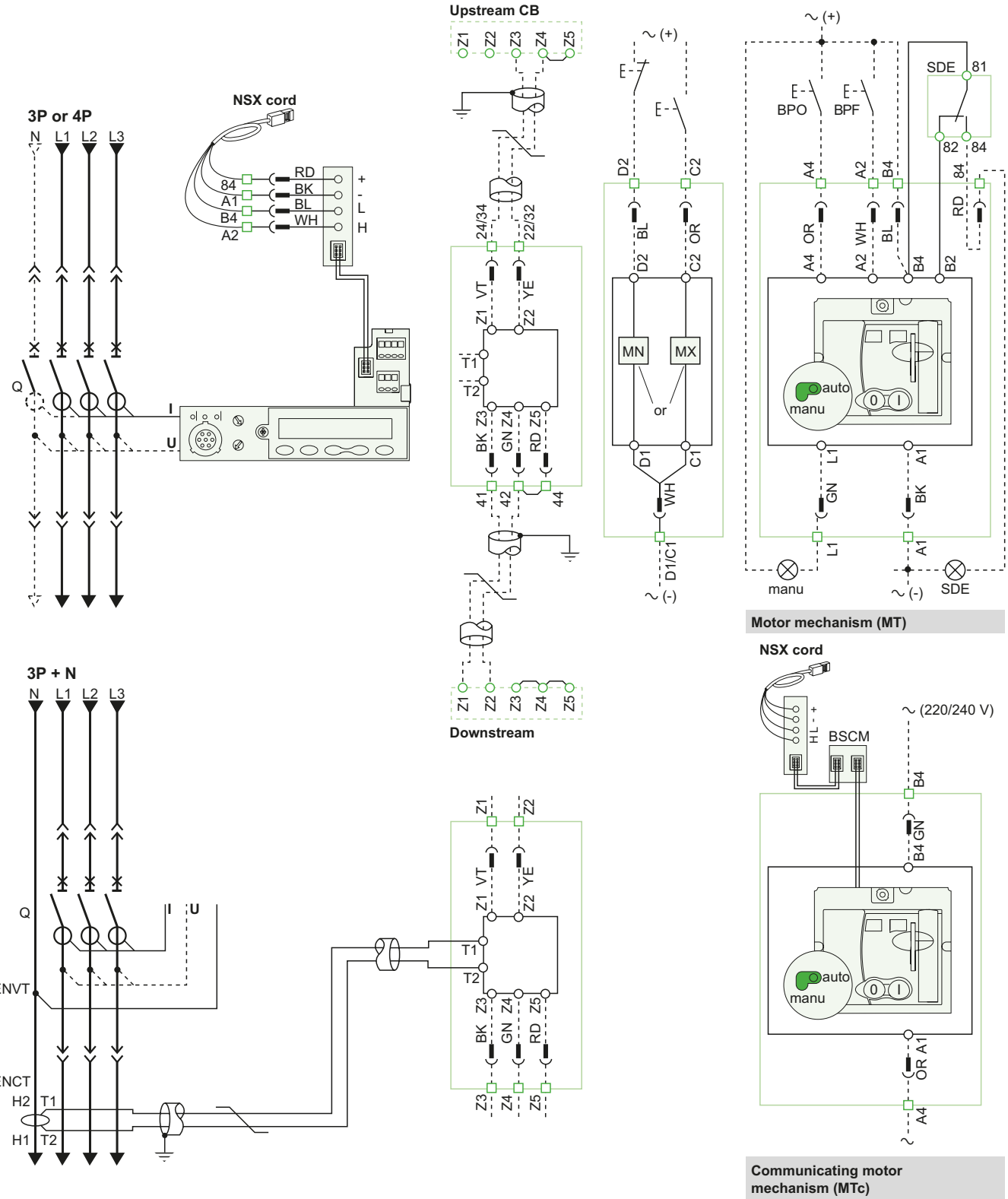
Color Code for Auxiliary Wiring

RD:	red	**VT:**	violet
WH:	white	**GY:**	grey
YE:	yellow	**OR:**	orange
BK:	black	**BL:**	blue
GN:	green		

The diagram is shown with circuits de-energized, all devices open, connected and charged and relays in normal position.

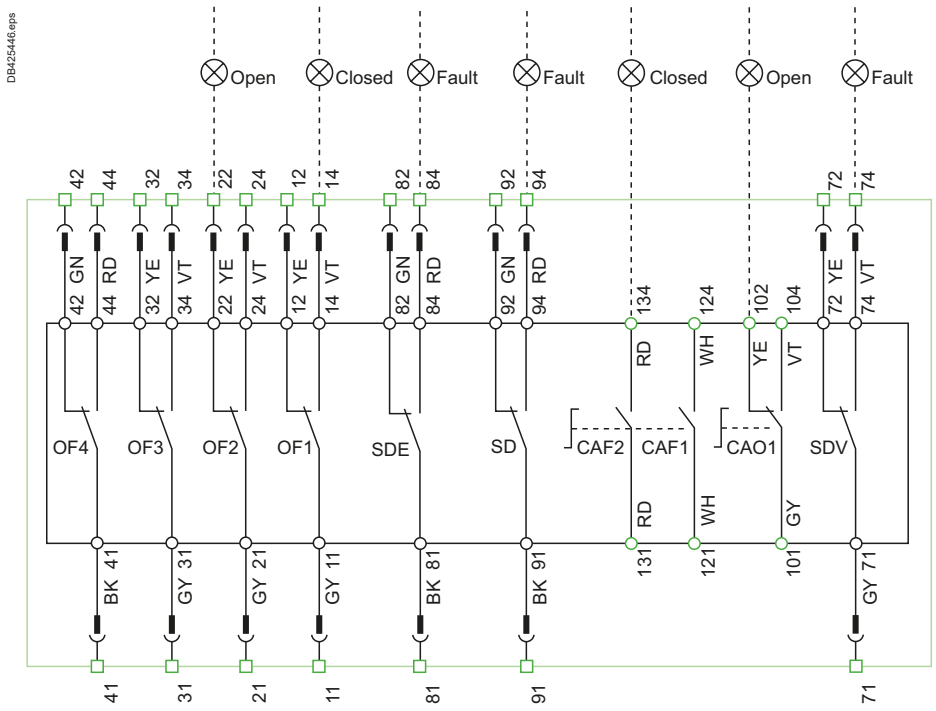
Power | MicroLogic | Remote Operation

DB425445.eps

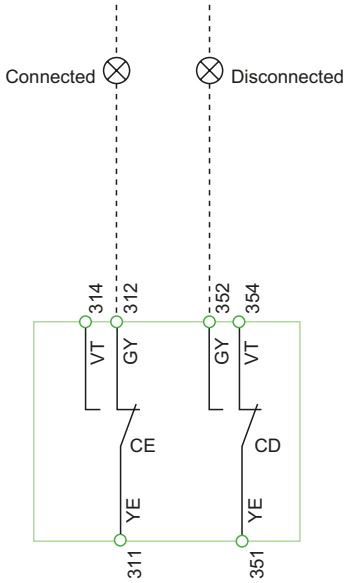


ComPacT NSX
Plug-in/Withdrawable Circuit Breakers

Indication Contacts



Carriage Switches



E

MicroLogic E

Communication
H(WH), L(BL): data
- (BK), + (RD): 24 V DC power supply

ZSI (Zone Selective Interlocking)
Z1: ZSI OUT SOURCE
Z2: ZSI OUT
Z3: ZSI IN SOURCE
Z4: ZSI IN ST (short time)
Z5: ZSI IN GF (ground fault)

Note: Z3, Z4, Z5 for NSX400/630 only.

ENCT: external neutral current transformer:
- shielded cable with 1 twisted pair (T1, T2)
- shielding earthed at one end only (CT end).

Connection L = 30 cm max.
- maximum length of 10 metres
- cable size 0.4 to 1.5 mm^2
- recommended cable: Belden 8441 or equivalent.

ENVT: external neutral voltage tap for connection to the neutral via a 3P circuit breaker.

Color code for auxiliary wiring

RD:	red	**VT:**	violet
WH:	white	**GY:**	grey
YE:	yellow	**OR:**	orange
BK:	black	**BL:**	blue
GN:	green		

Terminals shown in green □/O must be connected by the customer.

Remote operation

MN: undervoltage release
or
MX: shunt release

Motor mechanism (MT)

A4: opening order
A2: closing order
B4, A1: motor mechanism power supply
L1: manual position (manu)
B2: SDE interlocking (mandatory for automatic or remote recharging)
BPO: opening pushbutton
BPF: closing pushbutton

Communicating motor mechanism (MTc)

B4, A1: motor mechanism power supply
BSCM: breaker status and control module

Indication contacts

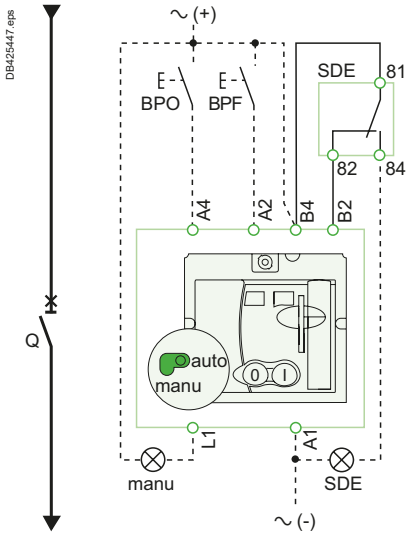
OF2/OF1: device ON/OFF indication contacts
OF4/OF3: device ON/OFF indication contacts (NSX400/630)
SDE: fault-trip indication contact (short-circuit, overload, ground fault, earth leakage)
SD: trip-indication contact
CAF2/CAF1: early-make contact (rotary handle only)
CAO1: early-break contact (rotary handle only)
SDV: earth leakage fault trip indication contact (VigiPacT add-on)

The diagram is shown with circuits de-energized, all devices open, connected and charged and relays in normal position.

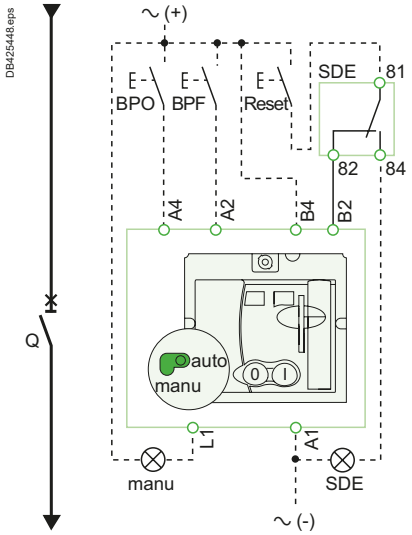
After tripping initiated by the "Push to trip" button or by the undervoltage (MN) release or the shunt (MX) release, device reset can be automatic, remote or manual.

Following tripping due to an electrical fault (with an SDE contact), reset must be carried out manually.

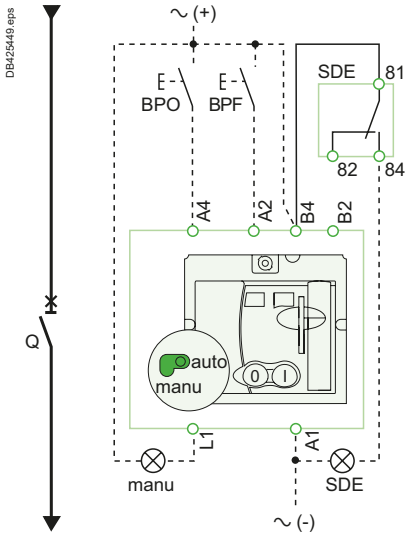
Motor mechanism (MT) with automatic reset



Motor mechanism (MT) with remote reset



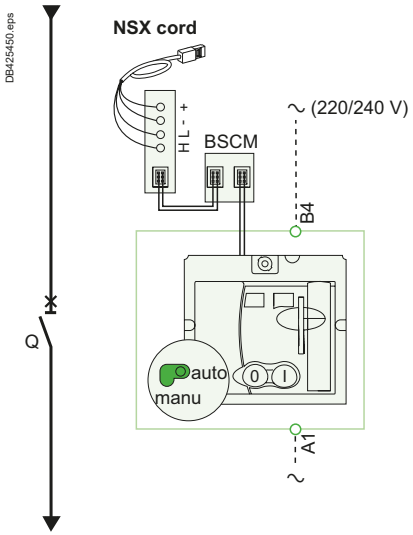
Motor mechanism (MT) with manual reset



Symbols

Q:	circuit breaker
A4:	opening order
A2:	closing order
B4, A1:	motor mechanism power supply
L1:	manual position (manu)
B2:	SDE interlocking (mandatory for correct operation)
BPO:	opening pushbutton
BPF:	closing pushbutton
SDE:	fault-trip indication contact (short-circuit, overload, ground fault, earth leakage)

Communicating motor mechanism (MTc)



Schematic representation of the communicating motor mechanism (MT).

Single-line diagram of communicating motor mechanism
Opening, closing and reset orders are transmitted via the communication network. The "Enable automatic reset" and "Enable reset even if SDE" parameters must be set using the EcoStruxure Power Commission software via the screen by clicking the blue text.

"**Auto/manu**" is a switch on the front of the motor mechanism.

Symbols	
Q:	circuit breaker
B4, A1:	motor mechanism power supply
BSCM:	breaker status and control module

Terminals shown in green **O** must be connected by the customer.

E

The diagram is shown with circuits de-energized, all devices open, connected and charged and relays in normal position.

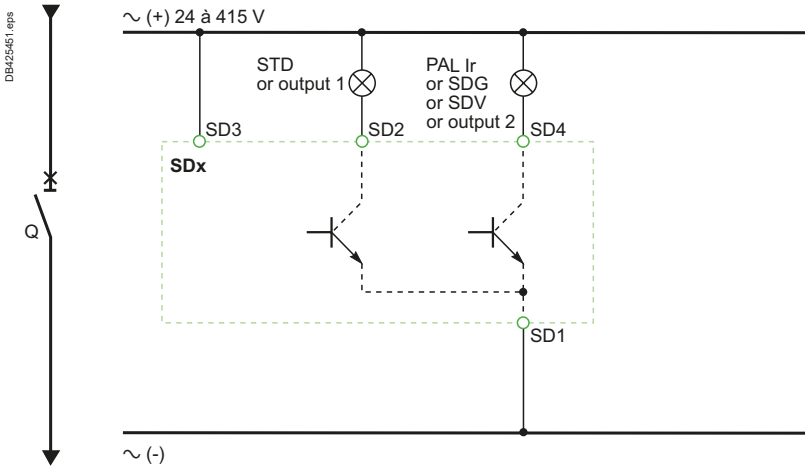
Symbols

SD1, SD3: SDx-module power supply
SD2: output 1 (80 mA max.)
SD4: output 2 (80 mA max.)

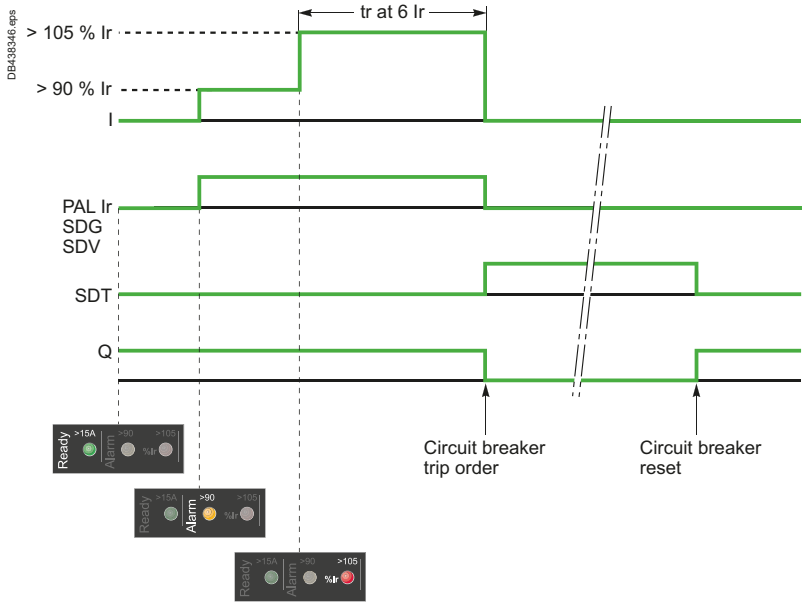
	SD2	SD4
MicroLogic 2	SDT	-
MicroLogic Vigi 4	SDT	SDV
MicroLogic 5	SDT or output 1	PAL Ir or output 2
MicroLogic 6	SDT or output 1	SDG or output 2
MicroLogic Vigi 7	SDT or output 1	SDV or output 2

Terminals shown in green **O** must be connected by the customer.

Connection



Operation



I: charge current
PAL Ir: thermal overload pre-alarm
SDG: ground-fault signal
SDT: thermal-fault signal
SDV residual current trip signal
Q: circuit breaker

E

ComPacT NSX
SDTAM Module with MicroLogic M

The diagram is shown with circuits de-energized, all devices open, connected and charged and relays in normal position.

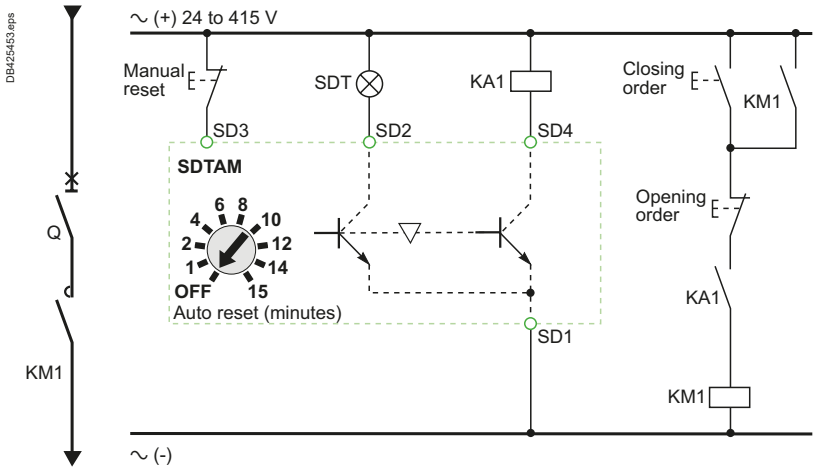
Symbols

SD1, SD3: SDTAM-module power supply
SD2: thermal-fault signal output (80 mA max.)
SD4: contactor-control output (80 mA max.)

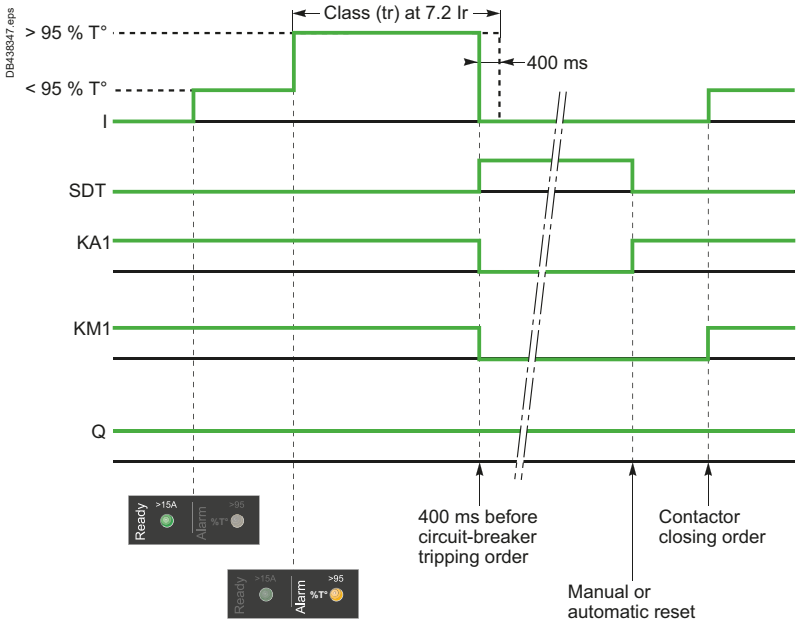
	SD2	SD4
MicroLogic 2-M	SDT	KA1
MicroLogic 6 E-M	SDT	KA1

Terminals shown in green **O** must be connected by the customer.

Connection

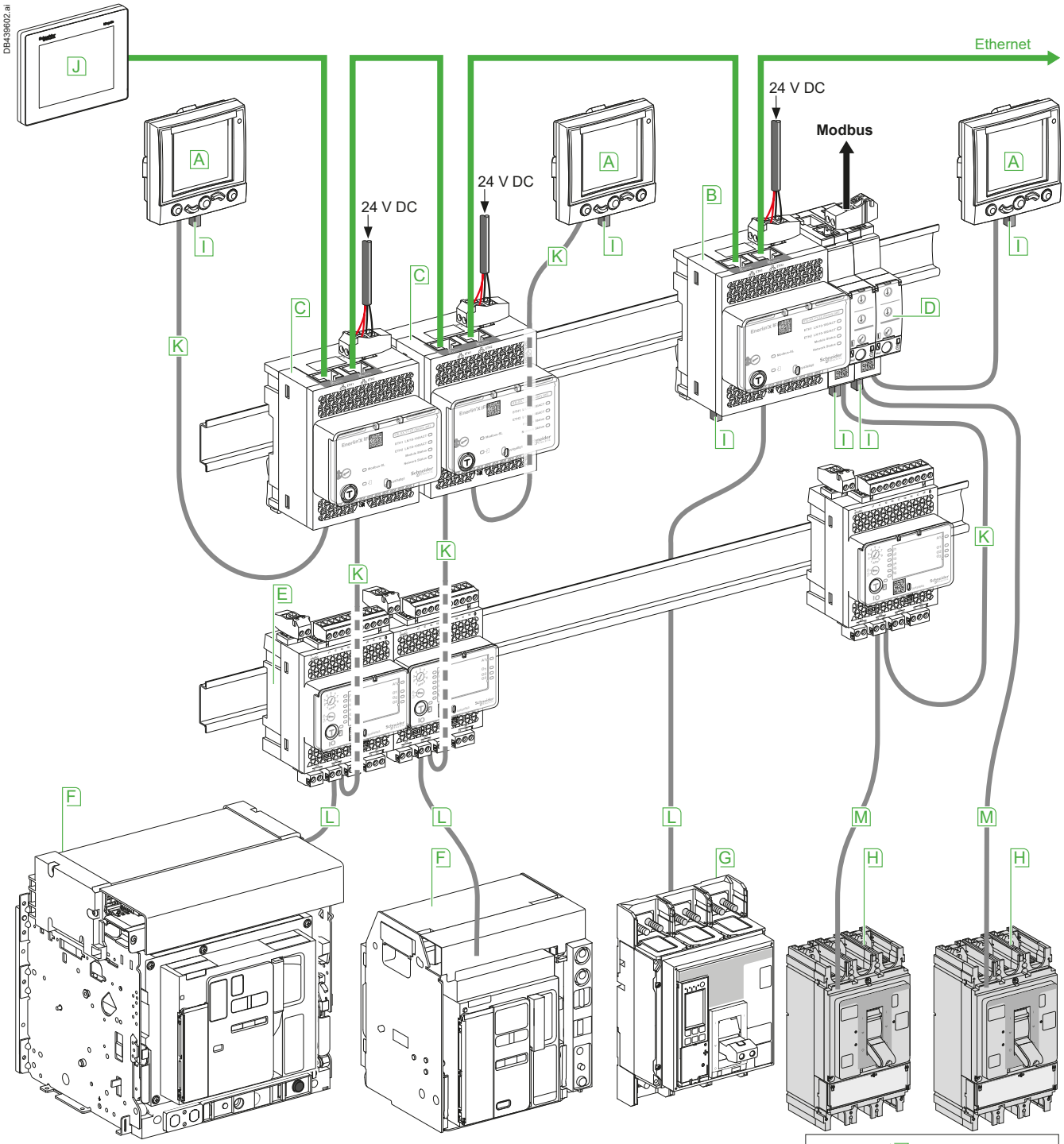


Operation



I: charge current
SDT: thermal-fault signal
KA1: auxiliary relay (e.g. RBN or RTBT relay)
KM1: motor contactor
Q: circuit breaker

Connection of Circuit Breakers to the Modbus Communication Network



A FDM121 (TRV00121)
B IFE interface (LV434002)
C IFE switchboard server (LV434001)
D IFM (LV484000)
E I/O application module (LV434063)

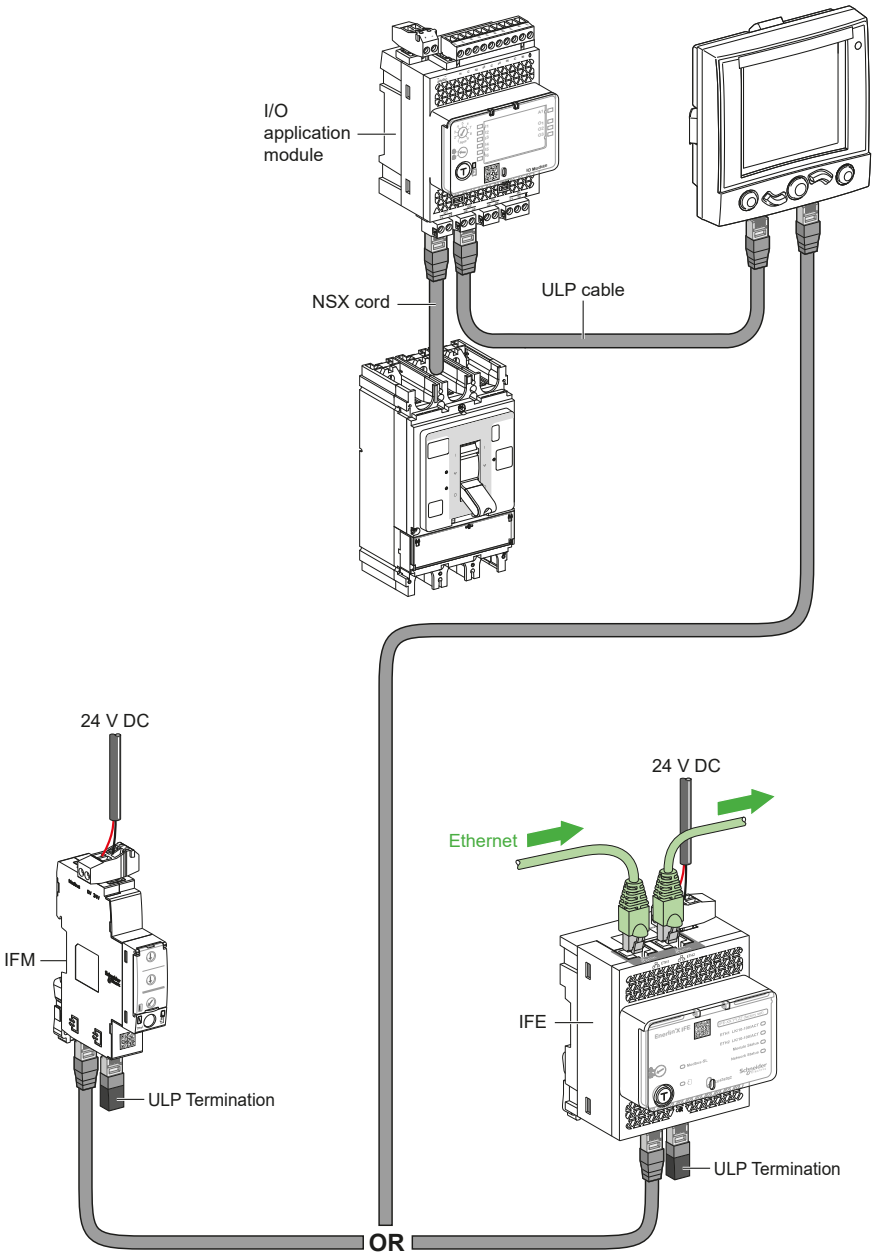
F MasterPact MTZ
G ComPacT NS630b-3200
H ComPacT NSX
I ULP termination (TRV00880)
J FDM128 (LV434128)

K ULP cable
L Breaker ULP cord
M NSX cord
Ethernet
Modbus

E

ComPacT NSX
Communication

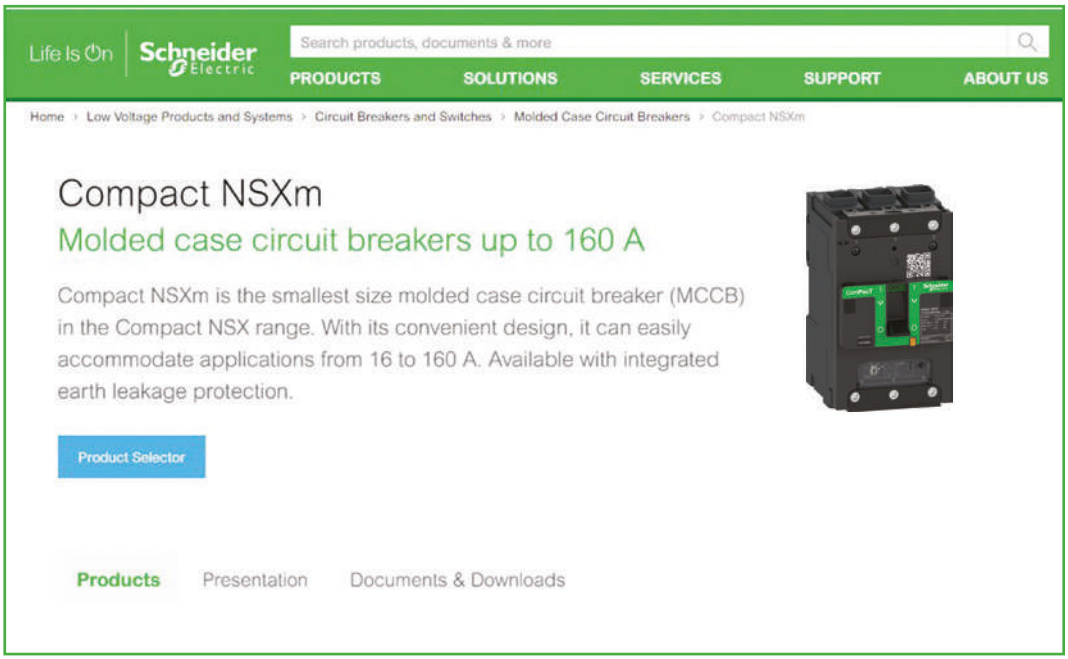
DB438265.ai



Order your ComPacT NSX and NSXm Through Digital Tools

Product Selector

Go on the range page on www.se.com



To select your ComPacT NSXm, use the product selector available at https://www.se.com/ww/en/work/support/product-selector/.

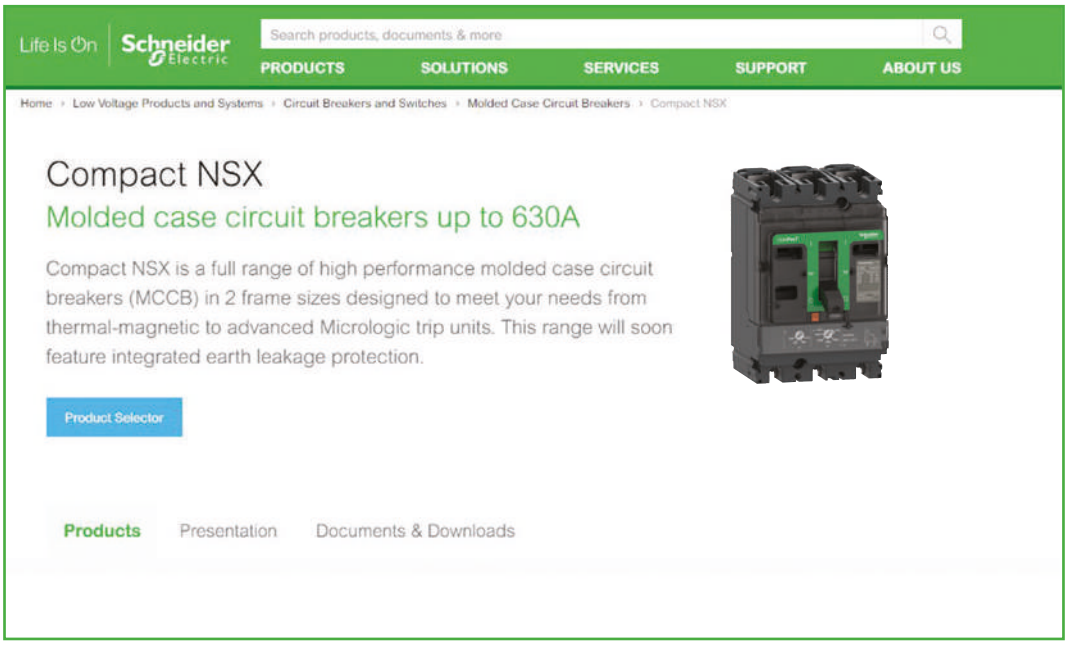
E

Type	Frame Rating	Breaking Capacity	Num Poles	Trip Unit	Trip Unit Ratings	Suffix
NSX = C	100m = 11	16kA = E	1P = 1	**TMD = TM**	16 = 016	EverLink = L
NSXm = C	160m = 12	25kA = B	2P = 2	MA = MA	20 = 020	Busbar = B
	100 = 10	**36kA = F**	**3P3D = 3**	TMG = MG	25 = 025	Fixed = F
	160 = 16	50kA = N	4P4D = 4	1.3 M = 1M	30 = 030	DC = D
	250 = 25	70kA = H	3P2D = 5	2.2 = 2D	40 = 040	Switch = S
	400 = 40	100kA = S	4P3D = 6	2.3 = 2D	50 = 050	DC PV = DP
	630 = 63	150kA = L		4.1 = 4V	63 = 063	
		...		4.2 = 4V	80 = 080	Acc with ID
				...	**100 = 100**	change = T
					...	

Order your ComPacT NSX and NSXm Through Digital Tools

Product Selector

Go on the range page on www.schneider-electric.com



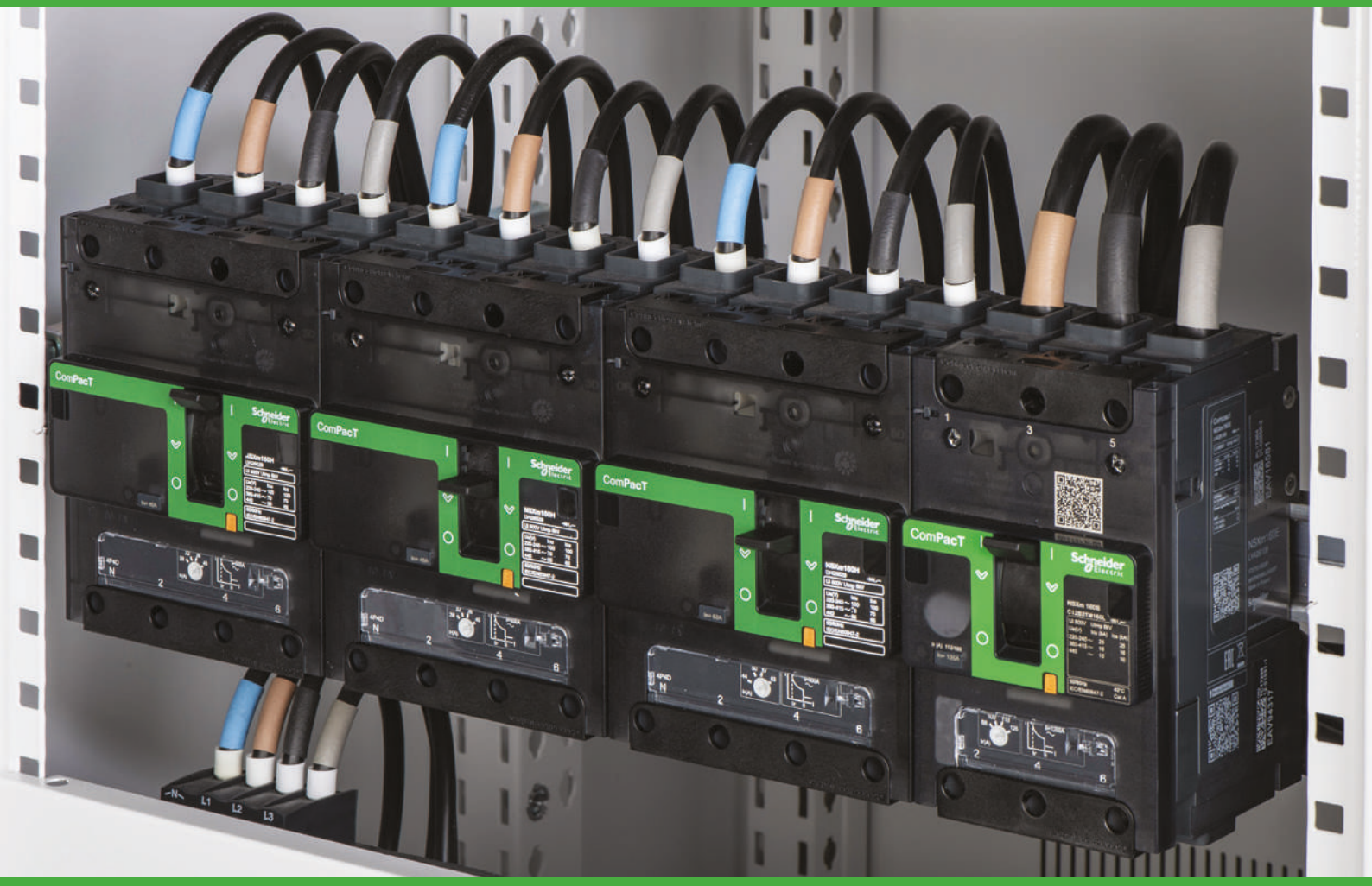
To select your ComPacT NSX, use the product selector available at https://www.se.com/ww/en/work/support/product-selector/.

F

Catalog Numbers

F

Other Chapters


ComPacT
Schneider Electric
ComPacT
Schneider Electric
ComPacT
Schneider Electric
ComPacT
Schneider Electric
-N
L1
L2
L3

Catalog Numbers: Com**PacT** NSXm

Complete Fixed Device

Accessories

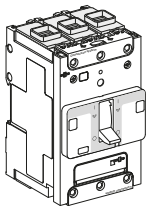
F

Other Chapters

Complete Fixed Device
ComPacT NSXm E/B (16/25 KA at 380/415 V)

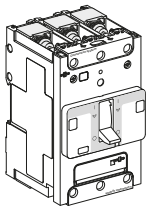
ComPacT NSXm E (16 KA at 380/415 V)

With thermal-magnetic trip unit TM-D



EverLink™ connectors

Rating	3P	4P 3d	4P 4d
TM16D	C11E3TM016L	C11E6TM016L	C11E4TM016L
TM25D	C11E3TM025L	C11E6TM025L	C11E4TM025L
TM32D	C11E3TM032L	C11E6TM032L	C11E4TM032L
TM40D	C11E3TM040L	C11E6TM040L	C11E4TM040L
TM50D	C11E3TM050L	C11E6TM050L	C11E4TM050L
TM63D	C11E3TM063L	C11E6TM063L	C11E4TM063L
TM80D	C11E3TM080L	C11E6TM080L	C11E4TM080L
TM100D	C11E3TM100L	C11E6TM100L	C11E4TM100L
TM125D	C12E3TM125L	C12E6TM125L	C12E4TM125L
TM160D	C12E3TM160L	C12E6TM160L	C12E4TM160L

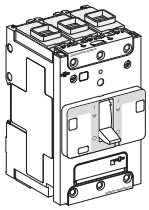


Compression lug/busbar connectors

Rating	3P	4P 3d	4P 4d
TM16D	C11E3TM016B	C11E6TM016B	C11E4TM016B
TM25D	C11E3TM025B	C11E6TM025B	C11E4TM025B
TM32D	C11E3TM032B	C11E6TM032B	C11E4TM032B
TM40D	C11E3TM040B	C11E6TM040B	C11E4TM040B
TM50D	C11E3TM050B	C11E6TM050B	C11E4TM050B
TM63D	C11E3TM063B	C11E6TM063B	C11E4TM063B
TM80D	C11E3TM080B	C11E6TM080B	C11E4TM080B
TM100D	C11E3TM100B	C11E6TM100B	C11E4TM100B
TM125D	C12E3TM125B	C12E6TM125B	C12E4TM125B
TM160D	C12E3TM160B	C12E6TM160B	C12E4TM160B

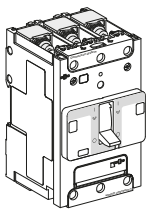
ComPacT NSXm B (25 KA at 380/415 V)

With thermal-magnetic trip unit TM-D



EverLink™ connectors

Rating	3P	4P 3d	4P 4d
TM16D	C11B3TM016L	C11B6TM016L	C11B4TM016L
TM25D	C11B3TM025L	C11B6TM025L	C11B4TM025L
TM32D	C11B3TM032L	C11B6TM032L	C11B4TM032L
TM40D	C11B3TM040L	C11B6TM040L	C11B4TM040L
TM50D	C11B3TM050L	C11B6TM050L	C11B4TM050L
TM63D	C11B3TM063L	C11B6TM063L	C11B4TM063L
TM80D	C11B3TM080L	C11B6TM080L	C11B4TM080L
TM100D	C11B3TM100L	C11B6TM100L	C11B4TM100L
TM125D	C12B3TM125L	C12B6TM125L	C12B4TM125L
TM160D	C12B3TM160L	C12B6TM160L	C12B4TM160L



Compression lug/busbar connectors

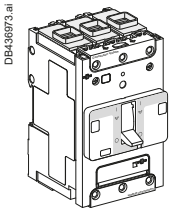
Rating	3P	4P 3d	4P 4d
TM16D	C11B3TM016B	C11B6TM016B	C11B4TM016B
TM25D	C11B3TM025B	C11B6TM025B	C11B4TM025B
TM32D	C11B3TM032B	C11B6TM032B	C11B4TM032B
TM40D	C11B3TM040B	C11B6TM040B	C11B4TM040B
TM50D	C11B3TM050B	C11B6TM050B	C11B4TM050B
TM63D	C11B3TM063B	C11B6TM063B	C11B4TM063B
TM80D	C11B3TM080B	C11B6TM080B	C11B4TM080B
TM100D	C11B3TM100B	C11B6TM100B	C11B4TM100B
TM125D	C12B3TM125B	C12B6TM125B	C12B4TM125B
TM160D	C12B3TM160B	C12B6TM160B	C12B4TM160B

F

Complete Fixed Device
ComPacT NSXm F/N (36/50 KA at 380/415 V)

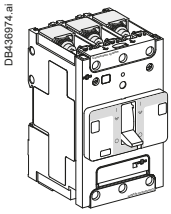
ComPacT NSXm F (36 KA at 380/415 V)

With thermal-magnetic trip unit TM-D



EverLink™ connectors

Rating	3P	4P 3d	4P 4d
TM16D	C11F3TM016L	C11F6TM016L	C11F4TM016L
TM25D	C11F3TM025L	C11F6TM025L	C11F4TM025L
TM32D	C11F3TM032L	C11F6TM032L	C11F4TM032L
TM40D	C11F3TM040L	C11F6TM040L	C11F4TM040L
TM50D	C11F3TM050L	C11F6TM050L	C11F4TM050L
TM63D	C11F3TM063L	C11F6TM063L	C11F4TM063L
TM80D	C11F3TM080L	C11F6TM080L	C11F4TM080L
TM100D	C11F3TM100L	C11F6TM100L	C11F4TM100L
TM125D	C12F3TM125L	C12F6TM125L	C12F4TM125L
TM160D	C12F3TM160L	C12F6TM160L	C12F4TM160L

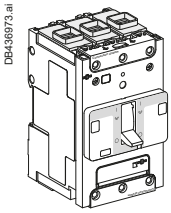


Compression lug/busbar connectors

Rating	3P	4P 3d	4P 4d
TM16D	C11F3TM016B	C11F6TM016B	C11F4TM016B
TM25D	C11F3TM025B	C11F6TM025B	C11F4TM025B
TM32D	C11F3TM032B	C11F6TM032B	C11F4TM032B
TM40D	C11F3TM040B	C11F6TM040B	C11F4TM040B
TM50D	C11F3TM050B	C11F6TM050B	C11F4TM050B
TM63D	C11F3TM063B	C11F6TM063B	C11F4TM063B
TM80D	C11F3TM080B	C11F6TM080B	C11F4TM080B
TM100D	C11F3TM100B	C11F6TM100B	C11F4TM100B
TM125D	C12F3TM125B	C12F6TM125B	C12F4TM125B
TM160D	C12F3TM160B	C12F6TM160B	C12F4TM160B

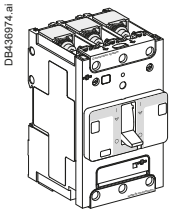
ComPacT NSXm N (50 KA at 380/415 V)

With thermal-magnetic trip unit TM-D



EverLink™ connectors

Rating	3P	4P 3d	4P 4d
TM16D	C11N3TM016L	C11N6TM016L	C11N4TM016L
TM25D	C11N3TM025L	C11N6TM025L	C11N4TM025L
TM32D	C11N3TM032L	C11N6TM032L	C11N4TM032L
TM40D	C11N3TM040L	C11N6TM040L	C11N4TM040L
TM50D	C11N3TM050L	C11N6TM050L	C11N4TM050L
TM63D	C11N3TM063L	C11N6TM063L	C11N4TM063L
TM80D	C11N3TM080L	C11N6TM080L	C11N4TM080L
TM100D	C11N3TM100L	C11N6TM100L	C11N4TM100L
TM125D	C12N3TM125L	C12N6TM125L	C12N4TM125L
TM160D	C12N3TM160L	C12N6TM160L	C12N4TM160L



Compression lug/busbar connectors

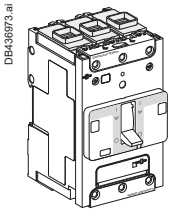
Rating	3P	4P 3d	4P 4d
TM16D	C11N3TM016B	C11N6TM016B	C11N4TM016B
TM25D	C11N3TM025B	C11N6TM025B	C11N4TM025B
TM32D	C11N3TM032B	C11N6TM032B	C11N4TM032B
TM40D	C11N3TM040B	C11N6TM040B	C11N4TM040B
TM50D	C11N3TM050B	C11N6TM050B	C11N4TM050B
TM63D	C11N3TM063B	C11N6TM063B	C11N4TM063B
TM80D	C11N3TM080B	C11N6TM080B	C11N4TM080B
TM100D	C11N3TM100B	C11N6TM100B	C11N4TM100B
TM125D	C12N3TM125B	C12N6TM125B	C12N4TM125B
TM160D	C12N3TM160B	C12N6TM160B	C12N4TM160B

F

Complete Fixed Device
ComPacT NSXm H (70 KA at 380/415 V)

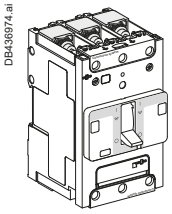
ComPacT NSXm H (70 KA at 380/415 V)

With thermal-magnetic trip unit TM-D



EverLink™ connectors

Rating	3P	4P 3d	4P 4d
TM16D	C11H3TM016L	C11H6TM016L	C11H4TM016L
TM25D	C11H3TM025L	C11H6TM025L	C11H4TM025L
TM32D	C11H3TM032L	C11H6TM032L	C11H4TM032L
TM40D	C11H3TM040L	C11H6TM040L	C11H4TM040L
TM50D	C11H3TM050L	C11H6TM050L	C11H4TM050L
TM63D	C11H3TM063L	C11H6TM063L	C11H4TM063L
TM80D	C11H3TM080L	C11H6TM080L	C11H4TM080L
TM100D	C11H3TM100L	C11H6TM100L	C11H4TM100L
TM125D	C12H3TM125L	C12H6TM125L	C12H4TM125L
TM160D	C12H3TM160L	C12H6TM160L	C12H4TM160L



Compression lug/busbar connectors

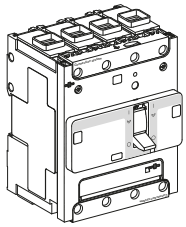
Rating	3P	4P 3d	4P 4d
TM16D	C11H3TM016B	C11H6TM016B	C11H4TM016B
TM25D	C11H3TM025B	C11H6TM025B	C11H4TM025B
TM32D	C11H3TM032B	C11H6TM032B	C11H4TM032B
TM40D	C11H3TM040B	C11H6TM040B	C11H4TM040B
TM50D	C11H3TM050B	C11H6TM050B	C11H4TM050B
TM63D	C11H3TM063B	C11H6TM063B	C11H4TM063B
TM80D	C11H3TM080B	C11H6TM080B	C11H4TM080B
TM100D	C11H3TM100B	C11H6TM100B	C11H4TM100B
TM125D	C12H3TM125B	C12H6TM125B	C12H4TM125B
TM160D	C12H3TM160B	C12H6TM160B	C12H4TM160B

F

Complete Fixed Device
ComPacT NSXm MicroLogic Vigi 4.1 E/B/F (16/25/36 KA at 380/415 V)

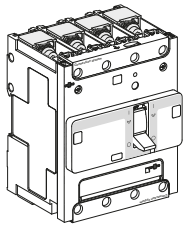
ComPacT NSXm MicroLogic Vigi 4.1 E (16 KA at 380/415 V)

With MicroLogic Vigi 4.1



EverLink™ connectors

Rating	3P	4P
25 A	C11E34V025L	C11E44V025L
50 A	C11E34V050L	C11E44V050L
100 A	C11E34V100L	C11E44V100L
160 A	C12E34V160L	C12E44V160L

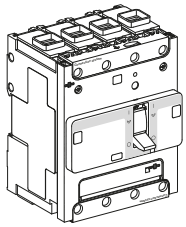


Compression lug/busbar connectors

Rating	3P	4P
25 A	C11E34V025B	C11E44V025B
50 A	C11E34V050B	C11E44V050B
100 A	C11E34V100B	C11E44V100B
160 A	C12E34V160B	C12E44V160B

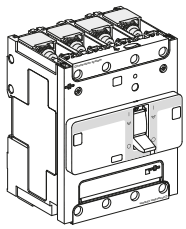
ComPacT NSXm MicroLogic Vigi 4.1 B (25 KA at 380/415 V)

With MicroLogic Vigi 4.1



EverLink™ connectors

Rating	3P	4P
25 A	C11B34V025L	C11B44V025L
50 A	C11B34V050L	C11B44V050L
100 A	C11B34V100L	C11B44V100L
160 A	C12B34V160L	C12B44V160L

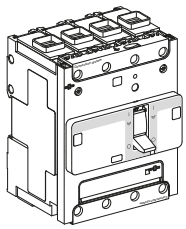


Compression lug/busbar connectors

Rating	3P	4P
25 A	C11B34V025B	C11B44V025B
50 A	C11B34V050B	C11B44V050B
100 A	C11B34V100B	C11B44V100B
160 A	C12B34V160B	C12B44V160B

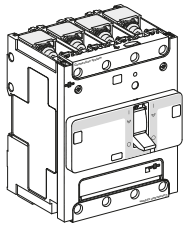
ComPacT NSXm MicroLogic Vigi 4.1 F (36 KA at 380/415 V)

With MicroLogic Vigi 4.1



EverLink™ connectors

Rating	3P	4P
25 A	C11F34V025L	C11F44V025L
50 A	C11F34V050L	C11F44V050L
100 A	C11F34V100L	C11F44V100L
160 A	C12F34V160L	C12F44V160L



Compression lug/busbar connectors

Rating	3P	4P
25 A	C11F34V025B	C11F44V025B
50 A	C11F34V050B	C11F44V050B
100 A	C11F34V100B	C11F44V100B
160 A	C12F34V160B	C12F44V160B

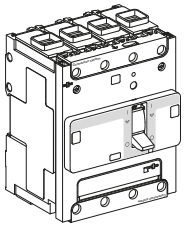
F

Complete Fixed Device
ComPacT NSXm MicroLogic Vigi 4.1 N/H (50/70 KA at 380/415 V)

ComPacT NSXm MicroLogic Vigi 4.1 N (50 KA at 380/415 V)

With MicroLogic Vigi 4.1

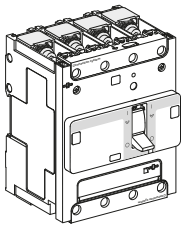
DB436975.ai



EverLink™ connectors

Rating	3P	4P
25 A	**C11N34V025L**	**C11N44V025L**
50 A	**C11N34V050L**	**C11N44V050L**
100 A	**C11N34V100L**	**C11N44V100L**
160 A	**C12N34V160L**	**C12N44V160L**

DB436976.ai



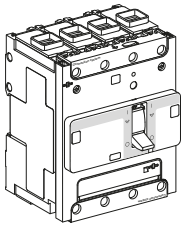
Compression lug/busbar connectors

Rating	3P	4P
25 A	**C11N34V025B**	**C11N44V025B**
50 A	**C11N34V050B**	**C11N44V050B**
100 A	**C11N34V100B**	**C11N44V100B**
160 A	**C12N34V160B**	**C12N44V160B**

ComPacT NSXm MicroLogic Vigi 4.1 H (70 KA at 380/415 V)

With MicroLogic Vigi 4.1

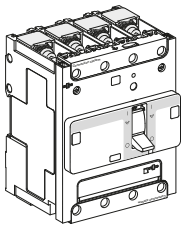
DB436975.ai



EverLink™ connectors

Rating	3P	4P
25 A	**C11H34V025L**	**C11H44V025L**
50 A	**C11H34V050L**	**C11H44V050L**
100 A	**C11H34V100L**	**C11H44V100L**
160 A	**C12H34V160L**	**C12H44V160L**

DB436976.ai



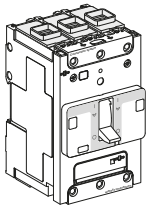
Compression lug/busbar connectors

Rating	3P	4P
25 A	**C11H34V025B**	**C11H44V025B**
50 A	**C11H34V050B**	**C11H44V050B**
100 A	**C11H34V100B**	**C11H44V100B**
160 A	**C12H34V160B**	**C12H44V160B**

F

ComPacT NSXm NA Switch-Disconnector

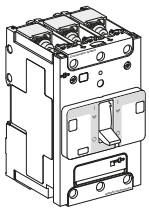
DB436973.ai



EverLink™ connectors

Rating	3P	4P
50NA	**C113050LS**	**C114050LS**
100NA	**C113100LS**	**C114100LS**
160NA	**C123160LS**	**C124160LS**

DB436974.ai



Compression lug/busbar connectors

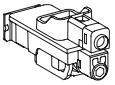
Rating	3P	4P
50NA	**C113050BS**	**C114050BS**
100NA	**C113100BS**	**C114100BS**
160NA	**C123160BS**	**C124160BS**

F

Accessories
Connection and Insulation

Connection Accessories (Cu or Al)

Bare cable connectors

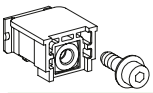

DB421533.eps

Everlink connector with control wire terminal	1x (2.5 to 95 mm²) ; ≤ 160 A Cu or ≤ 100 A Al	Set of 3	**LV426970**
		Set of 4	**LV426971**


DB418793.eps

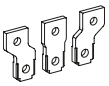
Aluminium connector	1x (2.5 to 70 mm²) ; ≤ 125 A Cu or Al	Set of 2	**LV426966**
		Set of 3	**LV426967**

Compression lugs/busbar connectors


DB421537.eps

Terminal with nuts and screws M6	≤ 160 A	Set of 3	**LV426960**
		Set of 4	**LV426961**

Terminal extensions


DB421538.eps

Spreaders from 27 to 35 mm pitch [1]		3P	**LV426940**
		4P	**LV426941**

Crimp lugs for copper cable [1]


DB421539.eps

For cable 50 mm²		Set of 3	**LV426978**
		Set of 4	**LV426979**
For cable 70 mm²		Set of 3	**LV426980**
		Set of 4	**LV426981**
For cable 95 mm²		Set of 3	**LV426982**
		Set of 4	**LV426983**

Crimp lugs for aluminium cable [1]


DB421540.eps

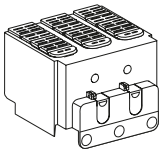
For cable 95 mm² rigid		Set of 3	**LV426984**
		Set of 4	**LV426985**
For cable 120 mm² rigid		Set of 3	**LV426976**
		Set of 4	**LV426977**

Torque limiting breakaway bits

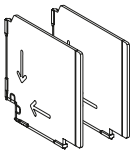

DB421541.eps

9 N.m		Set of 6	**LV426990**
		Set of 8	**LV426991**
5 N.m		Set of 6	**LV426992**
		Set of 8	**LV426993**

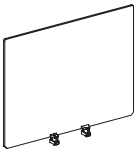
Insulation Accessories


DB421542.eps

1 long terminal shield		3P	**LV426912**
		4P	**LV426913**


DB421543.eps

Interphase barriers		Set of 6	**LV426920**


DB421544.eps

2 rear insulation screens		3P	**LV426922**
		4P	**LV426923**

[1] Supplied with 2 or 3 interphase barriers.

F

Electrical Auxiliaries

Auxiliary contacts (screwless, screw)


DB421545.eps

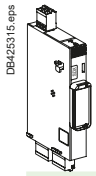
Standard OF or SD	**LV426950**

Wireless indication auxiliary


DB438244.ai

Zigbee auxiliary contact	**LV429453**

SDx for MicroLogic Vigi 4.1


DB425315.eps

SDx module 24-250 V AC/DC	**LV426900**

Voltage releases

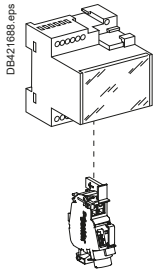

DB421548.eps

Standard	Voltage	MX	MN
AC	24 V 50/60 Hz	**LV426841**	**LV426801**
	48 V 50/60 Hz	**LV426842**	**LV426802**
	110...130 V 50/60 Hz	**LV426843**	**LV426803**
	220...240 V 50 Hz 208...240 V 60 Hz	**LV426844**	**LV426804**
	277 V 60 Hz	**LV426844**	**LV426805**
	380...415 V 50 Hz	**LV426846**	**LV426806**
	440...480 V 60 Hz	**LV426846**	**LV426807**
DC	12 V DC	**LV426850**	-
	24 V DC	**LV426841**	**LV426801**
	48 V DC	**LV426842**	**LV426802**
	125 V DC	**LV426843**	**LV426803**
	250 V DC	**LV426844**	**LV426815**


DB421549.eps

Pre-wired [1]	Voltage	MX	MN
AC	24 V 50/60 Hz	**LV426861**	**LV426821**
	48 V 50/60 Hz	**LV426862**	**LV426822**
	110...130 V 50/60 Hz	**LV426863**	**LV426823**
	220...240 V 50 Hz 208...240 V 60 Hz	**LV426864**	**LV426824**
	277 V 60 Hz	**LV426864**	**LV426825**
	380...415 V 50 Hz	**LV426866**	**LV426826**
	440...480 V 60 Hz	**LV426866**	**LV426827**
DC	12 V DC	**LV426870**	-
	24 V DC	**LV426861**	**LV426821**
	48 V DC	**LV426862**	**LV426822**
	125 V DC	**LV426863**	**LV426823**
	250 V DC	**LV426864**	**LV426835**

Time delay unit for undervoltage release (MN)


DB421688.eps

MN 48 V 50/60 Hz with fixed time delay		
Composed of:	MN 48 V DC	**LV426802**
	Delay unit 48 V 50/60 Hz	**LV429426**
MN 220-240 V 50/60 Hz with fixed time delay		
Composed of:	MN 250 V DC	**LV426815**
	Delay unit 220-240 V 50/60 Hz	**LV429427**
MN 48 V DC/AC 50/60 Hz with adjustable time delay		
Composed of:	MN 48 V DC	**LV426802**
	Delay unit 48 V DC/AC 50/60 Hz	**33680**
MN 110-130 V DC/AC 50/60 Hz with adjustable time delay		
Composed of:	MN 125 V DC	**LV426803**
	Delay unit 100-130 V DC/AC 50/60 Hz	**33681**
MN 220-250 V DC/AC 50/60 Hz with adjustable time delay		
Composed of:	MN 250 V DC	**LV426815**
	Delay unit 200-250 V DC/AC 50-60 Hz	**33682**

[1] Cable: 1 meter long - AWG 18 - 480 V UL certified.

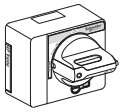
F

Accessories

Rotary Handles, Locks, Seals, Indication and Measurements

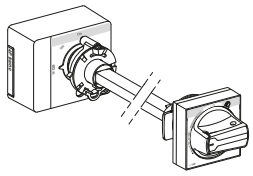
Rotary Handle

Direct rotary handle



With black handle	**LV426930T**
With red handle on yellow front	**LV426931T**

Extended rotary handle

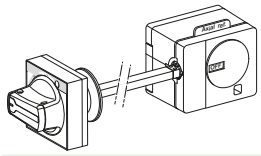


With black handle IP54	**LV426932T**
With red handle on yellow front IP54	**LV426933T**
With red handle on yellow front IP65	**LV426934T**

Open door shaft operator	**LV426937**

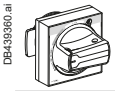
Laser tool	**GVAPL01**

Side rotary handle



With black handle IP54	**LV426935T**
With red handle on yellow front IP54	**LV426936T**

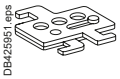
Universal handle



Black handle IP54 (spare part for replacement of front. ext. or side rotary handle)	**LV426997T**
Red handle on yellow front IP54	**LV426998T**
Red handle on yellow front IP65	**LV426999T**

Locks

Toggle locking device for 1 to 3 padlocks



By removable device	**29370**

By fixed device (OFF or ON)	**LV426905**

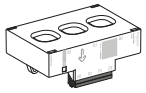
By fixed device (OFF only)	**LV426906**

Lead - Sealing Accessories

Bag of accessories	**LV429375**

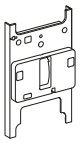
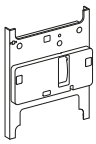
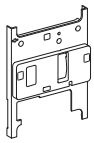
Indication and Measurement Modules

PowerLogic PowerTag Energy Flex NSXm



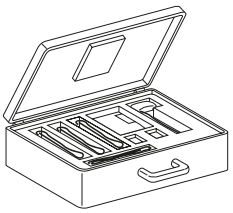
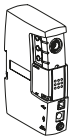
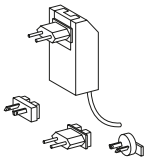
Rating (A)	160 A
3P/3P+N	**A9MEM1580**

Spare Parts

DB438270.ai 	Front cover	3P	**LV426946**
DB438271.ai 		4P	**LV426947**
DB438272.ai 		ELCB [1]	**LV426948**

Test Tool, Software, Demo

Test tool

DB111449.eps 	Pocket battery for MicroLogic	**LV434206**
DB111451.eps 	Maintenance case Comprising: ■ USB maintenance interface ■ Power supply ■ MicroLogic cord ■ USB cord ■ RJ45/RJ45 male cord	**TRV00910**
DB111450.eps 	Spare USB maintenance interface	**TRV00911**
DB111452.eps 	Spare power supply 110-240 V AC	**TRV00915**
DB111453.eps 	Spare MicroLogic cord for USB maintenance interface	**TRV00917**

[1] ELCB: Earth Leakage Circuit Breaker.

F

F

Catalog Numbers: Com**PacT** NSX100-250

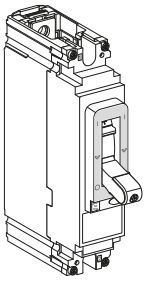
F

Complete Fixed Device
ComPacT NSX100/160 1P-2P NSX250N 1P

ComPacT NSX100/160 F/N/M/S 1P/2P

With thermal-magnetic trip unit TM-D

DB436977.ai



ComPacT NSX100F AC/DC		ComPacT NSX100F AC/DC
Rating	**1P 1d (Icu = 18 kA 220/240 V AC)**	**2P 2d (Icu = 18 kA 380/415 V AC)**
TM16D	**C10F1TM016**	**C10F2TM016**
TM20D	**C10F1TM020**	**C10F2TM020**
TM25D	**C10F1TM025**	**C10F2TM025**
TM30D	**C10F1TM030**	**C10F2TM030**
TM40D	**C10F1TM040**	**C10F2TM040**
TM50D	**C10F1TM050**	**C10F2TM050**
TM63D	**C10F1TM063**	**C10F2TM063**
TM80D	**C10F1TM080**	**C10F2TM080**
TM100D	**C10F1TM100**	**C10F2TM100**
ComPacT NSX160F AC/DC		ComPacT NSX160F AC/DC
Rating	**1P 1d (Icu = 18 kA 220/240 V AC)**	**2P 2d (Icu = 18 kA 380/415 V AC)**
TM125D	**C16F1TM125**	**C16F2TM125**
TM160D	**C16F1TM160**	**C16F2TM160**

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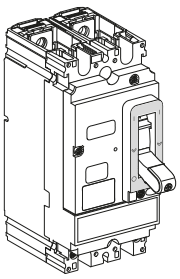


ComPacT NSX100N AC/DC		ComPacT NSX100M AC/DC
Rating	**1P 1d (Icu = 25 kA 220/240 V AC)**	**2P 2d (Icu = 25 kA 380/415 V AC)**
TM16D	**C10N1TM016**	**C10M2TM016**
TM20D	**C10N1TM020**	**C10M2TM020**
TM25D	**C10N1TM025**	**C10M2TM025**
TM30D	**C10N1TM030**	**C10M2TM030**
TM40D	**C10N1TM040**	**C10M2TM040**
TM50D	**C10N1TM050**	**C10M2TM050**
TM63D	**C10N1TM063**	**C10M2TM063**
TM80D	**C10N1TM080**	**C10M2TM080**
TM100D	**C10N1TM100**	**C10M2TM100**
ComPacT NSX160N AC/DC		ComPacT NSX160M AC/DC
Rating	**1P 1d (Icu = 25 kA 220/240 V AC)**	**2P 2d (Icu = 40 kA 380/415 V AC)**
TM125D	**C16N1TM125**	**C16M2TM125**
TM160D	**C16N1TM160**	**C16M2TM160**
ComPacT NSX100M AC/DC		ComPacT NSX100S AC/DC
Rating	**1P 1d (Icu = 40 kA 220/240 V AC)**	**2P 2d (Icu = 70 kA 380/415 V AC)**
TM16D	**C10M1TM016**	**C10S2TM016**
TM20D	**C10M1TM020**	**C10S2TM020**
TM25D	**C10M1TM025**	**C10S2TM025**
TM30D	**C10M1TM030**	**C10S2TM030**
TM40D	**C10M1TM040**	**C10S2TM040**
TM50D	**C10M1TM050**	**C10S2TM050**
TM63D	**C10M1TM063**	**C10S2TM063**
TM80D	**C10M1TM080**	**C10S2TM080**
TM100D	**C10M1TM100**	**C10S2TM100**
ComPacT NSX160M AC/DC		ComPacT NSX160S AC/DC
Rating	**1P 1d (Icu = 40 kA 220/240 V AC)**	**2P 2d (Icu = 70 kA 380/415 V AC)**
TM125D	**C16M1TM125**	**C16S2TM125**
TM160D	**C16M1TM160**	**C16S2TM160**

ComPacT NSX250 N 1P

With thermal-magnetic trip unit TM-D

ComPacT NSX250N AC	
Rating	**1P 1d (Icu = 25 kA 220/240 V AC)**
TM160D	**C25N1TM160**
TM200D	**C25N1TM200**
TM250D	**C25N1TM250**

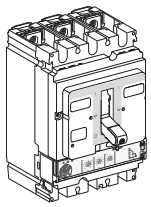
F

Complete Fixed Device

ComPacT NSX100/160/250B (25 KA 380/415 V)

ComPacT NSX100/160/250B

With thermal-magnetic trip unit TM-D



ComPacT NSX100B (25 kA at 380/415 V)

Rating	**3P** 3d	**4P** 3d	**4P** 4d
TM16D	**C10B3TM016**	**C10B6TM016**	**C10B4TM016**
TM25D	**C10B3TM025**	**C10B6TM025**	**C10B4TM025**
TM32D	**C10B3TM032**	**C10B6TM032**	**C10B4TM032**
TM40D	**C10B3TM040**	**C10B6TM040**	**C10B4TM040**
TM50D	**C10B3TM050**	**C10B6TM050**	**C10B4TM050**
TM63D	**C10B3TM063**	**C10B6TM063**	**C10B4TM063**
TM80D	**C10B3TM080**	**C10B6TM080**	**C10B4TM080**
TM100D	**C10B3TM100**	**C10B6TM100**	**C10B4TM100**

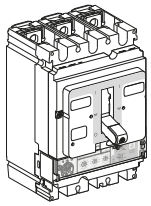
ComPacT NSX160B (25 kA at 380/415 V)

Rating	**3P** 3d	**4P** 3d	**4P** 4d
TM80D	**C16B3TM080**	**C16B6TM080**	**C16B4TM080**
TM100D	**C16B3TM100**	**C16B6TM100**	**C16B4TM100**
TM125D	**C16B3TM125**	**C16B6TM125**	**C16B4TM125**
TM160D	**C16B3TM160**	**C16B6TM160**	**C16B4TM160**

ComPacT NSX250B (25 kA at 380/415 V)

Rating	**3P** 3d	**4P** 3d	**4P** 4d
TM125D	**C25B3TM125**	**C25B6TM125**	**C25B4TM125**
TM160D	**C25B3TM160**	**C25B6TM160**	**C25B4TM160**
TM200D	**C25B3TM200**	**C25B6TM200**	**C25B4TM200**
TM250D	**C25B3TM250**	**C25B6TM250**	**C25B4TM250**

With electronic trip unit MicroLogic 2.2 (LS_0I protection)



ComPacT NSX100B (25 kA at 380/415 V)

Rating	**3P** 3d	**4P** 3d, 4d, 3d + N/2
40	**C10B32D040**	**C10B42D040**
100	**C10B32D100**	**C10B42D100**

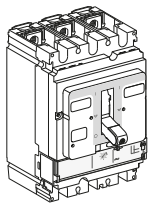
ComPacT NSX160B (25 kA at 380/415 V)

Rating	**3P** 3d	**4P** 3d, 4d, 3d + N/2
100	**C16B32D100**	**C16B42D100**
160	**C16B32D160**	**C16B42D160**

ComPacT NSX250B (25 kA at 380/415 V)

Rating	**3P** 3d	**4P** 3d, 4d, 3d + N/2
100	**C25B32D100**	**C25B42D100**
160	**C25B32D160**	**C25B42D160**
250	**C25B32D250**	**C25B42D250**

With electronic trip unit MicroLogic Vigi 4.2 (LS_0IR protection)



ComPacT NSX100B (25 kA 380/415V)

Rating	**3P** 3d	**4P** 4d, 3d + N/2
40 A	**C10B34V040**	**C10B44V040**
100 A	**C10B34V100**	**C10B44V100**

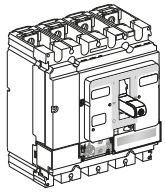
ComPacT NSX160B (25 kA 380/415V)

Rating	**3P** 3d	**4P** 4d, 3d + N/2
100 A	**C16B34V100**	**C16B44V100**
160 A	**C16B34V160**	**C16B44V160**

ComPacT NSX250B (25 kA 380/415V)

Rating	**3P** 3d	**4P** 4d, 3d + N/2
100 A	**C25B34V100**	**C25B44V100**
160 A	**C25B34V160**	**C25B44V160**
250 A	**C25B34V250**	**C25B44V250**

With electronic trip unit MicroLogic Vigi 7.2 E (LSIR protection)



ComPacT NSX100B (25 kA 380/415V)

Rating	**3P** 3d	**4P** 3d, 4d, 3d + N/2
40 A	-	**C10B47E040**
100 A	-	**C10B47E100**

ComPacT NSX160B (25 kA 380/415V)

Rating	**3P** 3d	**4P** 3d, 4d, 3d + N/2
100 A	-	**C16B47E100**
160 A	-	**C16B47E160**

ComPacT NSX250B (25 kA 380/415V)

Rating	**3P** 3d	**4P** 3d, 4d, 3d + N/2
100 A	-	**C25B47E100**
160 A	-	**C25B47E160**
250 A	-	**C25B47E250**

With electronic trip unit MicroLogic 5.2 E (LSI protection, energy meter)

Only available as separate component or through online configurator (product selector)

With electronic trip unit MicroLogic 6.2 E (LSIG protection, energy meter)

Only available as separate component or through online configurator (product selector)

With electronic trip unit MicroLogic 7.2 E (LSIG protection, energy meter)

Only available as separate component or through online configurator (product selector)

F

Complete Fixed Device
ComPacT NSX100/160/250F (36 KA 380/415 V)

ComPacT NSX100/160/250F

With thermal-magnetic trip unit TM-D

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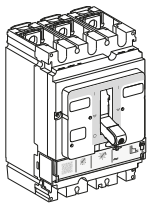


ComPacT NSX100F (36 kA at 380/415 V)

Rating	3P 3d	4P 3d	4P 4d
TM16D	C10F3TM016	C10F6TM016	C10F4TM016
TM25D	C10F3TM025	C10F6TM025	C10F4TM025
TM32D	C10F3TM032	C10F6TM032	C10F4TM032
TM40D	C10F3TM040	C10F6TM040	C10F4TM040
TM50D	C10F3TM050	C10F6TM050	C10F4TM050
TM63D	C10F3TM063	C10F6TM063	C10F4TM063
TM80D	C10F3TM080	C10F6TM080	C10F4TM080
TM100D	C10F3TM100	C10F6TM100	C10F4TM100

ComPacT NSX160F (36 kA at 380/415 V)

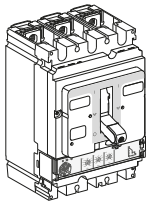
Rating	3P 3d	4P 3d	4P 4d
TM80D	C16F3TM080	C16F6TM080	C16F4TM080
TM100D	C16F3TM100	C16F6TM100	C16F4TM100
TM125D	C16F3TM125	C16F6TM125	C16F4TM125
TM160D	C16F3TM160	C16F6TM160	C16F4TM160

ComPacT NSX250F (36 kA at 380/415 V)

Rating	3P 3d	4P 3d	4P 4d
TM125D	C25F3TM125	C25F6TM125	C25F4TM125
TM160D	C25F3TM160	C25F6TM160	C25F4TM160
TM200D	C25F3TM200	C25F6TM200	C25F4TM200
TM250D	C25F3TM250	C25F6TM250	C25F4TM250

With electronic trip unit MicroLogic 2.2 (LS_OI protection)

DB438166.ai



ComPacT NSX100F (36 kA at 380/415 V)

Rating	3P 3d	4P 3d, 4d, 3d + N/2
40	C10F32D040	C10F42D040
100	C10F32D100	C10F42D100

ComPacT NSX160F (36 kA at 380/415 V)

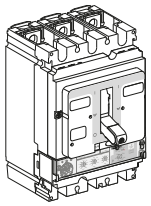
Rating	3P 3d	4P 3d, 4d, 3d + N/2
100	C16F32D100	C16F42D100
160	C16F32D160	C16F42D160

ComPacT NSX250F (36 kA at 380/415 V)

Rating	3P 3d	4P 3d, 4d, 3d + N/2
100	C25F32D100	C25F42D100
160	C25F32D160	C25F42D160
250	C25F32D250	C25F42D250

With electronic trip unit MicroLogic Vigi 4.2 (LS_OIR protection)

DB438167.ai



ComPacT NSX100F (36 kA 380/415V)

Rating	3P 3d	4P 4d, 3d + N/2
40 A	C10F34V040	C10F44V040
100 A	C10F34V100	C10F44V100

ComPacT NSX160F (36 kA 380/415V)

Rating	3P 3d	4P 4d, 3d + N/2
100 A	C16F34V100	C16F44V100
160 A	C16F34V160	C16F44V160

ComPacT NSX250F (36 kA 380/415V)

Rating	3P 3d	4P 4d, 3d + N/2
100 A	C25F34V100	C25F44V100
160 A	C25F34V160	C25F44V160
250 A	C25F34V250	C25F44V250

With electronic trip unit MicroLogic Vigi 7.2 E (LSIR protection + embedded energy management)

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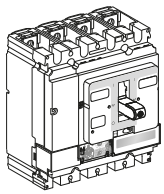

ComPacT NSX100F (36 kA 380/415V)

Rating	3P 3d	4P 4d, 3d + N/2
40 A	-	C10F47E040
100 A	-	C10F47E100

ComPacT NSX160F (36 kA 380/415V)

Rating	3P 3d	4P 4d, 3d + N/2
100 A	-	C16F47E100
160 A	-	C16F47E160

ComPacT NSX250F (36 kA 380/415V)

Rating	3P 3d	4P 4d, 3d + N/2
100 A	-	C25F47E100
160 A	-	C25F47E160
250 A	-	C25F47E250

With electronic trip unit MicroLogic 5.2 E (LSI protection, energy meter)

Only available as separate component or through online configurator (product selector)

With electronic trip unit MicroLogic 6.2 E (LSIG protection, energy meter)

Only available as separate component or through online configurator (product selector)

With electronic trip unit MicroLogic 7.2 E (LSIG protection, energy meter)

Only available as separate component or through online configurator (product selector)

F

Complete Fixed Device
ComPacT NSX100/160/250F (36 KA 380/415 V)

ComPacT NSX100/160/250F

With magnetic trip unit MA

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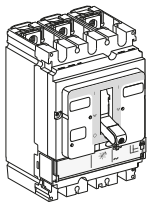


ComPacT NSX100F (36 kA at 380/415 V)	
Rating	**3P** 3d
MA2.5	**C10F3MA003**
MA6.3	**C10F3MA007**
MA12.5	**C10F3MA013**
MA25	**C10F3MA025**
MA50	**C10F3MA050**
MA100	**C10F3MA100**
ComPacT NSX160F (36 kA at 380/415 V)	
Rating	**3P** 3d
MA100	**C16F3MA100**
MA150	**C16F3MA150**
ComPacT NSX250F (36 kA at 380/415 V)	
Rating	**3P** 3d
MA150	**C25F3MA150**
MA220	**C25F3MA220**

With electronic trip unit MicroLogic 6.2 E-M (LSIG motor protection, energy meter)

Only available as separate component or through online configurator (product selector)

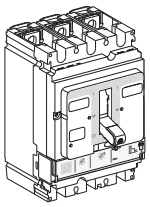
F

Complete Fixed Device
ComPacT NSX100/160/250N (50 KA 380/415 V)

ComPacT NSX100/160/250N

With thermal-magnetic trip unit TM-D

DB438165.ai



ComPacT NSX100N (50 kA at 380/415 V)

Rating	**3P** 3d	**4P** 3d	**4P** 4d
TM16D	**C10N3TM016**	**C10N6TM016**	**C10N4TM016**
TM25D	**C10N3TM025**	**C10N6TM025**	**C10N4TM025**
TM32D	**C10N3TM032**	**C10N6TM032**	**C10N4TM032**
TM40D	**C10N3TM040**	**C10N6TM040**	**C10N4TM040**
TM50D	**C10N3TM050**	**C10N6TM050**	**C10N4TM050**
TM63D	**C10N3TM063**	**C10N6TM063**	**C10N4TM063**
TM80D	**C10N3TM080**	**C10N6TM080**	**C10N4TM080**
TM100D	**C10N3TM100**	**C10N6TM100**	**C10N4TM100**

ComPacT NSX160N (50 kA at 380/415 V)

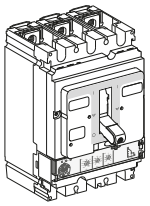
Rating	**3P** 3d	**4P** 3d	**4P** 4d
TM80D	**C16N3TM080**	**C16N6TM080**	**C16N4TM080**
TM100D	**C16N3TM100**	**C16N6TM100**	**C16N4TM100**
TM125D	**C16N3TM125**	**C16N6TM125**	**C16N4TM125**
TM160D	**C16N3TM160**	**C16N6TM160**	**C16N4TM160**

ComPacT NSX250N (50 kA at 380/415 V)

Rating	**3P** 3d	**4P** 3d	**4P** 4d
TM125D	**C25N3TM125**	**C25N6TM125**	**C25N4TM125**
TM160D	**C25N3TM160**	**C25N6TM160**	**C25N4TM160**
TM200D	**C25N3TM200**	**C25N6TM200**	**C25N4TM200**
TM250D	**C25N3TM250**	**C25N6TM250**	**C25N4TM250**

With electronic trip unit MicroLogic 2.2 (LS_OI protection)

DB438166.ai



ComPacT NSX100N (50 kA at 380/415 V)

Rating	**3P** 3d	**4P** 3d, 4d, 3d + N/2
40 A	**C10N32D040**	**C10N42D040**
100 A	**C10N32D100**	**C10N42D100**

ComPacT NSX160N (50 kA at 380/415 V)

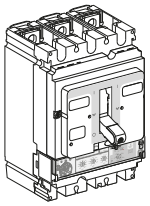
Rating	**3P** 3d	**4P** 3d, 4d, 3d + N/2
100 A	**C16N32D100**	**C16N42D100**
160 A	**C16N32D160**	**C16N42D160**

ComPacT NSX250N (50 kA at 380/415 V)

Rating	**3P** 3d	**4P** 3d, 4d, 3d + N/2
100 A	**C25N32D100**	**C25N42D100**
160 A	**C25N32D160**	**C25N42D160**
250 A	**C25N32D250**	**C25N42D250**

With electronic trip unit MicroLogic Vigi 4.2 (LS_OIR protection)

DB438167.ai



ComPacT NSX100N (50 kA 380/415V)

Rating	**3P** 3d	**4P** 4d, 3d + N/2
40 A	**C10N34V040**	**C10N44V040**
100 A	**C10N34V100**	**C10N44V100**

ComPacT NSX160N (50 kA 380/415V)

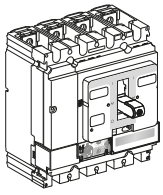
Rating	**3P** 3d	**4P** 4d, 3d + N/2
100 A	**C16N34V100**	**C16N44V100**
160 A	**C16N34V160**	**C16N44V160**

ComPacT NSX250N (50 kA 380/415V)

Rating	**3P** 3d	**4P** 4d, 3d + N/2
100 A	**C25N34V100**	**C25N44V100**
160 A	**C25N34V160**	**C25N44V160**
250 A	**C25N34V250**	**C25N44V250**

With electronic trip unit MicroLogic Vigi 7.2 E (LSIR protection + embedded energy management)

DB438567.ai



ComPacT NSX100N (50 kA 380/415V)

Rating	**3P** 3d	**4P** 4d, 3d + N/2
40 A	-	**C10N47E040**
100 A	-	**C10N47E100**

ComPacT NSX160N (50 kA 380/415V)

Rating	**3P** 3d	**4P** 4d, 3d + N/2
100 A	-	**C16N47E100**
160 A	-	**C16N47E160**

ComPacT NSX250N (50 kA 380/415V)

Rating	**3P** 3d	**4P** 4d, 3d + N/2
100 A	-	**C25N47E100**
160 A	-	**C25N47E160**
250 A	-	**C25N47E250**

With electronic trip unit MicroLogic 5.2 E (LSI protection, energy meter)

Only available as separate component or through online configurator (product selector)

With electronic trip unit MicroLogic 6.2 E (LSIG protection, energy meter)

Only available as separate component or through online configurator (product selector)

With electronic trip unit MicroLogic 7.2 E (LSIG protection, energy meter)

Only available as separate component or through online configurator (product selector)

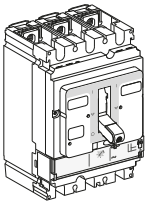
F

Complete Fixed Device
ComPacT NSX100/160/250N (50 KA 380/415 V)

ComPacT NSX100/160/250N

With magnetic trip unit MA

DB438168.ai



ComPacT NSX100N (50 kA at 380/415 V)	
Rating	**3P** 3d
MA2.5	**C10N3MA003**
MA6.3	**C10N3MA007**
MA12.5	**C10N3MA013**
MA25	**C10N3MA025**
MA50	**C10N3MA050**
MA100	**C10N3MA100**
ComPacT NSX160N (50 kA at 380/415 V)	
Rating	**3P** 3d
MA100	**C16N3MA100**
MA150	**C16N3MA150**
ComPacT NSX250N (50 kA at 380/415 V)	
Rating	**3P** 3d
MA150	**C25N3MA150**
MA220	**C25N3MA220**

With electronic trip unit MicroLogic 6.2 E-M (LSIG motor protection, energy meter)

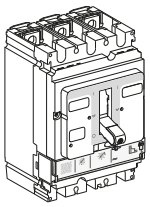
Only available as separate component or through online configurator (product selector)

F

Complete Fixed Device
ComPacT NSX100/160/250H (70 KA 380/415 V)

ComPacT NSX100/160/250H

With thermal-magnetic trip unit TM-D



ComPacT NSX100H (70 kA at 380/415 V)

Rating	**3P** 3d	**4P** 3d	**4P** 4d
TM16D	**C10H3TM016**	**C10H6TM016**	**C10H4TM016**
TM25D	**C10H3TM025**	**C10H6TM025**	**C10H4TM025**
TM32D	**C10H3TM032**	**C10H6TM032**	**C10H4TM032**
TM40D	**C10H3TM040**	**C10H6TM040**	**C10H4TM040**
TM50D	**C10H3TM050**	**C10H6TM050**	**C10H4TM050**
TM63D	**C10H3TM063**	**C10H6TM063**	**C10H4TM063**
TM80D	**C10H3TM080**	**C10H6TM080**	**C10H4TM080**
TM100D	**C10H3TM100**	**C10H6TM100**	**C10H4TM100**

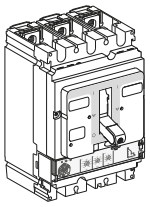
ComPacT NSX160H (70 kA at 380/415 V)

Rating	**3P** 3d	**4P** 3d	**4P** 4d
TM80D	**C16H3TM080**	**C16H6TM080**	**C16H4TM080**
TM100D	**C16H3TM100**	**C16H6TM100**	**C16H4TM100**
TM125D	**C16H3TM125**	**C16H6TM125**	**C16H4TM125**
TM160D	**C16H3TM160**	**C16H6TM160**	**C16H4TM160**

ComPacT NSX250H (70 kA at 380/415 V)

Rating	**3P** 3d	**4P** 3d	**4P** 4d
TM125D	**C25H3TM125**	**C25H6TM125**	**C25H4TM125**
TM160D	**C25H3TM160**	**C25H6TM160**	**C25H4TM160**
TM200D	**C25H3TM200**	**C25H6TM200**	**C25H4TM200**
TM250D	**C25H3TM250**	**C25H6TM250**	**C25H4TM250**

With electronic trip unit MicroLogic 2.2 (LS_0I protection)



ComPacT NSX100H (70 kA at 380/415 V)

Rating	**3P** 3d	**4P** 3d, 4d, 3d + N/2
40 A	**C10H32D040**	**C10H42D040**
100 A	**C10H32D100**	**C10H42D100**

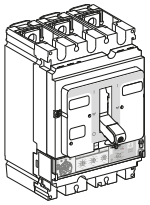
ComPacT NSX160H (70 kA at 380/415 V)

Rating	**3P** 3d	**4P** 3d, 4d, 3d + N/2
100 A	**C16H32D100**	**C16H42D100**
160 A	**C16H32D160**	**C16H42D160**

ComPacT NSX250H (70 kA at 380/415 V)

Rating	**3P** 3d	**4P** 3d, 4d, 3d + N/2
100 A	**C25H32D100**	**C25H42D100**
160 A	**C25H32D160**	**C25H42D160**
250 A	**C25H32D250**	**C25H42D250**

With electronic trip unit MicroLogic Vigi 4.2 (LS_0IR protection)



ComPacT NSX100H (70 kA 380/415V)

Rating	**3P** 3d	**4P** 4d, 3d + N/2
40 A	**C10H34V040**	**C10H44V040**
100 A	**C10H34V100**	**C10H44V100**

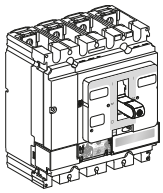
ComPacT NSX160H (70 kA 380/415V)

Rating	**3P** 3d	**4P** 4d, 3d + N/2
100 A	**C16H34V100**	**C16H44V100**
160 A	**C16H34V160**	**C16H44V160**

ComPacT NSX250H (70 kA 380/415V)

Rating	**3P** 3d	**4P** 4d, 3d + N/2
100 A	**C25H34V100**	**C25H44V100**
160 A	**C25H34V160**	**C25H44V160**
250 A	**C25H34V250**	**C25H44V250**

With electronic trip unit MicroLogic Vigi 7.2 E (LSIR protection + embedded energy management)



ComPacT NSX100H (70 kA 380/415V)

Rating	**3P** 3d	**4P** 4d, 3d + N/2
40 A	-	**C10H47E040**
100 A	-	**C10H47E100**

ComPacT NSX160H (70 kA 380/415V)

Rating	**3P** 3d	**4P** 4d, 3d + N/2
100 A	-	**C16H47E100**
160 A	-	**C16H47E160**

ComPacT NSX250H (70 kA 380/415V)

Rating	**3P** 3d	**4P** 4d, 3d + N/2
100 A	-	**C25H47E100**
160 A	-	**C25H47E160**
250 A	-	**C25H47E250**

With electronic trip unit MicroLogic 5.2 E (LSI protection, energy meter)

Only available as separate component or through online configurator (product selector)

With electronic trip unit MicroLogic 6.2 E (LSIG protection, energy meter)

Only available as separate component or through online configurator (product selector)

With electronic trip unit MicroLogic 7.2 E (LSIG protection, energy meter)

Only available as separate component or through online configurator (product selector)

F

Complete Fixed Device
ComPacT NSX100/160/250H (70 KA 380/415 V)

ComPacT NSX100/160/250H

With magnetic trip unit MA

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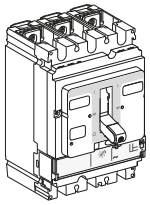

ComPacT NSX100H (70 kA at 380/415 V)

Rating	**3P** 3d
MA2.5	**C10H3MA003**
MA6.3	**C10H3MA007**
MA12.5	**C10H3MA013**
MA25	**C10H3MA025**
MA50	**C10H3MA050**
MA100	**C10H3MA100**

ComPacT NSX160H (70 kA at 380/415 V)

Rating	**3P** 3d
MA100	**C16H3MA100**
MA150	**C16H3MA150**

ComPacT NSX250H (70 kA at 380/415 V)

Rating	**3P** 3d
MA150	**C25H3MA150**
MA220	**C25H3MA220**

With electronic trip unit MicroLogic 2.2 M (LS_oI motor protection)

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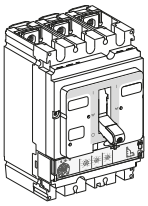

ComPacT NSX100H (70 kA at 380/415 V)

Rating	**3P** 3d
25 A	**C10H32M025**
50 A	**C10H32M050**
100 A	**C10H32M100**

ComPacT NSX160H (70 kA at 380/415 V)

Rating	**3P** 3d
100 A	**C16H32M100**
150 A	**C16H32M150**

ComPacT NSX250H (70 kA at 380/415 V)

Rating	**3P** 3d
150 A	**C25H32M150**
220 A	**C25H32M220**

With electronic trip unit MicroLogic 6.2 E-M (LSIG motor protection, energy meter)

Only available as separate component or through online configurator (product selector)

F

Complete Fixed Device
ComPacT NSX100/250R (200 KA 380/415 V - 45 KA 690 V)

ComPacT NSX100/250R

With thermal-magnetic trip unit TM-D

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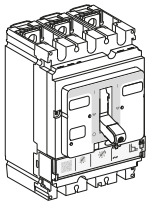

ComPacT NSX100R (200 kA at 380/415 V - 45 kA at 690 V)

Rating	**3P** 3d	**4P** 4d
TM40D	**C10R3TM040**	**C10R4TM040**
TM50D	**C10R3TM050**	**C10R4TM050**
TM63D	**C10R3TM063**	**C10R4TM063**
TM80D	**C10R3TM080**	**C10R4TM080**
TM100D	**C10R3TM100**	**C10R4TM100**

ComPacT NSX250R (200 kA at 380/415 V - 45 kA at 690 V)

Rating	**3P** 3d	**4P** 4d
TM125D	**C25R3TM125**	**C25R4TM125**
TM160D	**C25R3TM160**	**C25R4TM160**
TM200D	**C25R3TM200**	**C25R4TM200**
TM250D	**C25R3TM250**	**C25R4TM250**

With electronic trip unit MicroLogic 2.2 ($LS_o I$ protection)

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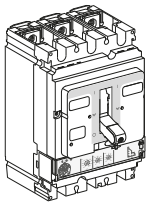

ComPacT NSX100R (200 kA at 380/415 V - 45 kA at 690 V)

Rating	**3P** 3d	**4P** 3d, 4d, 3d + N/2
40 A	**C10R32D040**	**C10R42D040**
100 A	**C10R32D100**	**C10R42D100**

ComPacT NSX250R (200 kA at 380/415 V - 45 kA at 690 V)

Rating	**3P** 3d	**4P** 3d, 4d, 3d + N/2
100 A	**C25R32D100**	**C25R42D100**
160 A	**C25R32D160**	**C25R42D160**
250 A	**C25R32D250**	**C25R42D250**

With electronic trip unit MicroLogic 5.2 E (LSI protection, energy meter)

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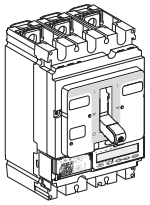


ComPacT NSX100R (200 kA at 380/415 V - 45 kA at 690 V)

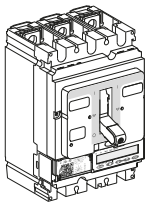
Rating	**3P** 3d	**4P** 3d, 4d, 3d + N/2, OSN
40 A	**C10R35E040**	**C10R45E040**
100 A	**C10R35E100**	**C10R45E100**

ComPacT NSX250R (200 kA at 380/415 V - 45 kA at 690 V)

Rating	**3P** 3d	**4P** 3d, 4d, 3d + N/2, OSN
100 A	**C25R35E100**	**C25R45E100**
160 A	**C25R35E160**	**C25R45E160**
250 A	**C25R35E250**	**C25R45E250**

With electronic trip unit MicroLogic 6.2 E (LSIG protection, energy meter)

DB438169.ai



ComPacT NSX100R (200 kA at 380/415 V - 45 kA at 690 V)

Rating	**3P** 3d	**4P** 3d, 4d, 3d + N/2, OSN
40 A	**C10R36E040**	**C10R46E040**
100 A	**C10R36E100**	**C10R46E100**

ComPacT NSX250R (200 kA at 380/415 V - 45 kA at 690 V)

Rating	**3P** 3d	**4P** 3d, 4d, 3d + N/2, OSN
100 A	**C25R36E100**	**C25R46E100**
160 A	**C25R36E160**	**C25R46E160**
250 A	**C25R36E250**	**C25R46E250**

F

Complete Fixed Device

Com**PacT** NSX100/250R (200 KA 380/415 V - 45 KA 690 V)

ComPacT NSX100/250R

With magnetic trip unit MA

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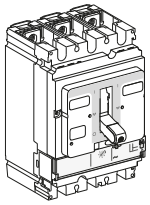

ComPacT NSX100R (200 kA at 380/415 V - 45 kA at 690 V)

Rating	**3P** 3d
MA12.5	**C10R3MA013**
MA25	**C10R3MA025**
MA50	**C10R3MA050**
MA100	**C10R3MA100**

ComPacT NSX250R (200 kA at 380/415 V - 45 kA at 690 V)

Rating	**3P** 3d
MA150	**C25R3MA150**
MA220	**C25R3MA220**

With electronic trip unit MicroLogic 2.2 M (LS_0I motor protection)

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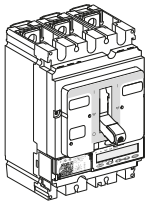

ComPacT NSX100R (200 kA at 380/415 V - 45 kA at 690 V)

Rating	**3P** 3d
25 A	**C10R32M025**
50 A	**C10R32M050**
100 A	**C10R32M100**

ComPacT NSX250R (200 kA at 380/415 V - 45 kA at 690 V)

Rating	**3P** 3d
150 A	**C25R32M150**
220 A	**C25R32M220**

With electronic trip unit MicroLogic 6.2 E-M (LSIG motor protection, energy meter)

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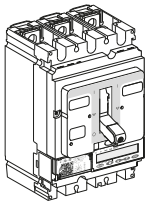

ComPacT NSX100R (200 kA at 380/415 V - 45 kA at 690 V)

Rating	**3P** 3d
25 A	**C10R36M025**
50 A	**C10R36M050**
80 A	**C10R36M080**

ComPacT NSX250R (200 kA at 380/415 V - 45 kA at 690 V)

Rating	**3P** 3d
150 A	**C25R36M150**
220 A	**C25R36M220**

F

Complete Fixed Device
ComPacT NSX100/250HB1 (85 KA 500 V - 75 KA 690 V)

ComPacT NSX100/250HB1

With thermal-magnetic trip unit TM-D

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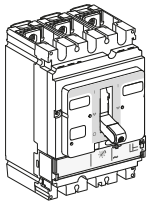

ComPacT NSX100HB1 (85 kA at 500 V - 75 kA at 690 V)

Rating	**3P** 3d	**4P** 4d
TM40D	**C10V3TM040**	**C10V4TM040**
TM50D	**C10V3TM050**	**C10V4TM050**
TM63D	**C10V3TM063**	**C10V4TM063**
TM80D	**C10V3TM080**	**C10V4TM080**
TM100D	**C10V3TM100**	**C10V4TM100**

ComPacT NSX250HB1 (85 kA at 500 V - 75 kA at 690 V)

Rating	**3P** 3d	**4P** 4d
TM125D	**C25V3TM125**	**C25V4TM125**
TM160D	**C25V3TM160**	**C25V4TM160**
TM200D	**C25V3TM200**	**C25V4TM200**
TM250D	**C25V3TM250**	**C25V4TM250**

With electronic trip unit MicroLogic 2.2 ($LS_o I$ protection)

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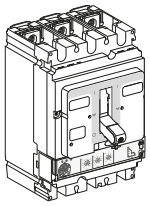


ComPacT NSX100HB1 (85 kA at 500 V - 75 kA at 690 V)

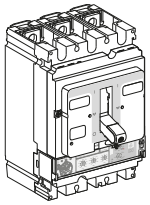
Rating	**3P** 3d	**4P** 3d, 4d, 3d + N/2
40 A	**C10V32D040**	**C10V42D040**
100 A	**C10V32D100**	**C10V42D100**

ComPacT NSX250HB1 (85 kA at 500 V - 75 kA at 690 V)

Rating	**3P** 3d	**4P** 3d, 4d, 3d + N/2
100 A	**C25V32D100**	**C25V42D100**
160 A	**C25V32D160**	**C25V42D160**
250 A	**C25V32D250**	**C25V42D250**

With electronic trip unit MicroLogic 5.2 E (LSI protection, energy meter)

DB438167.ai



ComPacT NSX100HB1 (85 kA at 500 V - 75 kA at 690 V)

Rating	**3P** 3d	**4P** 3d, 4d, 3d + N/2,OSN
40 A	**C10V35E040**	**C10V45E040**
100 A	**C10V35E100**	**C10V45E100**

ComPacT NSX250HB1 (85 kA at 500 V - 75 kA at 690 V)

Rating	**3P** 3d	**4P** 3d, 4d, 3d + N/2, OSN
100 A	**C25V35E100**	**C25V45E100**
160 A	**C25V35E160**	**C25V45E160**
250 A	**C25V35E250**	**C25V45E250**

With electronic trip unit MicroLogic 6.2 E (LSIG protection, energy meter)

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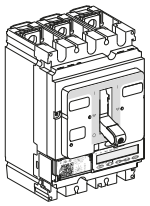


ComPacT NSX100HB1 (85 kA at 500 V - 75 kA at 690 V)

Rating	**3P** 3d	**4P** 3d, 4d, 3d + N/2, OSN
40 A	**C10V36E040**	**C10V46E040**
100 A	**C10V36E100**	**C10V46E100**

ComPacT NSX250HB1 (85 kA at 500 V - 75 kA at 690 V)

Rating	**3P** 3d	**4P** 3d, 4d, 3d + N/2, OSN
100 A	**C25V36E100**	**C25V46E100**
160 A	**C25V36E160**	**C25V46E160**
250 A	**C25V36E250**	**C25V46E250**

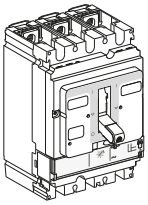
F

Complete Fixed Device
ComPacT NSX100/250HB1 (85 KA 500 V - 75 KA 690 V)

ComPacT NSX100/250HB1

With magnetic trip unit MA

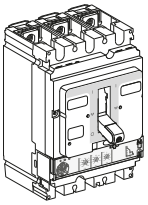
DB438168.ai



ComPacT NSX100HB1 (85 kA at 500 V - 75 kA at 690 V)	
Rating	**3P** 3d
MA12.5	**C10V3MA013**
MA25	**C10V3MA025**
MA50	**C10V3MA050**
MA100	**C10V3MA100**
ComPacT NSX250HB1 (85 kA at 500 V - 75 kA at 690 V)	
Rating	**3P** 3d
MA150	**C25V3MA150**
MA220	**C25V3MA220**

With electronic trip unit MicroLogic 2.2 M (LS_oI motor protection)

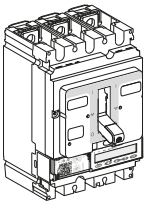
DB438166.ai



ComPacT NSX100HB1 (85 kA at 500 V - 75 kA at 690 V)	
Rating	**3P** 3d
25 A	**C10V32M025**
50 A	**C10V32M050**
100 A	**C10V32M100**
ComPacT NSX250HB1 (85 kA at 500 V - 75 kA at 690 V)	
Rating	**3P** 3d
150 A	**C25V32M150**
220 A	**C25V32M220**

With electronic trip unit MicroLogic 6.2 E-M (LSIG motor protection, energy meter)

DB438169.ai



ComPacT NSX100HB1 (85 kA at 500 V - 75 kA at 690 V)	
Rating	**3P** 3d
25 A	**C10V36M025**
50 A	**C10V36M050**
80 A	**C10V36M080**
ComPacT NSX250HB1 (85 kA at 500 V - 75 kA at 690 V)	
Rating	**3P** 3d
150 A	**C25V36M150**
220 A	**C25V36M220**

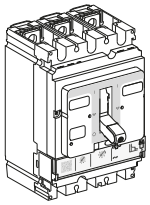
F

Complete Fixed Device
ComPacT NSX100/250HB2 (100 KA 500 V - 100 KA 690 V)

ComPacT NSX100/250HB2

With thermal-magnetic trip unit TM-D

DB438165.ai



ComPacT NSX100HB2 (100 kA at 500 V - 100 kA at 690 V)

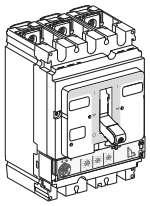
Rating	**3P** 3d	**4P** 4d
TM63D	**C10W3TM063**	**C10W4TM063**
TM80D	**C10W3TM080**	**C10W4TM080**
TM100D	**C10W3TM100**	**C10W4TM100**

ComPacT NSX250HB2 (100 kA at 500 V - 100 kA at 690 V)

Rating	**3P** 3d	**4P** 4d
TM125D	**C25W3TM125**	**C25W4TM125**
TM160D	**C25W3TM160**	**C25W4TM160**
TM200D	**C25W3TM200**	**C25W4TM200**
TM250D	**C25W3TM250**	**C25W4TM250**

With electronic trip unit MicroLogic 2.2 (LS_oI protection)

DB438166.ai



ComPacT NSX100HB2 (100 kA at 500 V - 100 kA at 690 V)

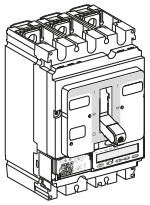
Rating	**3P** 3d	**4P** 3d, 4d, 3d + N/2
40 A	**C10W32D040**	**C10W42D040**
100 A	**C10W32D100**	**C10W42D100**

ComPacT NSX250HB2 (100 kA at 500 V - 100 kA at 690 V)

Rating	**3P** 3d	**4P** 3d, 4d, 3d + N/2
100 A	**C25W32D100**	**C25W42D100**
160 A	**C25W32D160**	**C25W42D160**
250 A	**C25W32D250**	**C25W42D250**

With electronic trip unit MicroLogic 5.2 E (LSI protection, energy meter)

DB438169.ai



ComPacT NSX100HB2 (100 kA at 500 V - 100 kA at 690 V)

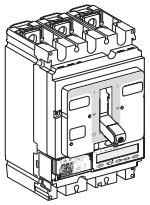
Rating	**3P** 3d	**4P** 3d, 4d, 3d + N/2, OSN
40 A	**C10W35E040**	**C10W45E040**
100 A	**C10W35E100**	**C10W45E100**

ComPacT NSX250HB2 (100 kA at 500 V - 100 kA at 690 V)

Rating	**3P** 3d	**4P** 3d, 4d, 3d + N/2, OSN
100 A	**C25W35E100**	**C25W45E100**
160 A	**C25W35E160**	**C25W45E160**
250 A	**C25W35E250**	**C25W45E250**

With electronic trip unit MicroLogic 6.2 E (LSIG protection, energy meter)

DB438169.ai



ComPacT NSX100HB2 (100 kA at 500 V - 100 kA at 690 V)

Rating	**3P** 3d	**4P** 3d, 4d, 3d + N/2, OSN
40 A	**C10W36E040**	**C10W46E040**
100 A	**C10W36E100**	**C10W46E100**

ComPacT NSX250HB2 (100 kA at 500 V - 100 kA at 690 V)

Rating	**3P** 3d	**4P** 3d, 4d, 3d + N/2, OSN
100 A	**C25W36E100**	**C25W46E100**
160 A	**C25W36E160**	**C25W46E160**
250 A	**C25W36E250**	**C25W46E250**

F

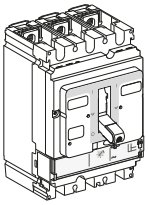
Complete Fixed Device

ComPacT NSX100/250HB2 (100 KA 500 V - 100 KA 690 V)

ComPacT NSX100/250HB2

With magnetic trip unit MA

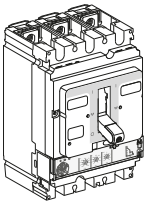
DB438168.ai



ComPacT NSX100HB2 (100 kA at 500 V - 100 kA at 690 V)	
Rating	**3P** 3d
MA12.5	**C10W3MA013**
MA25	**C10W3MA025**
MA50	**C10W3MA050**
MA100	**C10W3MA100**
ComPacT NSX250HB2 (100 kA at 500 V - 100 kA at 690 V)	
Rating	**3P** 3d
MA150	**C25W3MA150**
MA220	**C25W3MA220**

With electronic trip unit MicroLogic 2.2 M (LS_oI motor protection)

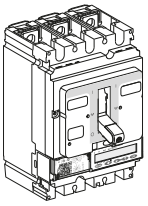
DB438166.ai



ComPacT NSX100HB2 (100 kA at 500 V - 100 kA at 690 V)	
Rating	**3P** 3d
25 A	**C10W32M025**
50 A	**C10W32M050**
100 A	**C10W32M100**
ComPacT NSX250HB2 (100 kA at 500 V - 100 kA at 690 V)	
Rating	**3P** 3d
150 A	**C25W32M150**
220 A	**C25W32M220**

With electronic trip unit MicroLogic 6.2 E-M (LSIG motor protection, energy meter)

DB438169.ai



ComPacT NSX100HB2 (100 kA at 500 V - 100 kA at 690 V)	
Rating	**3P** 3d
25 A	**C10W36M025**
50 A	**C10W36M050**
80 A	**C10W36M080**
ComPacT NSX250HB2 (100 kA at 500 V - 100 kA at 690 V)	
Rating	**3P** 3d
150 A	**C25W36M150**
220 A	**C25W36M220**

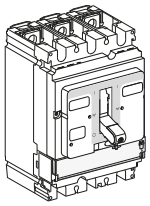
F

Complete Fixed Device
ComPacT NSX100/160/250NA

ComPacT NSX100/160/250NA Switch-Disconnector

With NA switch-disconnector unit

DB438170.ai



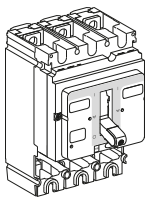
ComPacT NSX100NA		
Rating	3P	4P
100 A	C103100S	C104100S
ComPacT NSX160NA		
Rating	3P	4P
160 A	C163160S	C164160S
ComPacT NSX250NA		
Rating	3P	4P
250 A	C253250S	C254250S

F

Based on Separate Components
ComPacT NSX100/160/250

Basic Frame

DB438171.ai



ComPacT NSX100

	3P	4P
NSX100B (25 kA 380/415 V)	**C10B3**	**C10B4**
NSX100F (36 kA 380/415 V)	**C10F3**	**C10F4**
NSX100N (50 kA 380/415 V)	**C10N3**	**C10N4**
NSX100H (70 kA 380/415 V)	**C10H3**	**C10H4**
NSX100S (100 kA 380/415 V)	**C10S3**	**C10S4**
NSX100L (150 kA 380/415 V)	**C10L3**	**C10L4**

ComPacT NSX160

	3P	4P
NSX160B (25 kA 380/415 V)	**C16B3**	**C16B4**
NSX160F (36 kA 380/415 V)	**C16F3**	**C16F4**
NSX160N (50 kA 380/415 V)	**C16N3**	**C16N4**
NSX160H (70 kA 380/415 V)	**C16H3**	**C16H4**
NSX160S (100 kA 380/415 V)	**C16S3**	**C16S4**
NSX160L (150 kA 380/415 V)	**C16L3**	**C16L4**

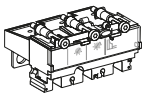
ComPacT NSX250

	3P	4P
NSX250B (25 kA 380/415 V)	**C25B3**	**C25B4**
NSX250F (36 kA 380/415 V)	**C25F3**	**C25F4**
NSX250N (50 kA 380/415 V)	**C25N3**	**C25N4**
NSX250H (70 kA 380/415 V)	**C25H3**	**C25H4**
NSX250S (100 kA 380/415 V)	**C25S3**	**C25S4**
NSX250L (150 kA 380/415 V)	**C25L3**	**C25L4**

+ Trip Unit

Distribution protection

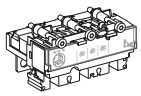
DB112246.eps



Thermal-magnetic TM-D

Rating	3P 3d	4P 3d	4P 4d
TM16D	**C103TM016**	**C106TM016**	**C104TM016**
TM25D	**C103TM025**	**C106TM025**	**C104TM025**
TM32D	**C103TM032**	**C106TM032**	**C104TM032**
TM40D	**C103TM040**	**C106TM040**	**C104TM040**
TM50D	**C103TM050**	**C106TM050**	**C104TM050**
TM63D	**C103TM063**	**C106TM063**	**C104TM063**
TM80D	**C103TM080**	**C106TM080**	**C104TM080**
TM100D	**C103TM100**	**C106TM100**	**C104TM100**
TM125D	**C163TM125**	**C166TM125**	**C164TM125**
TM160D [1]	**C163TM160**	**C166TM160**	**C164TM160**
TM160D [2]	**C253TM160**	**C256TM160**	**C254TM160**
TM200D	**C253TM200**	**C256TM200**	**C254TM200**
TM250D	**C253TM250**	**C256TM250**	**C254TM250**

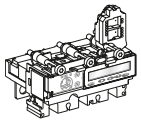
DB112247.eps



MicroLogic 2.2 (LS_0I protection)

Rating	3P 3d	4P 3d, 4d, 3d + N/2
40 A	**C1032D040**	**C1042D040**
100 A	**C1032D100**	**C1042D100**
160 A	**C1632D160**	**C1642D160**
250 A	**C2532D250**	**C2542D250**

DB112248.eps



MicroLogic 5.2 E (LSI protection, energy meter)

Rating	3P 3d	4P 3d, 4d, 3d + N/2, 3d + OSN
40 A	**C1035E040**	**C1045E040**
100 A	**C1035E100**	**C1045E100**
160 A	**C1635E160**	**C1645E160**
250 A	**C2535E250**	**C2545E250**

MicroLogic 6.2 E (LSIG protection, energy meter)

Rating	3P 3d	4P 3d, 4d, 3d + N/2, 3d + OSN
40 A	**C1036E040**	**C1046E040**
100 A	**C1036E100**	**C1046E100**
160 A	**C1636E160**	**C1646E160**
250 A	**C2536E250**	**C2546E250**

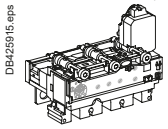
[1] For NSX160.
[2] For NSX250.

F

Based on Separate Components
ComPacT NSX100/160/250

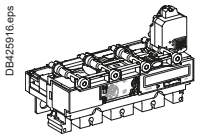
+ Trip Unit (Cont.)

Distribution protection with embedded earth leakage protection



MicroLogic Vigi 4.2 (LS_0IR protection)

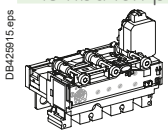
Rating	**3P** 3d	**4P** 4d 3d + N/2
40 A	**C1034V040**	**C1044V040**
100 A	**C1034V100**	**C1044V100**
160 A	**C1634V160**	**C1644V160**
250 A	**C2534V250**	**C2544V250**



MicroLogic Vigi 7.2 E (LSIR protection)

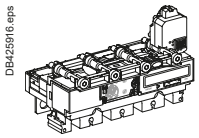
Rating	**3P** 3d	**4P** 4d 3d + N/2
40 A	-	**C1047E040**
100 A	-	**C1047E100**
160 A	-	**C1647E160**
250 A	-	**C2547E250**

Distribution protection with embedded earth leakage alarm



MicroLogic Vigi 4.2 AL (LS_0I protection + earth leakage alarm)

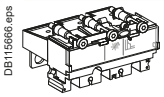
Rating	**3P** 3d	**4P** 4d 3d + N/2
40 A	**C1034A040**	**C1044A040**
100 A	**C1034A100**	**C1044A100**
160 A	**C1634A160**	**C1644A160**
250 A	**C2534A250**	**C2544A250**



MicroLogic Vigi 7.2 E AL (LSI protection + earth leakage alarm)

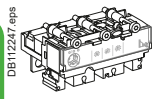
Rating	**3P** 3d	**4P** 4d 3d + N/2
40 A	-	**C1047A040**
100 A	-	**C1047A100**
160 A	-	**C1647A160**
250 A	-	**C2547A250**

Motor protection



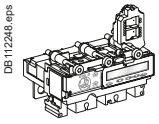
Magnetic MA (I protection)

Rating	**3P** 3d	**4P** 3d
MA2.5	**C103MA003**	
MA6.3	**C103MA007**	
MA12.5	**C103MA013**	
MA25	**C103MA025**	
MA50	**C103MA050**	
MA100	**C103MA100**	**C106MA100**
MA150	**C163MA150**	**C166MA150**
MA220	**C253MA220**	**C256MA220**



MicroLogic 2.2 M (LS_0I protection)

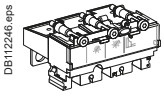
Rating	**3P** 3d
25 A	**C1032M025**
50 A	**C1032M050**
100 A	**C1032M100**
150 A	**C1632M150**
220 A	**C2532M220**



MicroLogic 6.2 E-M (LSIG protection, energy meter)

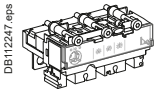
Rating	**3P** 3d
25 A	**C1036M025**
50 A	**C1036M050**
80 A	**C1036M080**
150 A	**C1636M150**
220 A	**C2536M220**

Generator protection



Thermal-magnetic TM-G

Rating	**3P** 3d	**4P** 4d
TM16G	**C103MG016**	**C104MG016**
TM25G	**C103MG025**	**C104MG025**
TM40G	**C103MG040**	**C104MG040**
TM63G	**C103MG063**	**C104MG063**
TM80G	**C103MG080**	**C104MG080**
TM100G	**C103MG100**	**C104MG100**
TM125G	**C163MG125**	**C164MG125**
TM160G	**C163MG160**	**C164MG160**
TM200G	**C253MG200**	**C254MG200**
TM250G	**C253MG250**	**C254MG250**



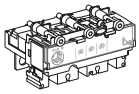
MicroLogic 2.2 G (LS_0I protection)

Rating	**3P** 3d	**4P** 3d, 4d, 3d + N/2
40 A	**C1032G040**	**C1042G040**
100 A	**C1032G100**	**C1042G100**
160 A	**C1632G160**	**C1642G160**
250 A	**C2532G250**	**C2542G250**

F

+ Trip Unit (Cont.)

Protection of public distribution systems


DB112247.eps

MicroLogic 2.2 AB (LS_0I protection)

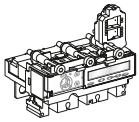
Rating	**4P** 3d, 4d, 3d + N/2
100 A	**C1042B100**
160 A	**C1642B160**
240 A	**C2542B240**

Earth Leakage protection of public distribution systems

MicroLogic Vigi 4.2 AB distribution protections

Rating	**4P** 3d, 4d, 3d + N/2
100 A	**C1044B100**
160 A	**C1644B160**
250 A	**C2544B250**

16 Hz 2/3 network protection

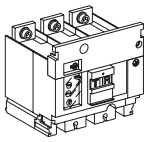

DB112248.eps

MicroLogic 5.2 A-Z (LSI protection)

Rating	**3P** 3d
100 A	**C1035Z100**
250 A	**C2535Z250**

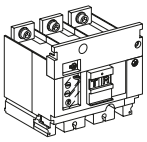
+ VigiPacT add-on Protection and Alarm Modules

VigiPacT add-on protection


DB112249.eps

	3P	**4P**
NSX100/160 (200 to 440 V)	**LV429488**	**LV429489**
NSX250 (200 to 440 V)	**LV429492**	**LV429493**
NSX100/160 (440 to 550 V)	**LV429490**	**LV429491**
NSX250 (440 to 550 V)	**LV429494**	**LV429495**
Connection for a 4P VigiPacT on a 3P breaker		**LV429214**

VigiPacT add-on alarm


DB112248.eps

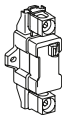
	3P	**4P**
200 to 440 V AC	**LV429498**	**LV429499**
Connection for a 4P insulation monitoring module on a 3P breaker		**LV429214**

F

Trip Unit Accessories
ComPacT NSX100/160/250

Trip Unit Accessories

External neutral CT for 3 pole breaker with MicroLogic 5/6


DB112733.eps

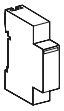
25-100 A	**LV429521**
150-250 A	**LV430563**

24 V DC wiring accessory for MicroLogic 5/6


DB112730.eps

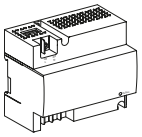
24 V DC power supply connector	**LV434210**

ZSI wiring accessory for NS630b NW with NSX


DB115665.eps

ZSI module	**LV434212**

External power supply module (24 V DC - 1 A), class 4

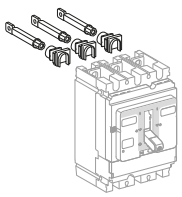

DB432608.eps

24-30 V DC	**LV454440**
48-60 V DC	**LV454441**
100-125 V DC	**LV454442**
110-130 V AC	**LV454443**
200-240 V AC	**LV454444**

F

Fixed/RC Device = Fixed/FC Device + Rear Connection Kit

DB438172.ai



Short RC kit

Kit 3P		3 x	**LV429235**
Kit 4P		4 x	**LV429235**

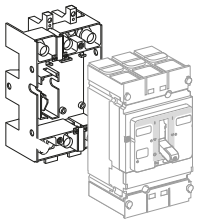
Mixed RC kit

Kit 3P	Short RCs	2 x	**LV429235**
	Long RCs	1 x	**LV429236**
Kit 4P	Short RCs	2 x	**LV429235**
	Long RCs	2 x	**LV429236**

Plug-in Version = Fixed/FC Device + Plug-in Kit

Kit for ComPacT NSX

DB438173.ai

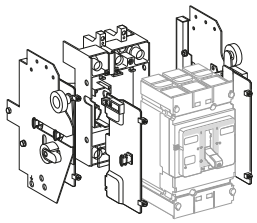


	3P	4P
Plug-in kit	**LV429289**	**LV429290**
Comprising:		
Base	= 1 x **LV429266**	= 1 x **LV429267**
Power connections	+ 3 x **LV429268**	+ 4 x **LV429268**
Short terminal shields	+ 2 x **LV429515**	+ 2 x **LV429516**
Safety trip interlock	+ 1 x **LV429270**	+ 1 x **LV429270**

Withdrawable Version = Fixed/FC Device + Withdrawable Kit

Kit for ComPacT NSX

DB438174.ai



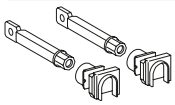
	3P	4P
	Kit for ComPacT NSX	**Kit for ComPacT NSX**
	=	**=**
Plug-in kit	1 x **LV429289**	1 x **LV429290**
	+	**+**
Chassis side plates for base	1 x **LV429282**	1 x **LV429282**
	+	**+**
Chassis side plates for breaker	1 x **LV429283**	1 x **LV429283**

F

Accessories and Auxiliaries
ComPacT NSX100/160/250

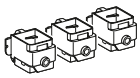
Connection Accessories (Cu or Al)

Rear connections

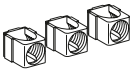

DB112225.eps

2 short		**LV429235**
2 long		**LV429236**

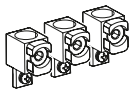
Bare cable connectors


DB112226.eps

Steel connectors	1 x (1.5 to 95 mm²) ; ≤ 160 A	Set of 2	**LV429246**
		Set of 3	**LV429242**
		Set of 4	**LV429243**


DB112725.eps

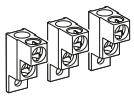
Aluminium connectors	1 x (25 to 95 mm²) ; ≤ 250 A	Set of 2	**LV429255**
		Set of 3	**LV429227**
		Set of 4	**LV429228**


DB425461.eps

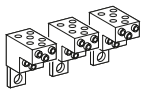
	1 x (120 to 185 mm²) ; ≤ 250 A	Set of 2	**LV429247**
		Set of 3	**LV429259**
		Set of 4	**LV429260**
	1 x (120 to 240 mm²) ; ≤ 250 A	Set of 3	**LV429244**
		Set of 4	**LV429245**


DB112726.eps

Clips for connectors		Set of 10	**LV429241**


DB112227.eps

Aluminium connectors for 2 cables [1]	2 x (50 to 120 mm²) ; ≤ 250 A	Set of 3	**LV429218**
		Set of 4	**LV429219**

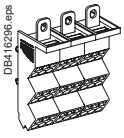

DB112228.eps

Aluminium connectors [1] for 6 cables	6 x (1.5 to 35 mm²) ; ≤ 250 A	Set of 3	**LV429248**
		Set of 4	**LV429249**


DB112724.eps

6.35 mm voltage tap for aluminium connectors for 1 or 2 cables	Set of 10	**LV429348**

Linergy DX and Linergy DP distribution block (for bare cable)

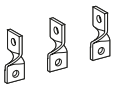

DB416296.eps

160 A (40 °C) 6 cables S ≤ 10 mm²	1P	**04031**
250 A (40 °C) 9 cables S ≤ 10 mm²	3P	**04033**
	4P	**04034**

Terminal extensions


DB112230.eps

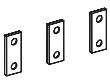
45° terminal extension [1]	Set of 3	**LV429223**
	Set of 4	**LV429224**


DB112231.eps

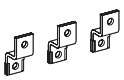
Edgewise terminal extensions [1]	Set of 3	**LV429308**
	Set of 4	**LV429309**


DB112232.eps

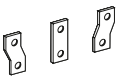
Right-angle terminal extensions [1]	Set of 3	**LV429261**
	Set of 4	**LV429262**


DB112233.eps

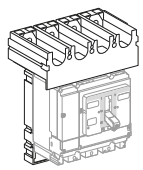
Straight terminal extensions [1]	Set of 3	**LV429263**
	Set of 4	**LV429264**


DB112234.eps

Double-L terminal extensions [1]	Set of 3	**LV429221**
	Set of 4	**LV429222**


DB112235.eps

Spreaders from 35 to 45 mm pitch [1]	3P	**LV431563**
	4P	**LV431564**


DB438175.ai

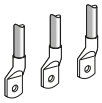
One-piece spreader from 35 to 45 mm pitch	3P	**LV431060**
	4P	**LV431061**

[1] Supplied with 2 or 3 interphase barriers.

F

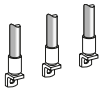
Accessories and Auxiliaries
ComPacT NSX100/160/250

Crimp lugs for copper cable [1]


DB112237.eps

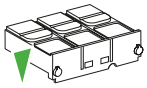
For cable 120 mm²	Set of 3	**LV429252**
	Set of 4	**LV429256**
For cable 150 mm²	Set of 3	**LV429253**
	Set of 4	**LV429257**
For cable 185 mm²	Set of 3	**LV429254**
	Set of 4	**LV429258**

Crimp lugs for aluminium cable [1]

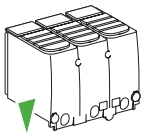

DB112238.eps

For cable 150 mm²	Set of 3	**LV429504**
	Set of 4	**LV429505**
For cable 185 mm²	Set of 3	**LV429506**
	Set of 4	**LV429507**

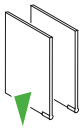
Insulation accessories


DB425457.eps

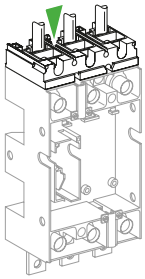
1 short terminal shield for breaker or plug-in base	3P	**LV429515**
	4P	**LV429516**


DB425458.eps

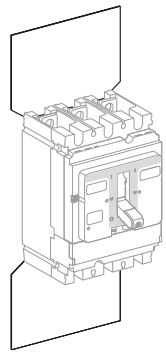
1 long terminal shield for breaker or plug-in base	3P	**LV429517**
	4P	**LV429518**


DB425459.eps

Interphase barriers for breaker or plug-in base	Set of 6	**LV429329**


DB425460.eps

Connection adapter for plug-in base	3P	**LV429306**
	4P	**LV429307**


DB438176.ai

2 insulating screens for breaker (45 mm pitch)	3P	**LV429330**
	4P	**LV429331**

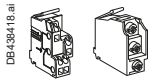
[1] Supplied with 2 or 3 interphase barriers.

F

Accessories and Auxiliaries
ComPacT NSX100/160/250

Electrical Auxiliaries

Auxiliary contacts (screwless, screw)

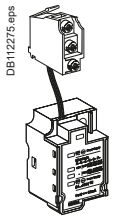


OF or SD or SDE or SDV screwless type	**29450**
OF or SD or SDE or SDV screw type	**29452**
SDE adapter, mandatory for trip unit TM, MA or MicroLogic 2	**LV429451**

Wireless indication auxiliary

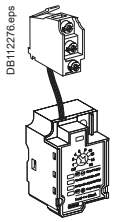
OF or SD or SDE wireless battery	**LV429454**

SDx output module for MicroLogic



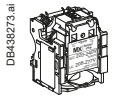
SDx module 24/415 V AC/DC screw type	**LV429532**

SDTAM contactor tripping module (early-break thermal fault signal) for MicroLogic 2.2 M/6.2 E-M

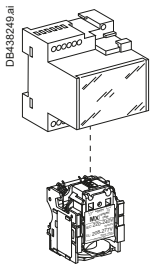


SDTAM 24/415 V AC/DC overload fault indication	**LV429424**

Voltage releases



	Voltage	MX	MN
AC	24 V 50/60 Hz	**LV429384**	**LV429404**
	48 V 50/60 Hz	**LV429385**	**LV429405**
	110-130 V 50/60 Hz	**LV429386**	**LV429406**
	220-240 V 50/60 Hz and 208-277 V 60 Hz	**LV429387**	**LV429407**
	380-415 V 50 Hz and 440-480 V 60 Hz	**LV429388**	**LV429408**
	525 V 50 Hz and 600 V 60 Hz	**LV429389**	**LV429409**
DC	12 V	**LV429382**	**LV429402**
	24 V	**LV429390**	**LV429410**
	30 V	**LV429391**	**LV429411**
	48 V	**LV429392**	**LV429412**
	60 V	**LV429383**	**LV429403**
	125 V	**LV429393**	**LV429413**
	250 V	**LV429394**	**LV429414**

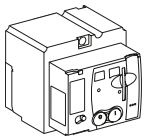


MN 48 V 50/60 Hz with fixed time delay		
Composed of:	MN 48 V DC	**LV429412**
	Delay unit 48 V 50/60 Hz	**LV429426**
MN 220-240 V 50/60 Hz with fixed time delay		
Composed of:	MN 250 V DC	**LV429414**
	Delay unit 220-240 V 50/60 Hz	**LV429427**
MN 48 V DC/AC 50/60 Hz with adjustable time delay		
Composed of:	MN 48 V DC	**LV429412**
	Delay unit 48 V DC/AC 50/60 Hz	**33680**
MN 110-130 V DC/AC 50/60 Hz with adjustable time delay		
Composed of:	MN 125 V DC	**LV429413**
	Delay unit 100-130 V DC/AC 50/60 Hz	**33681**
MN 220-250 V DC/AC 50/60 Hz with adjustable time delay		
Composed of:	MN 250 V DC	**LV429414**
	Delay unit 200-250 V DC/AC 50-60 Hz	**33682**

F

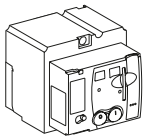
Motor Mechanism

Motor mechanism module supplied with SDE adapter



	Voltage	MT100/160	MT250
AC	48-60 V 50/60 Hz	**LV429440**	**LV431548**
	110-130 V 50/60 Hz	**LV429433**	**LV431540**
	220-240 V 50/60 Hz and 208-277 V 60 Hz	**LV429434**	**LV431541**
	380-415 V 50/60 Hz and 440-480 V 60 Hz	**LV429435**	**LV431542**
DC	24-30 V	**LV429436**	**LV431543**
	48-60 V	**LV429437**	**LV431544**
	110-130 V	**LV429438**	**LV431545**
	250 V	**LV429439**	**LV431546**

Communicating motor mechanism module supplied with SDE adapter

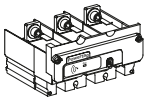


Motor mechanism module	MTc 100/160	220-240 V 50/60 Hz	**LV429441**
	MTc 250	220-240 V 50/60 Hz	**LV431549**
+			
Breaker and Status Communication Module	BSCM		**LV434205**
+			
NSX cord	Wire length L = 0.35 m		**LV434200**
	Wire length L = 1.3 m		**LV434201**
	Wire length L = 3 m		**LV434202**
	U > 480 V AC wire length L = 0.35 m		**LV434204**

Accessories and Auxiliaries
ComPacT NSX100/160/250

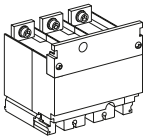
Indication and Measurement Modules

PowerLogic PowerTag NSX


DB430682.eps

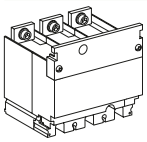
Rating (A)	250
3P	**LV434020**
3P+N	**LV434021**

Current transformer module


DB112257.eps

Rating (A)	100	150	250
3P	**LV429457**	**LV430557**	**LV431567**
4P	**LV429458**	**LV430558**	**LV431568**

Current transformer module and voltage output


DB112257.eps

Rating (A)	125	150	250
3P	**LV429461**	**LV430561**	**LV431569**
4P	**LV429462**	**LV430562**	**LV431570**

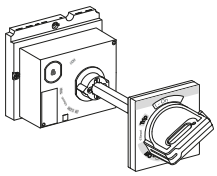
Rotary Handles

Direct rotary handle

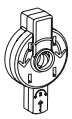

DB439006.ai

With black handle	**LV429337T**
With red handle on yellow front	**LV429339T**
MCC conversion accessory	**LV429341T**
CNOMO conversion accessory	**LV429342T**

Extended rotary handle


DB439007.ai

With black handle	**LV429338T**
With red handle on yellow front	**LV429340T**
With telescopic handle for withdrawable device	**LV429343T**


DB421689.eps

Open door shaft operator	**LV426937**

Accessories for direct or extended rotary handle

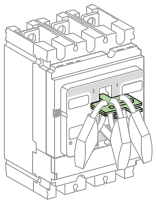
Indication auxiliary	1 early-break contact	**LV429345**
	2 early-make contacts	**LV429346**

F

Locks

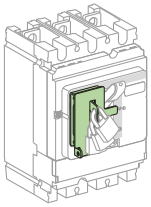
Toggle locking device for 1 to 3 padlocks

DB438179.ai



By removable device	**29370**

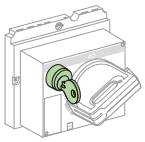
DB438180.ai



By fixed device for 3P-4P (open or close position)	**LV429371T**
By fixed device for 3P-4P (open position only)	**LV429370T**

Locking of rotary handle

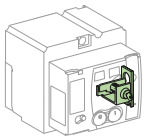
DB439008.ai



Keylock adapter (keylock not included)		**LV429344**
Keylock (keylock adapter not included)	Ronis 1351B.500	**41940**
	Profalux KS5 B24 D4Z	**42888**

Locking of motor mechanism module

DB425465.eps



Keylock adapter + Ronis keylock (special)	**LV429449**

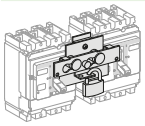
F

Accessories and Auxiliaries
ComPacT NSX100/160/250

Interlocking

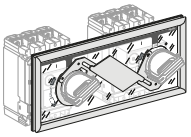
Mechanical interlocking for circuit breakers

DB438182.ai



With toggles	**LV429354T**

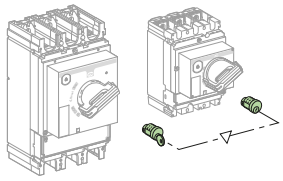
DB439009.ai



With direct rotary handle	**LV429369T**
With extended rotary handle	**LV429369ET**

Interlocking with key (2 keylocks/1 key) for rotary handles

DB439010.ai

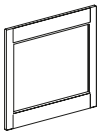


Keylock kit (keylock not included) [1]		**LV429344**
1 set of 2 keylocks	Ronis 1351B.500	**41950**
(1 key only, keylock kit not included)	Profalux KS5 B24 D4Z	**42878**

Installation Accessories

Front-panel escutcheons

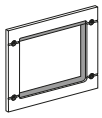
DB112269.eps



IP30

IP30 escutcheon for all control types	**LV429525**
IP30 trip unit access escutcheon for toggle	**LV429526**
IP30 escutcheon for VigiPacT add-on	**LV429527**

DB112737.eps



IP40

IP40 escutcheon for all control types	**LV429317**
IP40 escutcheon for VigiPacT add-on	**LV429316**
IP40 escutcheon for VigiPacT add-on or ammeter module	**LV429318**

IP43 rubber toggle cover

DB112738.eps

1 toggle cover	**LV429319** [2]

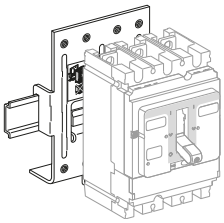
Lead-sealing accessories

DB115615.eps

Bag of accessories	**LV429375**

Din rail adapter

DB438185.ai



1 adapter	**LV429305**

60 Mm Plate

DB438186.ai

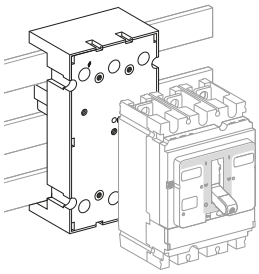


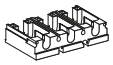
Plate 3P ComPacT NSX100/250 IEC	**LV429372**
Plate 4P ComPacT NSX100/250 IEC	**LV429373**

[1] For only 1 device.
[2] Applicable with old front cover only. Need to order LV429313, toggle extension to be compatible for IP43 rubber cover.

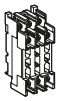
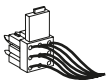
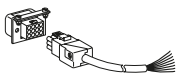
Accessories and Auxiliaries
ComPacT NSX100/160/250

Plug-in/Withdrawable Version Accessories

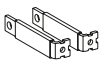
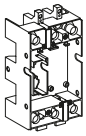
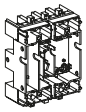
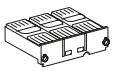
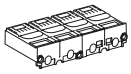
Insulation accessories

 DB117159.eps	1 connection adapter for plug-in base	3P	LV429306
		4P	LV429307

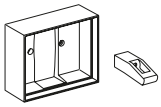
Auxiliary connections

 DB117160.eps	1 9-wire fixed connector (for base)		LV429273
 DB117161.eps	1 9-wire moving connector (for circuit breaker)		LV429274
 DB117162.eps	1 support for 2 moving connectors		LV429275
 DB115885.eps	9-wire manual auxiliary connector (fixed + moving)		LV429272

Plug-in base accessories

 DB432805.eps	2 long insulated right angle terminal extensions	Set of 2	LV429276
 DB117165.eps	2 IP40 shutters for base		LV429271
 DB117166.eps	Base	2P (3P base)	LV429265
		3P	LV429266
 DB117167.eps	Base	4P	LV429267
 DB117168.eps	2 power connections	2/3/4P	LV429268
 DB117169.eps	1 short terminal shield	2/3P	LV429515
 DB117170.eps	1 short terminal shield	4P	LV429516
 DB117171.eps	1 safety trip interlock	2/3/4P	LV429270

Chassis accessories

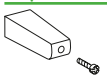
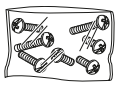
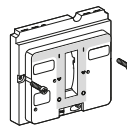
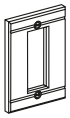
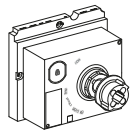
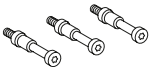
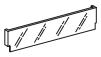
 DB117172.eps	Escutcheon collar	Toggle	LV429284 [1]
 DB117173.eps	Escutcheon collar	VigiPacT add-on	LV429285
 DB117163.eps	Locking kit (keylock not included)		LV429286
	Keylock (keylock adapter not included)	Ronis 1351B.500	41940
		Profalux KS5 B24 D4Z	42888
 DB111426.eps	2 carriage switches (connected/disconnected position indication)		LV429287

[1] Need to order LV434435, NSX front cover to be compatible for escutcheon collar for toggle.

F

Accessories and Auxiliaries
ComPacT NSX100/160/250

Spare Parts

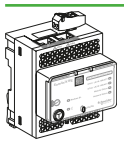
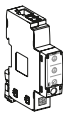
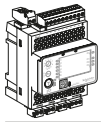
DB111430.eps 	5 spare toggle extensions (NSX250)		**LV429313**
DB115620.eps 	Bag of screws		**LV429312**
DB111431.eps 	12 snap-in nuts (fixed/FC)	M6 for NSX100N/H/L	**LV429234**
		M8 for NSX160/250N/H/L	**LV430554**
DB438187.ai 	NSX100-250 front cover	3P/4P	**LV434435**
	Retrofit NSX100-250 front cover	3P/4P	**LV43435AT**
DB111433.eps 	IP40 toggle escutcheon	ComPacT NS type/small cut-out	**29315**
DB111438.eps 	1 set of 10 identification labels		**LV429226**
DB438188.ai 	1 base for extended rotary handle		**LV429502T**
DB111434.eps 	Torque limiting screws (set of 12)	3P/4P ComPacT NSX100-250	**LV429513**
DB111435.eps 	LCD display for electronic trip unit	MicroLogic 5	**LV429483**
		MicroLogic 6	**LV429484**
		MicroLogic 6 E-M	**LV429486**
DB111436.eps 	5 transparent covers for trip unit	TM, MA, NA	**LV429481**
		MicroLogic 2	**LV429481**
		MicroLogic 5/6	**LV429478**

Visible Break Disconnect Function

See catalog dealing with "ComPacT INV products (visible break)" and the associated accessories.
The visible break disconnection function is compatible with fixed front-connected/rear-connected ComPacT NSX devices.

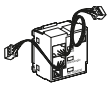
F

Communication Option

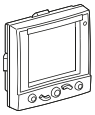
 DB425888.eps	IFE	Ethernet interface for LV breaker	**LV434001**
		Ethernet interface for LV breakers and gateway	**LV434002**
 DB425706.eps	IFM Modbus-SL interface module		**LV434000**
 DB432550.eps	I/O application module		**LV434063**

Monitoring and Control (Remote Operation)

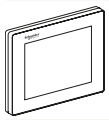
Circuit breaker accessories

 DB111439.eps	Breaker Status Control Module	BSCM [1]	**LV434205**

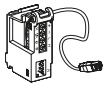
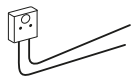
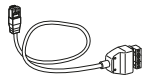
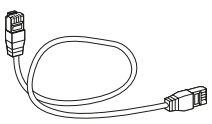
ULP display module [2]

 DB432551.eps	Switchboard front display module FDM121	**TRV00121**
	FDM mounting accessory (diameter 22 mm)	**TRV00128**

Ethernet display module

 DB417489.eps	Switchboard front display module FDM128	**LV434128**

ULP wiring accessories

 DB111442.eps	NSX cord L = 0.35 m	**LV434200**
	NSX cord L = 1.3 m	**LV434201**
	NSX cord L = 3 m	**LV434202**
	NSX cord for U > 480 V AC L = 1.3 m	**LV434204**
 DB115621.eps	10 stacking connectors for communication interface modules	**TRV00217**
 DB432584.ai	2 Modbus line terminators	**VW3A8306DRC** [3]
 LV434211.ai	Connector Modbus adaptor	**LV434211**
 DB417490.eps	RS 485 roll cable (4 wires, length 60 m)	**50965**
 DB115623.eps	5 RJ45 connectors female/female	**TRV00870**
 DB111444.eps	10 ULP line terminators	**TRV00880**
 DB111445.eps	10 RJ45/RJ45 male cord L = 0.3 m	**TRV00803**
	10 RJ45/RJ45 male cord L = 0.6 m	**TRV00806**
	5 RJ45/RJ45 male cord L = 1 m	**TRV00810**
	5 RJ45/RJ45 male cord L = 2 m	**TRV00820**
	5 RJ45/RJ45 male cord L = 3 m	**TRV00830**
	1 RJ45/RJ45 male cord L = 5 m	**TRV00850**

[1] SDE adapter mandatory for trip unit TM, MA or MicroLogic 2 (LV429451).
[2] For measurement display with MicroLogic E or status display with BSCM.
[3] www.schneider-electric.com.

F

Accessories and Auxiliaries
ComPacT NSX100/160/250

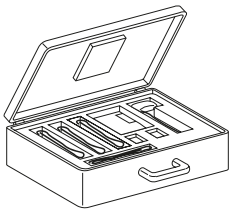
Test Tool, Software, Demo

Test tool

DB111449.eps

Pocket battery for MicroLogic NSX100-630 — **LV434206**

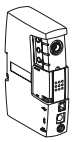
DB111451.eps



Maintenance case — **TRV00910**

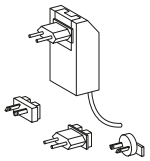
Comprising:
- USB maintenance interface
- Power supply
- MicroLogic cord
- USB cord
- RJ45/RJ45 male cord

DB111450.eps



Spare USB maintenance interface — **TRV00911**

DB111452.eps



Spare power supply 110-240 V AC — **TRV00915**

DB111453.eps

Spare MicroLogic cord for USB maintenance interface — **TRV00917**

DB111448.eps

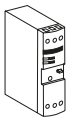
Bluetooth/Modbus option for USB maintenance interface — **VW3A8114** [1]

[1] See Telemecanique catalog.

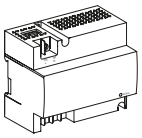
F

Accessories

Power supply modules



External power supply module 100-240 V AC 110-230 V DC/24 V DC-3 A class 2	**ABL8RPS24030** [1]



External power supply module 24 V DC-1 A OVC IV	
24-30 V DC	**LV454440**
48-60 V DC	**LV454441**
100-125 V DC	**LV454442**
110-130 V AC	**LV454443**
200-240 V AC	**LV454444**

[1] See Telemecanique catalog.

F

F

Catalog Numbers: Com**PacT** NSX400-630

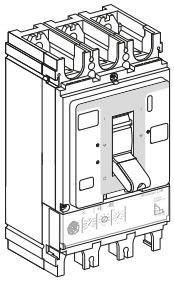
F

Complete Fixed Device
ComPacT NSX400/630F (36 KA 380/415 V)

ComPacT NSX400/630F

Electronic trip unit MicroLogic 2.3 (LS_0I protection)

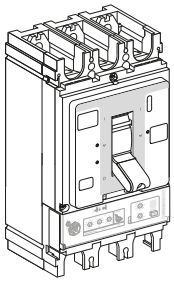
DB438189.ai



		3P 3d	**4P** 3d, 4d, 3d + N/2
ComPacT NSX400F (36 kA at 380/415 V)	250 A	**C40F32D250**	**C40F42D250**
	400 A	**C40F32D400**	**C40F42D400**
ComPacT NSX630F (36 kA at 380/415 V)	630 A	**C63F32D630**	**C63F42D630**

Electronic trip unit MicroLogic Vigi 4.3 (LS_0IR protection)

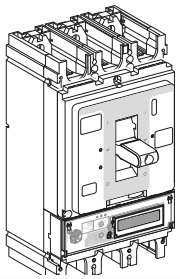
DB438190.ai



		3P 3d	**4P** 4d 3d + N/2
ComPacT NSX400F (36 kA at 380/415 V)	400 A	**C40F34V400**	**C40F44V400**
ComPacT NSX630F (36 kA at 380/415 V)	570 A	**C63F34V570**	**C63F44V570**

Electronic trip unit MicroLogic Vigi 7.3 E (LSIR protection + embedded energy management)

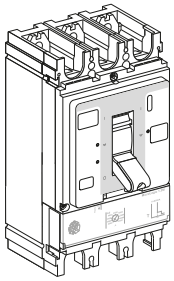
DB438568.ai



		3P 3d	**4P** 4d, 3d + N/2
ComPacT NSX400F (36 kA at 380/415V)	400 A	**C40F37E400**	**C40F47E400**
ComPacT NSX630F (36 kA at 380/415V)	570 A	**C63F37E570**	**C63F47E570**

Electronic trip unit MicroLogic 1.3 M (I motor protection)

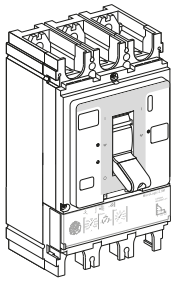
DB438191.ai



		3P 3d
ComPacT NSX400F 1.3 M (36 kA at 380/415V)	320 A	**C40F31M320**
ComPacT NSX630F 1.3 M (36 kA at 380/415V)	500 A	**C63F31M500**

Electronic trip unit MicroLogic 2.3 M (LS_0I motor protection)

DB438192.ai



		3P 3d
ComPacT NSX400F 2.3 M (36 kA at 380/415V)	320 A	**C40F32M320**
ComPacT NSX630F 2.3 M (36 kA at 380/415V)	500 A	**C63F32M500**

With electronic trip unit MicroLogic 5.3 E (LSI protection, energy meter)
Only available as separate component or through online configurator (product selector)

With electronic trip unit MicroLogic 6.3 E (LSIG protection, energy meter)
Only available as separate component or through online configurator (product selector)

With electronic trip unit MicroLogic 6.3 E-M (LSIG motor protection, energy meter)
Only available as separate component or through online configurator (product selector)

With electronic trip unit MicroLogic 7.3 E (LSIG protection, energy meter)
Only available as separate component or through online configurator (product selector)

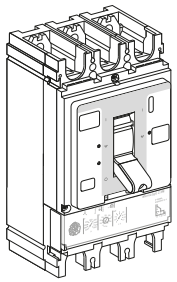
F

Complete Fixed Device
ComPacT NSX400/630N (50 KA 380/415 V)

ComPacT NSX400/630N

Electronic trip unit MicroLogic 2.3 (LS_OI protection)

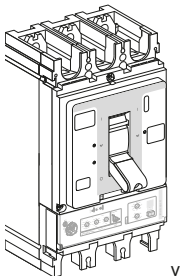
DB438189.ai



		3P 3d	**4P** 3d, 4d, 3d + N/2
ComPacT NSX400N (50 kA at 380/415 V)	250 A	**C40N32D250**	**C40N42D250**
	400 A	**C40N32D400**	**C40N42D400**
ComPacT NSX630N (50 kA at 380/415 V)	630 A	**C63N32D630**	**C63N42D630**

Electronic trip unit MicroLogic Vigi 4.3 (LS_OIR protection)

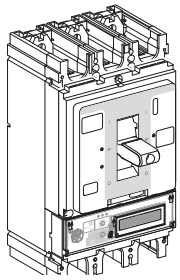
DB438190.ai



		3P 3d	**4P** 4d 3d + N/2
ComPacT NSX400N (50 kA at 380/415 V)	400 A	**C40N34V400**	**C40N44V400**
ComPacT NSX630N (50 kA at 380/415 V)	570 A	**C63N34V570**	**C63N44V570**

Electronic trip unit MicroLogic Vigi 7.3 E (LSIR protection + embedded energy management)

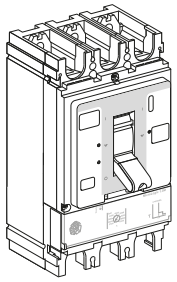
DB438568.ai



		3P 3d	**4P** 4d, 3d + N/2
ComPacT NSX400N (36 kA at 380/415V)	400 A	**C40N37E400**	**C40N47E400**
ComPacT NSX630N (36 kA at 380/415V)	570 A	**C63N37E570**	**C63N47E570**

Electronic trip unit MicroLogic 1.3 M A (I motor protection)

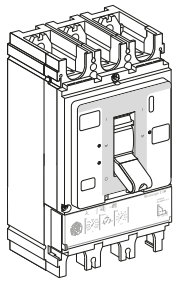
DB438191.ai



		3P 3d
ComPacT NSX400N 1.3 M (50 kA at 380/415V)	320 A	**C40N31M320**
ComPacT NSX630N 1.3 M (50 kA at 380/415V)	500 A	**C63N31M500**

Electronic trip unit MicroLogic 2.3 M (LS_OI motor protection)

DB438192.ai



		3P 3d
ComPacT NSX400N 2.3 M (50 kA at 380/415V)	320 A	**C40N32M320**
ComPacT NSX630N 2.3 M (50 kA at 380/415V)	500 A	**C63N32M500**

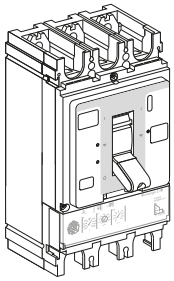
F

Complete Fixed Device
ComPacT NSX400/630H (70 KA 380/415 V)

ComPacT NSX400/630H

Electronic trip unit MicroLogic 2.3 (LS_0I protection)

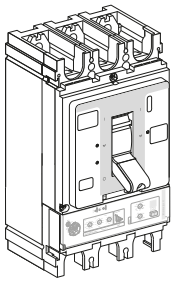
DB438189.ai



		3P 3d	**4P** 3d, 4d, 3d + N/2
ComPacT NSX400H (70 kA at 380/415 V)	250 A	**C40H32D250**	**C40H42D250**
	400 A	**C40H32D400**	**C40H42D400**
ComPacT NSX630H (70 kA at 380/415 V)	630 A	**C63H32D630**	**C63H42D630**

Electronic trip unit MicroLogic Vigi 4.3 (LS_0IR protection)

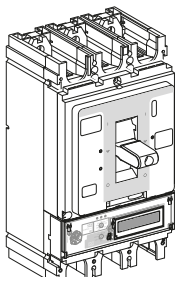
DB438190.ai



		3P 3d	**4P** 4d 3d + N/2
ComPacT NSX400H (70 kA at 380/415 V)	400 A	**C40H34V400**	**C40H44V400**
ComPacT NSX630H (70 kA at 380/415 V)	570 A	**C63H34V570**	**C63H44V570**

Electronic trip unit MicroLogic Vigi 7.3 E (LSIR protection + embedded energy management)

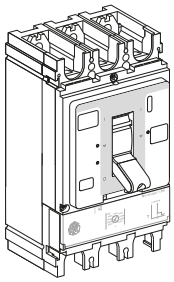
DB438568.ai



		3P 3d	**4P** 4d, 3d + N/2
ComPacT NSX400H (36 kA at 380/415V)	400 A	**C40H37E400**	**C40H47E400**
ComPacT NSX630H (36 kA at 380/415V)	570 A	**C63H37E570**	**C63H47E570**

Electronic trip unit MicroLogic 1.3 M (I motor protection)

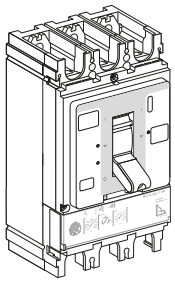
DB438191.ai



		3P 3d
ComPacT NSX400H 1.3 M (70 kA at 380/415V)	320 A	**C40H31M320**
ComPacT NSX630H 1.3 M (70 kA at 380/415V)	500 A	**C63H31M500**

Electronic trip unit MicroLogic 2.3 M (LS_0I motor protection)

DB438192.ai



		3P 3d
ComPacT NSX400H 2.3 M (70 kA at 380/415V)	320 A	**C40H32M320**
ComPacT NSX630H 2.3 M (70 kA at 380/415V)	500 A	**C63H32M500**

With electronic trip unit MicroLogic 6.3 E (LSIG protection, energy meter)
Only available as separate component or through online configurator (product selector)

With electronic trip unit MicroLogic 6.3 E-M (LSIG motor protection, energy meter)
Only available as separate component or through online configurator (product selector)

With electronic trip unit MicroLogic 7.3 E (LSIG protection, energy meter)
Only available as separate component or through online configurator (product selector)

F

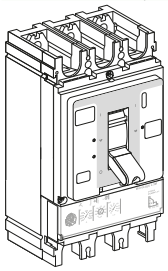
Complete Fixed Device

ComPacT NSX400/630R (200 KA 380/415 V - 45 KA 690 V)

ComPacT NSX400/630R

Electronic trip unit MicroLogic 2.3 (LS_OI protection)

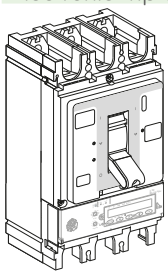
DB438189.ai



		3P 3d	**4P** 3d, 4d, 3d + N/2
NSX400R (200 kA at 380/415 V - 45 kA at 690 V)	250 A	**C40R32D250**	**C40R42D250**
	400 A	**C40R32D400**	**C40R42D400**
NSX630R (200 kA at 380/415 V - 45 kA at 690 V)	630 A	**C63R32D630**	**C63R42D630**

Electronic trip unit MicroLogic 5.3 E (LSI protection, energy meter)

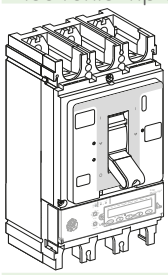
DB438193.ai



		3P 3d	**4P** 3d, 4d, 3d + N/2, 3d + OSN
NSX400R (200 kA at 380/415 V - 45 kA at 690 V)	400 A	**C40R35E400**	**C40R45E400**
NSX630R (200 kA at 380/415 V - 45 kA at 690 V)	630 A	**C63R35E630**	**C63R45E630**

Electronic trip unit MicroLogic 6.3 E (LSIG protection, energy meter)

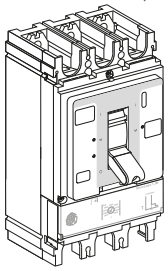
DB438194.ai



		3P 3d	**4P** 3d, 4d, 3d + N/2, 3d + OSN
NSX400R (200 kA at 380/415 V - 45 kA at 690 V)	400 A	**C40R36E400**	**C40R46E400**
NSX630R (200 kA at 380/415 V - 45 kA at 690 V)	630 A	**C63R36E630**	**C63R46E630**

Electronic trip unit MicroLogic 1.3 M (I motor protection)

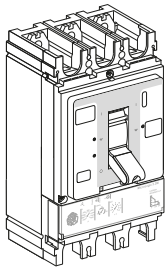
DB438191.ai



		3P 3d
NSX400R (200 kA at 380/415 V - 45 kA at 690 V)	320 A	**C40R31M320**
NSX630R (200 kA at 380/415 V - 45 kA at 690 V)	500 A	**C63R31M500**

Electronic trip unit MicroLogic 2.3 M (LS_OI motor protection)

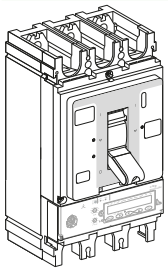
DB438192.ai



		3P 3d
NSX400R (200 kA at 380/415 V - 45 kA at 690 V)	320 A	**C40R32M320**
NSX630R (200 kA at 380/415 V - 45 kA at 690 V)	500 A	**C63R32M500**

With electronic trip unit MicroLogic 6.3 E-M (LSIG motor protection, energy meter)

DB438195.ai



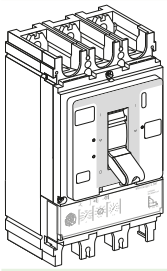
		3P 3d
NSX400R (200 kA at 380/415 V - 45 kA at 690 V)	320 A	**C40R36M320**
NSX630R (200 kA at 380/415 V - 45 kA at 690 V)	500 A	**C63R36M500**

F

Complete Fixed Device
ComPacT NSX400/630HB1 (85 KA 500 V - 75 KA 690 V)

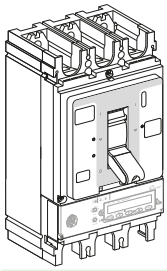
ComPacT NSX400/630HB1

Electronic trip unit MicroLogic 2.3 (LS_OI protection)



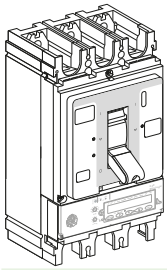
		3P 3d	**4P** 3d, 4d, 3d + N/2
NSX400HB1 (85 kA at 500 V - 75 kA at 690 V)	250 A	**C40V32D250**	**C40V42D250**
	400 A	**C40V32D400**	**C40V42D400**
NSX630HB1 (85 kA at 500 V - 75 kA at 690 V)	630 A	**C63V32D630**	**C63V42D630**

Electronic trip unit MicroLogic 5.3 E (LSI protection, energy meter)



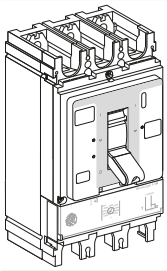
		3P 3d	**4P** 3d, 4d, 3d + N/2, 3d + OSN
NSX400HB1 (85 kA at 500 V - 75 kA at 690 V)	400 A	**C40V35E400**	**C40V45E400**
NSX630HB1 (85 kA at 500 V - 75 kA at 690 V)	630 A	**C63V35E630**	**C63V45E630**

Electronic trip unit MicroLogic 6.3 E (LSIG protection, energy meter)



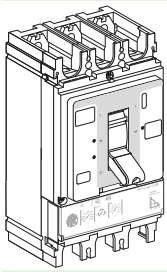
		3P 3d	**4P** 3d, 4d, 3d + N/2, 3d + OSN
NSX400HB1 (85 kA at 500 V - 75 kA at 690 V)	400 A	**C40V36E400**	**C40V46E400**
NSX630HB1 (85 kA at 500 V - 75 kA at 690 V)	630 A	**C63V36E630**	**C63V46E630**

Electronic trip unit MicroLogic 1.3 M (I motor protection)



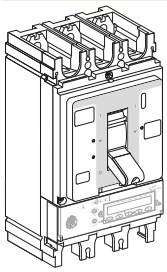
		3P 3d
NSX400HB1 (85 kA at 500 V - 75 kA at 690 V)	320 A	**C40V31M320**
NSX630HB1 (85 kA at 500 V - 75 kA at 690 V)	500 A	**C63V31M500**

Electronic trip unit MicroLogic 2.3 M (LS_OI motor protection)



		3P 3d
NSX400HB1 (85 kA at 500 V - 75 kA at 690 V)	320 A	**C40V32M320**
NSX630HB1 (85 kA at 500 V - 75 kA at 690 V)	500 A	**C63V32M500**

With electronic trip unit MicroLogic 6.3 E-M (LSIG motor protection, energy meter)



		3P 3d
NSX400HB1 (85 kA at 500 V - 75 kA at 690 V)	320 A	**C40V36M320**
NSX630HB1 (85 kA at 500 V - 75 kA at 690 V)	500 A	**C63V36M500**

F

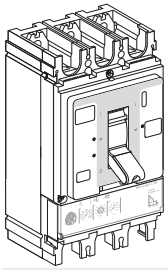
Complete Fixed Device

ComPacT NSX400/630HB2 (85 KA 500 V - 100 KA 690 V)

ComPacT NSX400/630HB2

Electronic trip unit MicroLogic 2.3 (LS_OI protection)

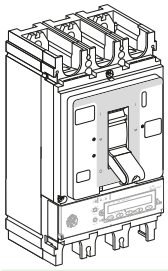
DB438189.ai



		3P 3d	**4P** 3d, 4d, 3d + N/2
NSX400HB2 (85 kA at 500 V - 100 kA at 690 V)	250 A	**C40W32D250**	**C40W42D250**
	400 A	**C40W32D400**	**C40W42D400**
NSX630HB2 (85 kA at 500 V - 100 kA at 690 V)	630 A	**C63W32D630**	**C63W42D630**

Electronic trip unit MicroLogic 5.3 E (LSI protection, energy meter)

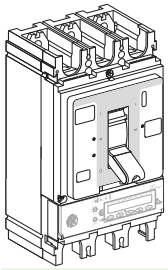
DB438193.ai



		3P 3d	**4P** 3d, 4d, 3d + N/2, 3d + OSN
NSX400HB2 (85 kA at 500 V - 100 kA at 690 V)	400 A	**C40W35E400**	**C40W45E400**
NSX630HB2 (85 kA at 500 V - 100 kA at 690 V)	630 A	**C63W35E630**	**C63W45E630**

Electronic trip unit MicroLogic 6.3 E (LSIG protection, energy meter)

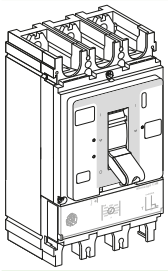
DB438194.ai



		3P 3d	**4P** 3d, 4d, 3d + N/2, 3d + OSN
NSX400HB2 (85 kA at 500 V - 100 kA at 690 V)	400 A	**C40W36E400**	**C40W46E400**
NSX630HB2 (85 kA at 500 V - 100 kA at 690 V)	630 A	**C63W36E630**	**C63W46E630**

Electronic trip unit MicroLogic 1.3 M (I motor protection)

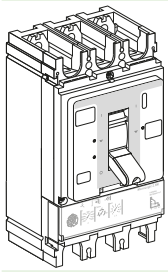
DB438191.ai



		3P 3d
NSX400HB2 (85 kA at 500 V - 100 kA at 690 V)	320 A	**C40W31M320**
NSX630HB2 (85 kA at 500 V - 100 kA at 690 V)	500 A	**C63W31M500**

Electronic trip unit MicroLogic 2.3 M (LS_OI motor protection)

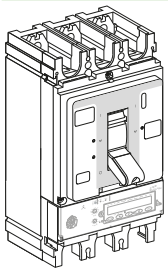
DB438192.ai



		3P 3d
NSX400HB2 (85 kA at 500 V - 100 kA at 690 V)	320 A	**C40W32M320**
NSX630HB2 (85 kA at 500 V - 100 kA at 690 V)	500 A	**C63W32M500**

With electronic trip unit MicroLogic 6.3 E-M (LSIG motor protection, energy meter)

DB438195.ai



		3P 3d
NSX400HB2 (85 kA at 500 V - 100 kA at 690 V)	320 A	**C40W36M320**
NSX630HB2 (85 kA at 500 V - 100 kA at 690 V)	500 A	**C63W36M500**

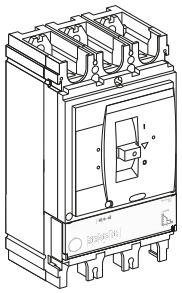
F

Complete Fixed Device
ComPacT NSX400/630NA
ComPacT NSX400K (10 KA - 1000V AC)

ComPacT NSX400K [1]

Special application

DB439026.ai

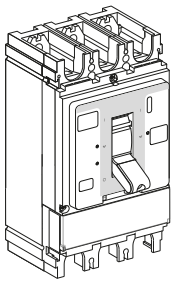


	3P	4P
ComPacT NSX400K, 250 A, MicroLogic 2.3	**C40K32D250**	**C40K42D250**
ComPacT NSX400K, 400 A, MicroLogic 2.3	**C40K32D400**	**C40K42D400**

ComPacT NSX400/630 NA Switch-Disconnector

With NA switch-disconnector unit

DB438196.ai



	3P	4P
ComPacT NSX400 NA	**C403400S**	**C404400S**
ComPacT NSX630 NA, 45 mm pitch	**C633630S**	**C634630S**

[1] Long or short terminal shields are mandatory.

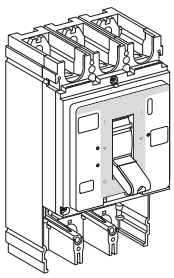
F

Based on Separate Components

ComPacT NSX400/630

Basic Frame

DB438197.ai



ComPacT NSX400

	3P	4P
NSX400F (36 kA 380/415 V)	**C40F3**	**C40F4**
NSX400N (50 kA 380/415 V)	**C40N3**	**C40N4**
NSX400H (70 kA 380/415 V)	**C40H3**	**C40H4**
NSX400S (100 kA 380/415 V)	**C40S3**	**C40S4**
NSX400L (150 kA 380/415 V)	**C40L3**	**C40L4**

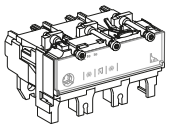
ComPacT NSX630

	3P	4P
NSX630F (36 kA 380/415 V)	**C63F3**	**C63F4**
NSX630N (50 kA 380/415 V)	**C63N3**	**C63N4**
NSX630H (70 kA 380/415 V)	**C63H3**	**C63H4**
NSX630S (100 kA 380/415 V)	**C63S3**	**C63S4**
NSX630L (150 kA 380/415 V)	**C63L3**	**C63L4**

+ Trip Unit

Distribution protection

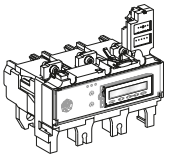
DB111461.eps



MicroLogic 2.3 (LS_0I protection)

Rating	3P 3d	4P 3d, 4d, 3d + N/2
MicroLogic 2.3 250 A	**C4032D250**	**C4042D250**
MicroLogic 2.3 400 A	**C4032D400**	**C4042D400**
MicroLogic 2.3 630 A	**C6332D630**	**C6342D630**

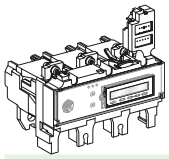
DB111462.eps



MicroLogic 5.3 E (LSI protection, energy meter)

Rating	3P 3d	4P 3d, 4d, 3d + N/2, 3d + OSN
MicroLogic 5.3 E 400 A	**C4035E400**	**C4045E400**
MicroLogic 5.3 E 630 A	**C6335E630**	**C6345E630**

DB111462.eps

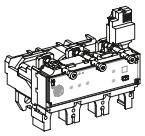


MicroLogic 6.3 E (LSIG protection, energy meter)

Rating	3P 3d	4P 3d, 4d, 3d + N/2, 3d + OSN
MicroLogic 6.3 E 400 A	**C4036E400**	**C4046E400**
MicroLogic 6.3 E 630 A	**C6336E630**	**C6346E630**

Distribution protection with embedded earth leakage protection

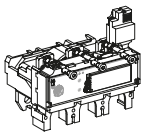
DB425917.eps



With electronic trip unit MicroLogic Vigi 4.3 (LS_0IR protection)

Rating	3P 3d	4P 4d 3d + N/2
400 A	**C4034V400**	**C4044V400**
570 A	**C6334V570**	**C6344V570**

DB425919.eps

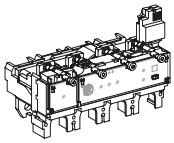


With electronic trip unit MicroLogic Vigi 7.3 E (LSIR protection)

Rating	3P 3d	4P 4d 3d + N/2
400 A	**C4037E400**	**C4047E400**
570 A	**C6337E570**	**C6347E570**

Distribution protection with embedded earth leakage protection alarm

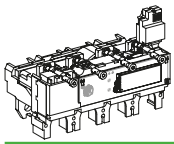
DB425918.eps



With electronic trip unit MicroLogic Vigi 4.3 AL (LS_0I protection + earth leakage alarm)

Rating	3P 3d	4P 4d 3d + N/2
400 A	**C4034A400**	**C4044A400**
570 A	**C6334A570**	**C6344A570**

DB425920.eps



With electronic trip unit MicroLogic Vigi 7.3 E AL (LSI protection + earth leakage alarm)

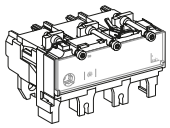
Rating	3P 3d	4P 4d 3d + N/2
400 A	**C4037A400**	**C4047A400**
570 A	**C6337A570**	**C6347A570**

F

Based on Separate Components
ComPacT NSX400/630

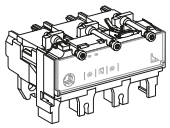
+ Trip Unit

Motor protection


DB111463.eps

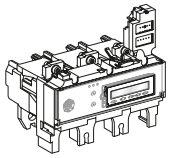
MicroLogic 1.3 M (I protection)

Rating	3P 3d	4P 3d
MicroLogic 1.3 M 320 A	**C4031M320**	**C4041M320**
MicroLogic 1.3 M 500 A	**C6331M500**	**C6341M500**


DB111461.eps

MicroLogic 2.3 M (LS_0I protection)

Rating	3P 3d
MicroLogic 2.3 M 320 A	**C4032M320**
MicroLogic 2.3 M 500 A	**C6332M500**


DB111462.eps

MicroLogic 6.3 E-M (LSIG protection, energy meter)

Rating	3P 3d
MicroLogic 6.3 E-M 320 A	**C4036M320**
MicroLogic 6.3 E-M 500 A	**C6336M500**

Protection of public distribution systems

MicroLogic 2.3 AB (LS_0I protection)

Rating	4P 3d, 4d, 3d + N/2
MicroLogic 2.3 400 A	**C4042B400**

16 Hz 2/3 network protection

MicroLogic 5.3 A-Z (LSI protection, ammeter)

Rating	3P 3d
MicroLogic 5.3 A-Z 630 A	**C6335Z630**

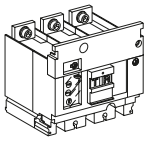
Earth Leakage protection of public distribution systems

MicroLogic Vigi 4.3 AB distribution protections

Rating	4P 4d 3d + N/2
400 A	**C4044B400**

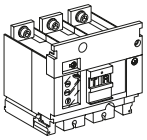
+ VigiPacT add-on Protection and Alarm Modules

VigiPacT add-on protection


DB112249.eps

	3P	4P
200 to 440 V	**LV432464**	**LV432465**
440 to 550 V	**LV432466**	**LV432467**
Connection for a 4P VigiPacT on a 3P breaker		**LV432457**

VigiPacT add-on alarm


DB112249.eps

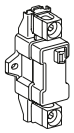
	3P	4P
200 to 440 V	**LV432469**	**LV432470**
Connection for a 4P insulation monitoring module on a 3P breaker		**LV432457**

F

Trip Unit Accessories
ComPacT NSX400/630

Trip Unit Accessories

External neutral CT for 3 pole breaker with MicroLogic 5/6

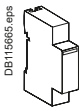


400-630 A	**LV432575**

24 V DC wiring accessory for MicroLogic 5/6

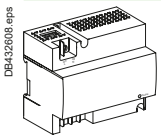
24 V DC power supply connector	**LV434210**

ZSI accessory for NS630b-NW with NSX



ZSI module	**LV434212**

External power supply module (24 V DC - 1 A), class 4



24-30 V DC	**LV454440**
48-60 V DC	**LV454441**
100-125 V DC	**LV454442**
110-130 V AC	**LV454443**
200-240 V AC	**LV454444**

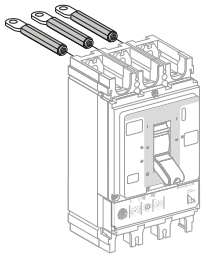
F

Installation and Connection
ComPacT NSX400/630

Fixed/RC Device = Fixed/FC Device + Rear Connection Kit

Mixed RC kit

DB438198.ai

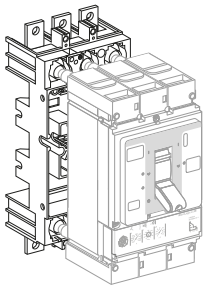


Kit 3P	Short RCs	2 x	**LV432475**
	Long RCs	1 x	**LV432476**
Kit 4P	Short RCs	2 x	**LV432475**
	Long RCs	2 x	**LV432476**

Plug-in Version = Fixed/FC Device + Plug-in Kit

Kit for ComPacT NSX

DB438199.ai



	3P	4P
Plug-in kit	**LV432538**	**LV432539**
Comprising:		
Base	**= 1 x LV432516**	**= 1 x LV432517**
Power connections	**+ 3 x LV432518**	**+ 4 x LV432518**
Short terminal shields	**+ 2 x LV432591**	**+ 2 x LV432592**
Safety trip interlock	**+ 1 x LV432520**	**+ 1 x LV432520**

Kit for ComPacT NSX VigiPacT add-on

Kit for ComPacT NSX

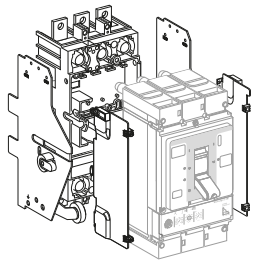
	3P	4P
ComPact NSX Vigi add-on plug-in kit	**LV432540**	**LV432541**
Comprising:		
Base	= 1 x LV432516	= 1 x LV432517
Power connections	+ 3 x LV432519	+ 4 x LV432519
Short terminal shields	+ 2 x LV432591	+ 2 x LV432592
Safety trip interlock	+ 1 x LV432520	+ 1 x LV432520

F

Withdrawable Version = Fixed/FC Device + Withdrawable Kit

Kit for ComPacT NSX

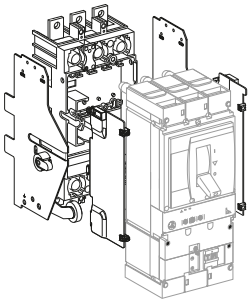
DB438200.ai



	3P	4P
	Kit for ComPacT NSX	**Kit for ComPacT NSX**
	=	=
Plug-in kit:	**1 x LV432538**	**1 x LV432539**
	+	+
Chassis side plates for base	**1 x LV432532**	**1 x LV432532**
	+	+
Chassis side plates for breaker	**1 x LV432533**	**1 x LV432533**

Kit for ComPact NSX Vigi add-on

DB117174.eps



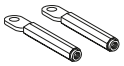
	3P	4P
	Kit for ComPact NSX Vigi add-on	**Kit for ComPact NSX Vigi add-on**
	=	=
Plug-in kit:	1 x **LV432540**	1 x **LV432541**
	+	+
Chassis side plates for base	1 x **LV432532**	1 x **LV432532**
	+	+
Chassis side plates for breaker	1 x **LV432533**	1 x **LV432533**

F

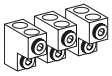
Accessories and Auxiliaries
ComPacT NSX400/630

Connection Accessories (Cu or Al)

Rear connections

DB111471.eps 	2 short			**LV432475**
	2 long			**LV432476**

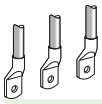
Bare cable connectors [1]

DB115624.eps 	Aluminium connectors	1 x (35 to 300 mm²)	Set of 3	**LV432479**
			Set of 4	**LV432480**
DB115625.eps 	Aluminium connectors for 2 cables	2 x (35 to 240 mm²)	Set of 3	**LV432481**
			Set of 4	**LV432482**
DB112724.eps 	6.35 mm voltage tap for aluminium connectors for 1 or 2 cables		Set of 10	**LV429348**

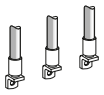
Terminal extensions [1]

DB115649.eps 	45° terminal extensions		Set of 3	**LV432586**
			Set of 4	**LV432587**
DB115650.eps 	Edgewise terminal extensions		Set of 3	**LV432486**
			Set of 4	**LV432487**
DB115651.eps 	Right-angle terminal extensions		Set of 3	**LV432484**
			Set of 4	**LV432485**
DB115652.eps 	Spreaders	52.5 mm	3P	**LV432490**
			4P	**LV432491**
		70 mm	3P	**LV432492**
			4P	**LV432493**

Crimp lugs for copper cable [1]

DB112237.eps 	For cable 240 mm²		Set of 3	**LV432500**
			Set of 4	**LV432501**
	For cable 300 mm²		Set of 3	**LV432502**
			Set of 4	**LV432503**

Crimp lugs for aluminium cable [1]

DB112238.eps 	For cable 240 mm²		Set of 3	**LV432504**
			Set of 4	**LV432505**
	For cable 300 mm²		Set of 3	**LV432506**
			Set of 4	**LV432507**
	Supplied with 2 or 3 interphase barriers			

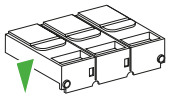
[1] Supplied with 2 or 3 interphase barriers.

F

Accessories and Auxiliaries
ComPacT NSX400/630

Insulation accessories

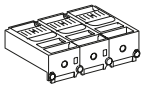
DB425467.eps



Short terminal shield, 45 mm (1 piece)

3P	**LV432591**
4P	**LV432592**

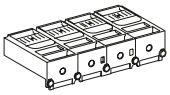
DB117183.eps



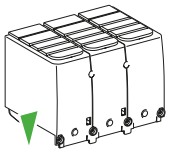
Short terminal shield > 500 V (1 piece)

3P	**LV433693**
4P	**LV433694**

DB117184.eps



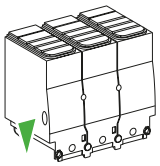
DB425468.eps



Long terminal shield, 45 mm (1 piece)

3P	**LV432593**
4P	**LV432594**

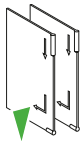
DB425469.eps



Long terminal shield for spreaders, 52.5 mm (1 piece) (supplied with insulating plate)

3P	**LV432595**
4P	**LV432596**

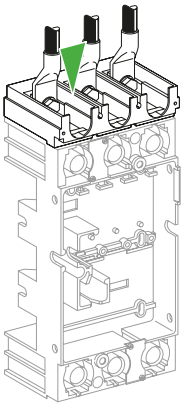
DB425470.eps



Interphase barriers

Set of 6	**LV432570**

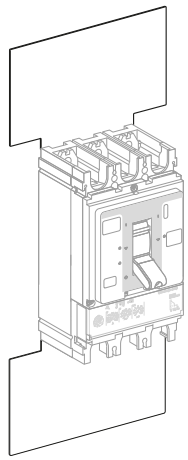
DB425471.eps



Connection adapter for plug-in base

3P	**LV432584**
4P	**LV432585**

DB438201.ai



2 insulating screens (70 mm pitch)

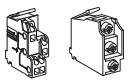
3P	**LV432578**
4P	**LV432579**

F

Accessories and Auxiliaries
ComPacT NSX400/630

Electrical Auxiliaries

Auxiliary contacts (screwless, screw)

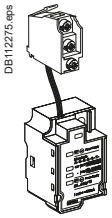


OF or SD or SDE or SDV screwless type	**29450**
OF or SD or SDE or SDV screw type	**29452**

Wireless indication auxiliary

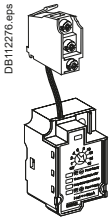
OF or SD or SDE wireless	**LV429454**

SDx output module for MicroLogic electronic trip unit



SDx module 24/415 V AC/DC screw type	**LV429532**

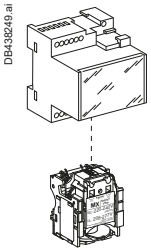
SDTAM contactor tripping module (early-break thermal fault signal) for MicroLogic 2.3 M/6.3 E-M



SDTAM 24/415 V AC/DC overload fault indication	**LV429424**

Voltage releases

	Voltage	MX	MN
AC	24 V 50/60 Hz	**LV429384**	**LV429404**
	48 V 50/60 Hz	**LV429385**	**LV429405**
	110-130 V 50/60 Hz	**LV429386**	**LV429406**
	220-240 V 50/60 Hz and 208-277 V 60 Hz	**LV429387**	**LV429407**
	380-415 V 50 Hz and 440-480 V 60 Hz	**LV429388**	**LV429408**
	525 V 50 Hz and 600 V 60 Hz	**LV429389**	**LV429409**
DC	12 V	**LV429382**	**LV429402**
	24 V	**LV429390**	**LV429410**
	30 V	**LV429391**	**LV429411**
	48 V	**LV429392**	**LV429412**
	60 V	**LV429383**	**LV429403**
	125 V	**LV429393**	**LV429413**
	250 V	**LV429394**	**LV429414**



MN 48 V 50/60 Hz with fixed time delay

Composed of:	MN 48 V DC	**LV429412**
	Delay unit 48 V 50/60 Hz	**LV429426**

MN 220-240 V 50/60 Hz with fixed time delay

Composed of:	MN 250 V DC	**LV429414**
	Delay unit 220-240 V 50/60 Hz	**LV429427**

MN 48 V DC/AC 50/60 Hz with adjustable time delay

Composed of:	MN 48 V DC	**LV429412**
	Delay unit 48 V DC/AC 50/60 Hz	**33680**

MN 110-130 V DC/AC 50/60 Hz with adjustable time delay

Composed of:	MN 125 V DC	**LV429413**
	Delay unit 100-130 V DC/AC 50/60 Hz	**33681**

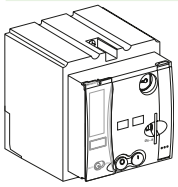
MN 220-250 V DC/AC 50/60 Hz with adjustable time delay

Composed of:	MN 250 V DC	**LV429414**
	Delay unit 200-250 V DC/AC 50-60 Hz	**33682**

F

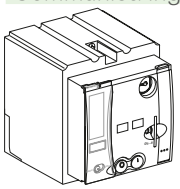
Motor Mechanism

Motor mechanism module



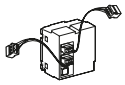
	Voltage	MT400-630
AC	48-60 V 50/60 Hz	**LV432639**
	110-130 V 50/60 Hz	**LV432640**
	220-240 V 50/60 Hz and 208-277 V 60 Hz	**LV432641**
	380-415 V 50 Hz	**LV432642**
	440-480 V 60 Hz	**LV432647**
DC	24-30 V	**LV432643**
	48-60 V	**LV432644**
	110-130 V	**LV432645**
	250 V	**LV432646**
Operation counter		**LV432648**

Communicating motor mechanism module



Motor mechanism module	MTc 400/630	220-240 V 50/60 Hz	**LV432652**

+



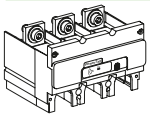
Breaker status Communication Module	BSCM	**LV434205**

+

NSX cord	Wire length L = 0.35 m	**LV434200**
	Wire length L = 1.3 m	**LV434201**
	Wire length L = 3 m	**LV434202**
	U > 480 V AC wire length L = 0.35 m	**LV434204**

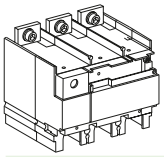
Indication and Measurement Modules

PowerLogic PowerTag NSX



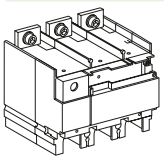
Rating (A)	630
3P	**LV434022**
3P+N	**LV434023**

Current transformer module



Rating (A)	400	630
3P	**LV432657**	**LV432857**
4P	**LV432658**	**LV432858**

Current transformer module and voltage output



Rating (A)	400	600
3P	**LV432653**	**LV432861**
4P	**LV432654**	**LV432862**

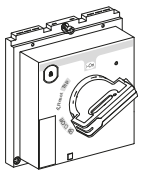
F

Accessories and Auxiliaries
ComPacT NSX400/630

Rotary Handles

Direct rotary handle

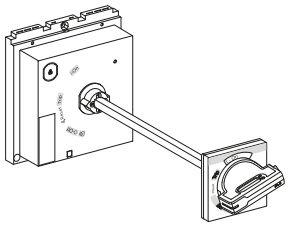
DB439011.ai



With black handle	**LV432597T**
With red handle on yellow front	**LV432599T**
MCC conversion accessory	**LV432606T**
CNOMO conversion accessory	**LV432602T**

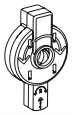
Extended rotary handle

DB439012.ai



With black handle	**LV432598T**
With red handle on yellow front	**LV432600T**
With telescopic handle for withdrawable device	**LV432603T**

DB421689.eps



Open door shaft operator	**LV426937**

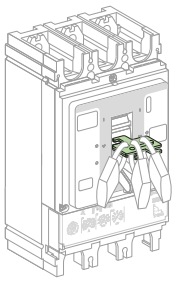
Accessories for direct or extended rotary handle

Indication auxiliary	1 early-break contact	**LV432605**
	2 early-make contacts	**LV429346**

Locks

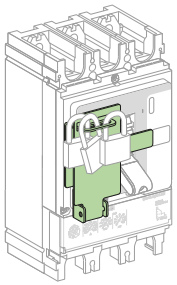
Toggle locking device for 1 to 3 padlocks

DB438204.ai



By removable device	**29370**

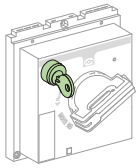
DB438205.ai



By fixed device for 3P, 4P (open or close position)	**LV432631**
By fixed device for 3P, 4P (for open position only)	**LV432630**

Locking of rotary handle

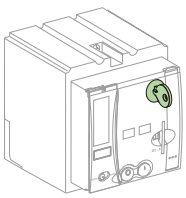
DB439013.ai



Keylock adapter (keylock not included)		**LV432604**
Keylock (keylock adapter not included)	Ronis 1351B.500	**41940**
	Profalux KS5 B24 D4Z	**42888**

Locking of motor mechanism module

DB425475.eps



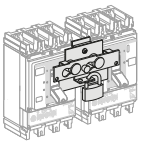
Keylock adapter (keylock not included)		**LV432649**
Keylock (keylock adapter not included)	Ronis 1351B.500	**41940**
	Profalux KS5 B24 D4Z	**42888**

F

Interlocking

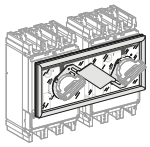
Mechanical interlocking for circuit breakers

DB438419.ai



With toggles	**LV432614T**

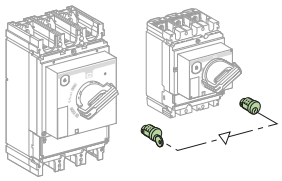
DB439014.ai



With direct rotary handle	**LV432621T**
With extended rotary handle	**LV432621ET**

Interlocking with key (2 keylocks/1 key) for rotary handles

DB439010.ai

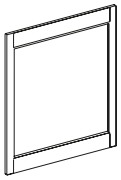


Keylock kit (keylock not included) [1]		**LV432604**
1 set of 2 keylocks	Ronis 1351B.500	**41950**
(1 key only, keylock kit not included)	Profalux KS5 B24 D4Z	**42878**

Installation Accessories

Front-panel escutcheons

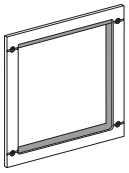
DB111488.eps



IP30

IP30 escutcheon for all control types	**LV432557**
IP30 trip unit access escutcheon for toggle	**LV432559**
IP30 escutcheon for VigiPacT add-on	**LV429527**

DB111489.eps

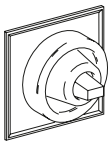


IP40

IP40 escutcheon for all control types	**LV432558**
IP40 escutcheon for VigiPacT add-on	**LV429316**
IP40 escutcheon for VigiPacT add-on or ammeter module	**LV429318**

IP43 rubber toggle cover

DB111490.eps



1 toggle cover	**LV432560** [2]

Lead-sealing accessories

DB115015.eps

Bag of accessories	**LV429375**

60 Mm Plate

DB438207.ai

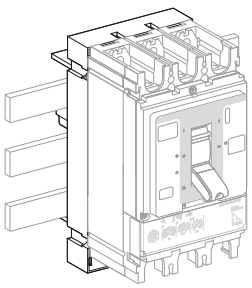


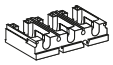
Plate 3P ComPacT NSX400/630 IEC	**LV432623**
Plate 4P ComPacT NSX400/630 IEC	**LV432624**

[1] For only 1 device.
[2] Need to order LV432553, toggle extension to be compatible for IP43 rubber cover.

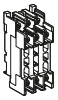
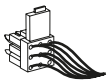
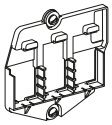
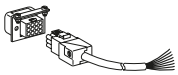
Accessories and Auxiliaries
ComPacT NSX400/630

Plug-in/Withdrawable Version Accessories

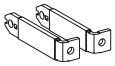
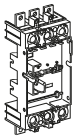
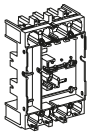
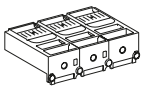
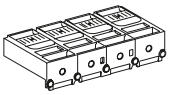
Insulation accessories

 DB117159.eps	Connection adapter for plug-in base	3P	**LV432584**
		4P	**LV432585**

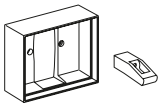
Auxiliary connections

 DB117160.eps	1 9-wire fixed connector (for base)		**LV429273**
 DB117161.eps	1 9-wire moving connector (for circuit breaker)		**LV432523**
 DB116368.eps	1 support for 3 moving connectors		**LV432525**
 DB115885.eps	9-wire manual auxiliary connector (fixed + moving)		**LV429272**

Plug-in base accessories

 DB432606.eps	Long insulated right angle terminal extensions	Set of 2	**LV432526**
 DB117165.eps	2 IP40 shutters for base		**LV432521**
 DB117180.eps	Base	3P	**LV432516**
 DB117181.eps	Base	4P	**LV432517**
 DB117182.eps	Power connections	3/4P	**LV432518**
 DB117183.eps	Short terminal shields	3P	**LV432591**
	Short terminal shield > 500 V (1 piece)	3P	**LV433693**
 DB117184.eps	Short terminal shields	4P	**LV432592**
	Short terminal shield > 500 V (1 piece)	4P	**LV433694**
 DB117171.eps	Safety trip interlock	3/4P	**LV432520**

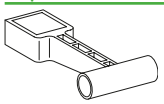
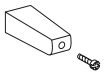
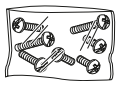
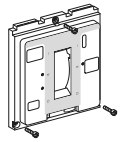
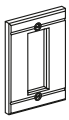
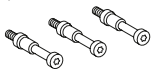
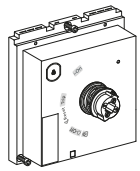
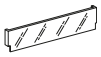
Chassis accessories

 DB117172.eps	Escutcheon collar	Toggle	**LV432534** [1]
 DB117173.eps	Escutcheon collar	VigiPacT add-on	**LV429285**
 DB117163.eps	Locking kit (keylock not included)		**LV429286**
	Keylock (keylock adapter not included)	Ronis 1351B.500	**41940**
		Profalux KS5 B24 D4Z	**42888**
 DB114426.eps	2 carriage switches (connected/disconnected position indication)		**LV429287**

[1] Need to order LV434436, NSX front cover to be compatible for escutcheon collar for toggle.

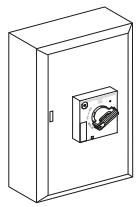
F

Spare Parts

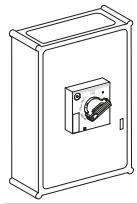
DB115633.eps 	Additional toggle extension for NSX400/630		**32595** [1]
DB111430.eps 	5 spare toggle extensions		**LV432553**
DB115620.eps 	Bag of screws		**LV432552**
DB438208.ai 	NSX400-630 front cover	3P/4P	**LV434436**
	Retrofit NSX400-630 front cover (F/N/H)	3P/4P	**LV4344ALT**
	NSX400-630 front cover (R/HB1/HB2)	3P/4P	**LV4344AHT**
DB111433.eps 	IP40 toggle escutcheon	ComPacT NS type/small cut-out	**32556**
DB111434.eps 	Torque limiting screws (set of 12)	3P/4P ComPacT NSX400-630	**LV432513**
DB111438.eps 	1 set of 10 identification labels		**LV429226**
DB438209.ai 	1 base for extended rotary handle		**LV432498T**
DB111435.eps 	LCD display for electronic trip unit	MicroLogic 5	**LV429483**
		MicroLogic 6	**LV429484**
		MicroLogic E-M	**LV429486**
DB111436.eps 	5 transparent covers for electronic trip unit	MicroLogic 5/6	**LV432459**
		MicroLogic 2	**LV432461**

Individual Enclosures

IP55 steel enclosure

DB439015.ai 	ComPacT NSX400 with black extended rotary handle	**LV431219**
	ComPacT NSX400 with red and yellow extended rotary handle	**LV431220**
	ComPacT NSX630 or ComPacT NSX400/630 VigiPacT add-on with black extended rotary handle	**LV431221**
	ComPacT NSX630 or ComPacT NSX400/630 VigiPacT add-on with red and yellow extended rotary handle	**LV431222**

IP55 insulating enclosure

DB439016.ai 	ComPacT NSX400/630 with black extended rotary handle	**LV432665**
	ComPacT NSX400/630 VigiPacT add-on with black extended rotary handle	**LV432666**

Visible Break Disconnect Function

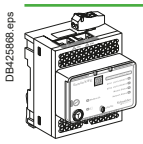
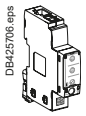
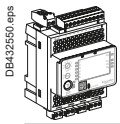
See catalog dealing with "ComPacT INV products (visible break)" and the associated accessories.
The visible break disconnection function is compatible with fixed front-connected/rear-connected ComPacT NSX devices.

[1] Need to order LV432553, NSX front cover to be compatible for escutcheon collar for toggle.

F

Communication, Monitoring and Control
ComPacT NSX400/630

Communication Option

 DB425688.eps	IFE	Ethernet interface for LV breaker	**LV434001**
		Ethernet interface for LV breakers and gateway	**LV434002**
 DB425706.eps	IFM Modbus-SL interface module		**LV434000**
 DB432550.eps	I/O application module		**LV434063**

Monitoring and Control (Remote Operation)

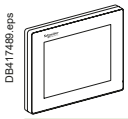
Circuit breaker accessories

 DB111439.eps	Breaker Status Control Module	BSCM [1]	**LV434205**

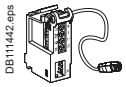
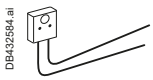
ULP display module [2]

 DB432551.eps	Switchboard front display module FDM121	**TRV00121**
	FDM mounting accessory (diameter 22 mm)	**TRV00128**

Ethernet display module

 DB417488.eps	Switchboard front display module FDM128	**LV434128**

ULP wiring accessories

 DB111442.eps	NSX cord L = 0.35 m	**LV434200**
	NSX cord L = 1.3 m	**LV434201**
	NSX cord L = 3 m	**LV434202**
	NSX cord for U > 480 V AC L = 1.3 m	**LV434204**
 DB115621.eps	10 stacking connectors for communication interface modules	**TRV00217**
 DB432584.ai	2 Modbus line terminators	**VW3A8306DRC** [3]
 LV434211.ai	Connector Modbus adaptor	**LV434211**
 DB417490.eps	RS 485 roll cable (4 wires, length 60 m)	**50965**
 DB115623.eps	5 RJ45 connectors female/female	**TRV00870**
 DB111444.eps	10 ULP line terminators	**TRV00880**
 DB111445.eps	10 RJ45/RJ45 male cord L = 0.3 m	**TRV00803**
	10 RJ45/RJ45 male cord L = 0.6 m	**TRV00806**
	5 RJ45/RJ45 male cord L = 1 m	**TRV00810**
	5 RJ45/RJ45 male cord L = 2 m	**TRV00820**
	5 RJ45/RJ45 male cord L = 3 m	**TRV00830**
	1 RJ45/RJ45 male cord L = 5 m	**TRV00850**

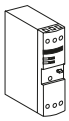
[1] SDE adapter mandatory for trip unit TM, MA or MicroLogic 2 (LV429451).
[2] For measurement display with MicroLogic E or status display with BSCM.
[3] www.schneider-electric.com.

F

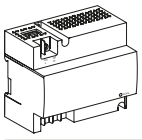
Monitoring and Control, Accesssories
ComPacT NSX400/630

Accessories

Power supply modules


DB112278.eps

External power supply module 100-240 V AC 110-230 V DC/24 V DC-3 A class 2 — **ABL8RPS24030** [1]


DB432608.eps

External power supply module 24 V DC-1 A OVC IV

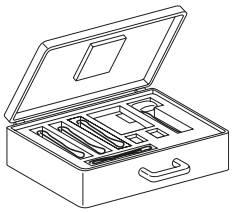
24-30 V DC	**LV454440**
48-60 V DC	**LV454441**
100-125 V DC	**LV454442**
110-130 V AC	**LV454443**
200-240 V AC	**LV454444**

Test Tool, Software, Demo

Test tool


DB111449.eps

Pocket battery for MicroLogic NSX100-630 — **LV434206**

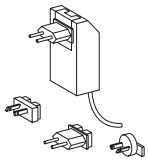

DB111451.eps

Maintenance case — **TRV00910**

Comprising:
- USB maintenance interface
- Power supply
- MicroLogic cord
- USB cord
- RJ45/RJ45 male cord


DB111450.eps

Spare USB maintenance interface — **TRV00911**


DB111452.eps

Spare power supply 110-240 V AC — **TRV00915**


DB111453.eps

Spare MicroLogic cord for USB maintenance interface — **TRV00917**


DB111448.eps

Bluetooth/Modbus option for USB maintenance interface — **VW3A8114** [1]

[1] See Telemecanique catalog.

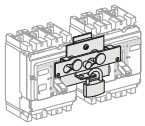
F

Source-Changeover Systems for 2 Devices
ComPacT NSX100 to NSX630

Manual Source-Changeover

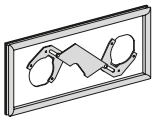
Mechanical interlocking

DB438182.ai



For toggle controlled circuit breakers	NSX100...250	**LV429354T**
	NSX400...630	**LV432614T**

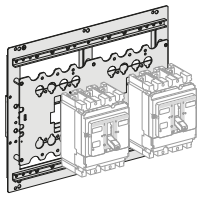
DB418508.eps



For rotary handled circuit breakers	NSX100...250	**LV429369T**
	NSX400...630	**LV432621T**

Interlocking on base plate

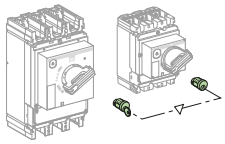
DB438212.ai



For 2 devices side by side	**29349**
	32609

Keylock interlocking

DB439010.ai

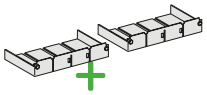


For rotary handled or remote controlled circuit breakers		
2 locks, 1 key	Ronis 1351B.500	**41950**
	Profalux KS5 B24 D4Z	**42878**

Connection Accessories

Downstream coupling accessories

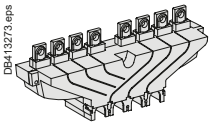
DB1101062.eps



Short terminal shields (1 pair) + “S1” source/“S2” source

	3P	4P
NSX100...250/NSX100...250/ 250 A	**LV429358**	**LV429359**
NSX400...630/NSX400...630/ 630 A	**LV432619**	**LV432620**

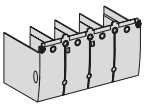
DB413273.eps



Long terminal shields (1 pair)

NSX100...250/NSX100...250		**LV429518**
NSX400...630/NSX400...630		**LV432594**
Long terminal shield for spreaders, 52.5 mm (1 piece)	**LV432596**	**LV432596**

DB403921.eps



Terminal Extensions

DB115652.eps

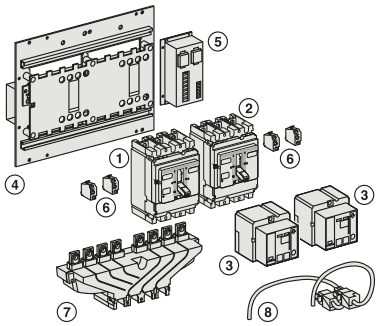
Spreaders	52.5 mm	4P	**LV432491**

Source-Changeover Systems for 2 Devices
ComPacT NSX100 to NSX630

Typical Composition of Source-Changeover System

Remote source-changeover

DB438213.ai

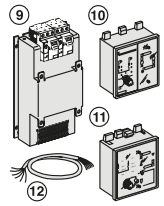


1 normal device N (1)
+ 1 replacement device R (2)
+ 2 remote controls (3)
+ 1 plate with interlocking (4) with IVE (5) and its wiring (8)
+ 2 plug-in kits (if plug-in version)
+ 1 adaptor kit for NSX100...250 plug-in (if NSX400...630 with NSX100...250)
+ auxilary switches (6)
2 x (1 OF + 1 SDE) for ComPacT NSX100...630
+ 1 downstream coupling accessory (7) for ComPacT NSX100...630 (option)
+ long RC (if back connection)

IVE and remote controls must have the same voltage.

Associated controller

DB400069.eps



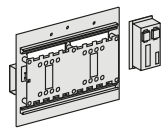
1 source changeover without associated controller
+ 1 ACP (9) with BA controller (10)
Or + 1 ACP (9) with UA controller (11)
Or + 1 ACP (9) with UA150 controller (11)
+ extension (12) for remote UA/BA connection on front of switchboard

IVE + remote control + ACP + BA or UA must have the same voltage.

Automatic Source-Changeover

Mechanical and electrical interlocking

DB403056.eps



Source "normal"/source "replacement" (identical voltages)			24 to 250 V DC		48 to 415 V AC 50/60 Hz 440 V 60 Hz
NSX100...250/NSX100...250					
Plate + IVE			**29351**		**29350**
	Plate		**29349**		**29349**
	IVE		**29356**		**29352**
Auxiliary switches 2 OF + 2 SDE		4 x	**29450**	4 x	**29450**
Spare wiring system (device/IVE)			**29365**		**29365**
Back sockets option add:	Only long RC		[2]		[2]
Plug in base option add:	Plug in kit		[2]		[2]
NSX400...630/NSX100...630					
Plate + IVE			**32611**		**32610**
	Plate		**32609**		**32609**
	IVE		**29356**		**29352**
Auxiliary switches 2 OF + 2 SDE		4 x	**29450**	4 x	**29450**
Spare wiring system (device/IVE)			**29365**		**29365**
Back sockets option add:	Only long RC		[2]		[2]
Plug in base option add:	Plug in kit		[2]		[2]
	Adaptator kit for NSX100...250	1 x	**32618**	1 x	**32618**

Controller

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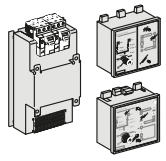

	110/127 V AC 50/60 Hz	220/240 V AC 50/60 Hz	380/415 V AC 50/60 Hz 440 V 60 Hz
ACP + controller BA [1]		**29470**	**29471**
Plate ACP		**29363**	**29364**
Controller BA		**29376**	**29377**
ACP + controller UA [1]	**29448**	**29472**	**29473**
Plate ACP	**29447**	**29363**	**29364**
Controller UA	**29446**	**29378**	**29380**

Wiring cable between BA/UA and ACP/IVE

Wiring cable (1.5 meter)	**29368**	**29368**

[1] The supply voltages BA/UA controller, ACP plate, IVE and the remote control must be identical whatever the source-changeover type.
[2] See products pages.

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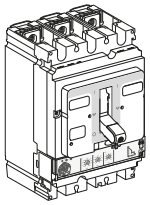
NSX100/400 for Utilities, "Tarif Jaune" Public Distribution

Complete Fixed/FC Device without Accessories

ComPacT NSX with MicroLogic AB

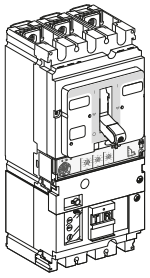

DB438166.ai

ComPacT NSX

	Rating	4P
NSX100F MicroLogic AB	100	**LV434562**
NSX160F MicroLogic AB	160	**LV434563**
NSX250F MicroLogic AB	240	**LV434564**
NSX400F MicroLogic AB	400	**LV434565**

Comprising:		Basic frame	MicroLogic AB
NSX100F + MicroLogic AB	100	**LV429008**	**LV434550**
NSX160F + MicroLogic AB	160	**LV430408**	**LV434551**
NSX250F + MicroLogic AB	240	**LV431408**	**LV434554**
NSX400F + MicroLogic AB	400	**LV432415**	**LV434557**

ComPacT NSX Vigi add-on with MicroLogic AB


DB438672.ai

ComPacT NSX Vigi add-on

	Rating	4P
NSX100F MicroLogic AB	100	**LV434572**
NSX160F MicroLogic AB	160	**LV434573**
NSX250F MicroLogic AB	240	**LV434574**
NSX400F MicroLogic AB	400	**LV434575**

Comprising:		Basic frame	MicroLogic AB	Vigi add-on MH/MB
NSX100F + MicroLogic AB	100 + MH	**LV429008**	**LV434550**	**LV429211**
NSX160F + MicroLogic AB	160 + MH	**LV430408**	**LV434551**	**LV429211**
NSX250F + MicroLogic AB	240 + MH	**LV431408**	**LV434554**	**LV431536**
NSX400F + MicroLogic AB	400 + MB	**LV432415**	**LV434557**	**LV432456**

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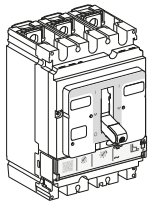
NSX100/400 for Utilities, "Tarif Jaune" Public Distribution

Complet Fixed/FC Device without Accessories

ComPacT NSX with normal trip unit


DB438165.ai

ComPacT NSX100F

Rating	4P 3d	4P 4d
TM40D	LV429644	LV429654
TM63D	LV429642	LV429652
TM80D	LV429641	LV429651
TM100D	LV429640	LV429650

ComPacT NSX160F

Rating	4P 3d	4P 4d
TM80D	LV430643	LV430653
TM100D	LV430642	LV430652
TM125D	LV430641	LV430651
TM160D	LV430640	LV430650

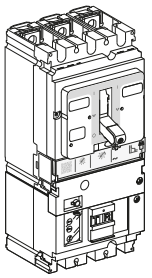
ComPacT NSX250F

Rating	4P 3d	4P 4d
TM125D	LV431643	LV431653
TM160D	LV431642	LV431652
TM200D	LV431641	LV431651
TM250D	LV431640	LV431650

ComPacT NSX400F

	4P 3d	4P 4d
MicroLogic 2.3	LV432677	LV432677

ComPacT NSX with normal trip unit


DB438671.ai

ComPacT NSX100F Vigi add-on

Rating	4P 3d	4P 4d
TM40D	LV429944	LV429954
TM63D	LV429942	LV429952
TM80D	LV429941	LV429951
TM100D	LV429940	LV429950

ComPacT NSX160F Vigi add-on

Rating	4P 3d	4P 4d
TM80D	LV430943	LV430953
TM100D	LV430942	LV430952
TM125D	LV430941	LV430951
TM160D	LV430940	LV430950

ComPacT NSX250F Vigi add-on

Rating	4P 3d	4P 4d
TM125D	LV431943	LV431953
TM160D	LV431942	LV431952
TM200D	LV431941	LV431951
TM250D	LV431940	LV431950

ComPacT NSX400F Vigi add-on

	4P 3d	4P 4d
MicroLogic 2.3	LV432732	LV432732

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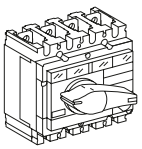
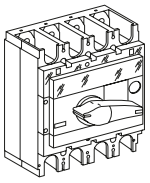
NSX100/400 for Utilities, "Tarif Jaune" Public Distribution
Visible Break

ComPacT INV100 to INV630 Standard Version

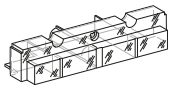

DB438673.ai

		4P
ComPacT INV100	For ComPacT NSX100	31161
ComPacT INV160	For ComPacT NSX160	31165
ComPacT INV200	For ComPacT NSX250	31163
ComPacT INV250	For ComPacT NSX250	31167


DB438674.ai

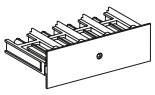
		4P
ComPacT INV320	For ComPacT NSX400	31169
ComPacT INV400	For ComPacT NSX400	31171

Spare Viewport

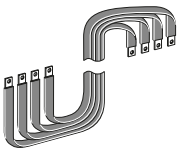

DB438675.ai

For INV100 to 250	31089
For INV320/400	31090

Combination with ComPacT NSX Devices


DB438676.ai

INV100 to 250 - NSX250 combination assembly	31066
INV320/400 - NSX250 combination assembly	31067
Front alignment base for INV320/400 - NSX250 combination assembly	31064
INV320/400 - NSX400 combination assembly	31068


DB403063.eps

Flexible connection assembly for vertical INV100 to 250 with NSX horizontal N [1]	04443
Flexible connection assembly for vertical INV100 to 250 with NSX horizontal V [1]	04444
Flexible connection assembly for vertical INV320 to 630 with NSX horizontal N [1]	04445
Flexible connection assembly for vertical INV320 to 630 with NSX horizontal V [1]	04446
Flexible connection assembly for vertical INV100 to 250 with vertical NSX250 beside	31071
Flexible connection assembly for vertical INV320 to 630 with vertical NSX400/630 beside	31072
Flexible connection assembly for vertical INV320 to 630 with vertical NSX250 beside	31093

[1] Product sold by MGA and valid for new Prisma only.

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Installation and Connection with or without the Visible Break Function

Conventional installation

Combination assembly

Upstream and downstream connection

INV100 to 250 - NSX100/160/250	4 snap-on bare cable connectors for cables:	1.5 to 95 mm² ; ≤ 160 A	2x	**LV429243**
		10 to 185 mm² ; ≤ 250 A	2x	**LV429260**
	10 clips for bare cable connector		1x	**LV429241**
	4 right-angle terminal extensions		2x	**LV429262**
	2 long terminal shields		1x	**LV429518**
INV320/400 - NSX100/160/250	4 bare cable connectors:	For 1 cable, 35 mm² to 300 mm²	1x	**LV432480**
		For 2 cables, 35 mm² to 240 mm²	1x	**LV432482**
	4 right-angle terminal extensions		1x	**LV432485**
	1 long terminal shield		1x	**LV432594**
	4 snap-on bare cable connectors for cables:	1.5 to 95 mm² ; ≤ 160 A	1x	**LV429243**
		10 to 185 mm² ; ≤ 250 A	1x	**LV429260**
	10 clips for bare cable connector		1x	**LV429241**
	4 right-angle terminal extensions		1x	**LV429262**
	1 long terminal shield		1x	**LV429518**
INV320/400 - NSX400	4 bare cable connectors:	For 1 cable, 35 mm² to 300 mm²	2x	**LV432480**
		For 2 cables, 35 mm² to 240 mm²	2x	**LV432482**
	4 right-angle terminal extensions		2x	**LV432485**
	1 long terminal shield		1x	**LV432594**

Installation in cabinet or enclosure

Combination assembly (mounting in duct)
Flexible connection assembly (mounting in cubicle)

Upstream and downstream connection

INV100 to 250 - NSX100/160/250	4 snap-on bare cable connectors for cables:	1.5 to 95 mm² ; ≤ 160 A	2x	**LV429243**
		10 to 185 mm² ; ≤ 250 A	2x	**LV429260**
	1 short terminal shield		1x	**LV429516**
INV320/400 - NSX100/160/250	4 bare cable connectors:	For 1 cable, 35 mm² to 300 mm²	1x	**LV432480**
		For 2 cables, 35 mm² to 240 mm²	1x	**LV432482**
	1 short terminal shield		1x	**LV432592**
	4 snap-on bare cable connectors for cables:	1.5 to 95 mm² ; ≤ 160 A	1x	**LV429243**
		10 to 185 mm² ; ≤ 250 A	1x	**LV429260**
	1 short terminal shield		1x	**LV429516**
INV320/400 - NSX400	4 bare cable connectors:	For 1 cable, 35 mm² to 300 mm²	2x	**LV432480**
		For 2 cables, 35 mm² to 240 mm²	2x	**LV432482**
	1 short terminal shield		1x	**LV432592**

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Catalog Numbers
ComPacT NSX100 to NSX630 Order Form

Name of customer: .....
Address for delivery: .....
.....
Requested delivery date: .....
Customer order no.: .....

To indicate your choices, check the applicable square boxes or note the quantity and enter the appropriate information in the rectangles

Circuit breaker or switch-disconnector

ComPacT type	**NSX100/160/250 -**	
	160A not available with R, HB1 or HB2	
	NSX400/630	
Rating	**A**	
Circuit breaker	**B, F, N, H, S, L, R, HB1, HB2**	
Switch-disconnector	**NA**	
Number of poles	**1, 2, 3 or 4**	
Number of poles protected	**2d, 3d or 4d**	
Fixed device		Front connections
Plug-in/withdr.	Plug-in	Withdrawable
Earth-leakage protection	**ME, MH, MB (not available with R, HB1 or HB2)**	

Trip unit

Thermal-mag.

TMD rating (16 ... 250 A) (40 ….250 A) with R, HB1 and (63...250 A) with HB2

TMG rating (16 ... 250 A) - not available with R, HB1or HB2

MA rating (2.5 ... 220 A) (12.5 ….220 A) with R, HB1 and HB2

Electronic * Not available with R, HB1 or HB2

MicroLogic 2.2	**MicroLogic 2.3**
MicroLogic 2.2 G*	**MicroLogic 2.3 AB***
MicroLogic 2.2 AB*	**MicroLogic Vigi 4.3**
MicroLogic Vigi 4.2	**MicroLogic Vigi 4.3 AL**
MicroLogic Vigi 4.2 AL	**MicroLogic Vigi 4.3 AB**
MicroLogic Vigi 4.2 AB	**MicroLogic 5.3 A***
MicroLogic 5.2 A*	**MicroLogic 5.3 E**
MicroLogic 5.2 E	**MicroLogic 5.3 A-Z***
MicroLogic 5.2 A-Z*	**MicroLogic 6.3 A***
MicroLogic 6.2 A*	**MicroLogic 6.3 E**
MicroLogic 6.2 E	**MicroLogic Vigi 7.3 E**
MicroLogic Vigi 7.2 E	**MicroLogic Vigi 7.3 E AL**
MicroLogic Vigi 7.2 AL	**MicroLogic 1.3 M**
MicroLogic 2.2 M	**MicroLogic 2.3 M**
MicroLogic 6.2 E-M	**MicroLogic 6.3 E-M**
SDTAM Module	

External neutral CT
24 V DC power supply connector
ZSI connector accessory for plug-in and withdrawable
ZSI wiring accessory for NS630b/MTZ

External power supply module 24 V DC

24-30 V DC	48-60 V DC
100-125 V AC	110-130 V AC
200-240 V AC	

Battery module

Connection

Rear-connection kit: Short / Mixed / Long

NSX100/250 connectors:
- Snap-on 1.5□ to 95□ (< 160 A)
- Snap-on 25□ to 95□ (< 250 A)
- Snap-on 120□ to 185□ (< 250 A)
- Distribution 6 x 1.5□ to 35□
- Aluminium 1 cable 25 to 95
- Aluminium 1 cable 120 to 185
- Aluminium 1 cable 120 to 250
- Aluminium 2 cables 50□ to 120□

NSX400/630 connectors:
- 1 cable 35□ to 300□
- 2 cables 35□ to 240□

Right-angle terminal extensions
Straight extensions: NSX100/250
Edgewise extensions: 45° terminal extension / Double-L terminal extensions

Spreader	NSX100/250 (one piece)			(45 mm)
	NSX400/630 (52.5 mm)			(70 mm)
Cu cable lugs	NSX100/250	120□	150□	185□
	NSX400/630		240□	300□
Al cable lugs	NSX100/250		150□	185□
	NSX400/630		240□	300□

Voltage measurement Input for connector: For lugs NSX100/250 ⩽ 185□ / For lugs NSX400/630

Terminal shields	NSX100/250	Short	Long
	NSX400/630	Short	Long
		Short ⩾ 500 V	Long for 52.5 mm spreaders

Interphase barriers: Set of 6
2 insulating screens: NSX100/250 / NSX400/630: 70 pitch

Test tool

Pocket battery for MicroLogic	Power supply 110-240 V AC
Maintenance case	Spare MicroLogic cord
USB maintenance interface	

Indication and measurement

PowerLogic PowerTag NSX		3P	4P
Ammeter module	standard	3P	4P
	I max	3P	
Current-transformer module		3P	4P
Current-transformer module + TCU		3P	4P
Insulation-monitoring module - not available with HB1 or HB2		3P	4P
Voltage-presence indicator - not available with HB1 or HB2			
Auxiliary contact	OF, SD, SDE or SDV	Screwless	Screw
	OF, SD, SDE		Wireless
SDE adapter (TM, MA or MicroLogic 2 trip units)			
SDX module			

Remote operation

Electrical operation	Motor mechanism		AC	DC	V	
Voltage releases	Instantaneous	MX	AC	DC	V	
		MN	AC	DC	V	
	Fixed time delay	MN	AC	DC	V	
	Adjust. time delay	MN	AC	DC	V	

Rotary handles

Direct	Black	Red and yellow front
	MCC conversion access.	CNOMO conversion access.
Extended	Black	Red and yellow front
	Telescopic handle for withdrawable device	
	Open door shaft operator	
Indication auxiliary	1 early-break switch	2 early-make switches

Locking

Toggle (1 to 3 padlocks)	Removable	Fixed
Rotary handle	Keylock adapter (keylock not included)	
	Keylocks Ronis 1351B.500	Profalux KS5 B24 D4Z
Motor mechanism	Keylock adapter + keylock Ronis (special)	NSX100/250
	Keylock adapter (keylock not included)	NSX400/630
	Keylocks Ronis 1351B.500	Profalux KS5 B24 D4Z

Interlocking

Mechanical	Toggle operated	Rotary Handle
By key (2 keylocks, 1 key) for rotary handle	Locking kit without locks	
	Keylocks Ronis 1351B.500	Profalux KS5 B24 D4Z

Installation accessories

- IP30 escutcheon for all types (toggle/rotary handle/motor mechanism)
- IP30 escutcheon (with access to toggle + trip unit)
- IP30 escutcheon for VigiPacT add-on
- IP40 escutcheon for all types (toggle/rotary handle/motor mechanism)
- IP40 escutcheon for VigiPacT add-on
- IP40 escutcheon for VigiPacT add-on or ammeter module
- Toggle cover
- Sealing accessories
- DIN rail adapter: NSX100/250
- 3P 60 mm busbar adapter

Plug-in/withdrawable configuration accessories

Auxiliary connections:
- 1 automatic connector fixed part with 9 wires (for base)
- 1 automatic connector moving part with 9 wires (for circuit breaker)
- 1 support for 3 automatic connector moving parts / 1 support for 2 automatic connector
- 9-wire manual auxiliary connector (fixed + moving)

Plug-in base accessories	Long insulated terminals	Set of 2
	2 IP4 shutters for base	
Chassis accessories	Escutcheon collar	Toggle / Vigi
	Locking kit (keylock not included)	
	2 carriage switches (conn./disconnected position indication)	
Parts or plug-in Withdrawable kits	Plug-in base FC/RC	2P / 3P / 4P
	Set of two power connections	Standard / Vigi
	Safety trip for advanced opening	
	For 3P/4P chassis	Moving part / Fixed part

Adapter for plug-in base (for terminal shield or interphase barriers)

Communication

NSX Cord L = 0.35 m	NSX Cord L = 1.3 m
NSX Cord U > 480 V AC L = 0.35 m	NSX Cord L = 3 m

- BSCM
- Communicating motor mechanism 220-240 V
- Switchboard front display module FDM121
- FDM mounting accessory
- Ethernet Interface + Gateway
- Ethernet Interface
- Modbus interface
- I/O Application Module: Qty 1 / Qty 2
- Stacking accessory
- ULP line termination

RJ45 connectors female/female

Wire length RJ45 L = 0.3 m	Wire length RJ45 L = 0.6 m
Wire length RJ45 L = 1 m	Wire length RJ45 L = 2 m
Wire length RJ45 L = 3 m	Wire length RJ45 L = 5 m

F

Glossary

G

Glossary

For each major section (Accessories, Switchgear, etc.) and for each item (Adapter for plug-in base, Connection terminal, etc.), this glossary provides:
- The page number in the concerned catalog
- The reference standard
- The standardized IEC symbol
- The definition.

Text in quotation marks is drawn from the standards.

Accessories

Adapter for plug-in base	The adapter is a plastic component that can be installed upstream and/or downstream of the plug-in base and enables use of all the connection accessories of the fixed device.
Bare-cable connector	Conducting part of the circuit breaker intended for connection to power circuits. On ComPacT NSX, it is an aluminium part that screws to the connection terminals of the circuit breaker. There are one or more holes (single or multiple cable connector) for the ends of bare cables.
Connection terminals	Flat copper surface, linked to the conducting parts of the circuit breaker and to which power connections are made using bars, connectors or lugs.
One-piece spreader	The spreader is a plastic component with copper connectors that can be installed upstream and/or downstream of a ComPacT NSX100 to 250 circuit breaker with a pole pitch of 35 mm. It increases the pitch of the circuit-breaker terminals to the 45 mm pitch of a NSX400/630 device to facilitate connection of large cables.
Spreaders	Set of three (3P device) or four (4P) flat, conducting parts made of aluminium. They are screwed to the circuit-breaker terminals to increase the pitch between poles.

Circuit-breaker characteristics (IEC 60947-2)

Breaking capacity	Value of prospective current that a switching device is capable of breaking at a stated voltage under prescribed conditions of use and behaviour. Reference is generally made to the ultimate breaking capacity (Icu) and the service breaking capacity (Ics).
Degree of protection (IP) IEC 60529	Defines device protection against the penetration of solid objects and liquids, using two digits specified in standard IEC 60259. Each digit corresponds to a level of protection, where 0 indicates no protection. ■ First digit (0 to 6): protection against penetration of solid foreign objects. 1 corresponds to protection against objects with a diameter > 50 mm, 6 corresponds to total protection against dust. ■ Second digit (0 to 8): protection against penetration of liquids (water). 1 corresponds to protection against falling drops of water (condensation), 8 corresponds to continuous immersion. The enclosure of ComPacT NSX circuit breakers provides a minimum of IP40 (protection against objects > 1 mm) and can reach IP56 (protection against dust and powerful water jets) depending on the installation conditions.
Degree of protection against external mechanical impacts (IK)	Defines the aptitude of an object to resist mechanical impacts on all sides, indicated by a number from 0 to 10 (standard IEC 62262). Each number corresponds to the impact energy (in Joules) that the object can handle according to a Standardized procedure. 0 corresponds to no protection, 1 to an impact energy of 0.14 Joules, 10 to an impact energy of 20 Joules. ComPacT NSX provide IK07 (2 Joules) and can provide IK08 (5 Joules) depending on the installation conditions.
Durability	The term "durability" is used in the standards instead of "endurance" to express the expectancy of the number of operating cycles which can be performed by the equipment before repair or replacement of parts. The term "endurance" is used for specifically defined operational performance.
Electrical durability IEC 60947-1	With respect to its resistance to electrical wear, equipment is characterized by the number of on-load operating cycles, corresponding to the service conditions given in the relevant product standard, which can be made without re replacement.

Glossary

Frame size	A term designating a group of circuit breakers, the external physical dimensions of which are common to a range of current ratings. Frame size is expressed in amperes corresponding to the highest current rating of the group. Within a frame size, the width may vary according to the number of poles. This definition does not imply dimensional standardization. ComPacT NSX has two frame sizes covering 100 to 250 A and 400 to 630 A.
Insulation class	Defines the type of device insulation in terms of earthing and the corresponding safety for user, in one of three classes. ■ Class I. The device is earthed. Any electrical faults, internal or external, or caused by the load, are cleared via the earthing circuit, thus ensuring user safety. ■ Class II. The device is not connected to a protective conductor. User safety is ensured by reinforced insulation around the live parts (an insulating case and no contact with live parts, i.e. plastic buttons, molded connections, etc.) or double insulation. ■ Class III. The device may be connected only to SELV (safety extra-low voltage) circuits. The ComPacT NSX are class II devices (front) and may be installed through the door in class II switchboards (standards IEC 61140 and IEC 60664-1), without reducing insulation, even with a rotary handle or motor mechanism module.
Making capacity	Value of prospective making current that a switching device is capable of making at a stated voltage under prescribed conditions of use and behaviour. Reference is generally made to the short-circuit making capacity Icm.
Maximum break time	Maximum time after which breaking is effective, i.e. the contacts separated and the current completely interrupted.
Mechanical durability	With respect to its resistance to mechanical wear, equipment is characterized by the number of no-load operating cycles which can be effected before it becomes necessary to service or replace any mechanical parts.
Non-tripping time	This is the minimum time during which the protective device does not operate in spite of pick-up overrun, if the duration of the overrun does not exceed the corresponding voluntary time delay.
Pollution degree of environment conditions IEC 60947-1 IEC 60664-1	Conventional number based on the amount of conductive or hygroscopic dust, ionized gas or salt and on the relative humidity and its frequency of occurrence, resulting in hygroscopic absorption or condensation of moisture leading to reduction in dielectric strength and/or surface resistivity. Standard IEC 60947-1 distinguishes four pollution degrees. ■ Degree 1. No pollution or only dry, non-conductive pollution occurs. ■ Degree 2. Normally, only non-conductive pollution occurs. Occasionally, however, a temporary conductivity caused by condensation may be expected. ■ Degree 3. Conductive pollution occurs, or dry, non-conductive pollution occurs which becomes conductive due to condensation. ■ Degree 4. The pollution generates persistent conductivity caused, for instance, by conductive dust or by rain or snow. ComPacT NSX meets degree 3, which corresponds to industrial applications.
Prospective short-circuit current	Current that would flow through the poles if they remained fully closed during the short-circuit.
Rated current (In)	This is the current that the device can carry continuously with the contacts closed and without abnormal temperature rise.
Rated impulse withstand voltage (Uimp)	The peak value of an impulse voltage of prescribed form and polarity which the equipment is capable of withstanding without failure under specified conditions of test and to which the values of the clearances are referred. The rated impulse withstand voltage of an equipment shall be equal to or higher than the values stated for the transient overvoltages occurring in the circuit in which the equipment is fitted.
Rated insulation voltage (Ui)	The rated insulation voltage of an equipment is the value of voltage to which dielectric tests and creepage distances are referred. In no case shall the maximum value of the rated operational voltage exceed that of the rated insulation voltage.
Rated operational current (Ie)	A rated operational current of an equipment is stated by the manufacturer and takes into account the rated operational voltage, the rated frequency, the rated duty, the utilization category and the type of protective enclosure, if appropriate.
Rated operational voltage (Ue)	A value of voltage which, combined with a rated operational current, determines the application of the equipment and to which the relevant tests and the utilization categories are referred. For multipole equipment, it is generally stated as the voltage between phases. This is the maximum continuous voltage at which the equipment may be used.

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Rated short-time withstand current (Icw)	Value of short-time withstand current, assigned to the equipment by the manufacturer, that the equipment can carry without damage, under the test conditions specified in the relevant product standard. Generally expressed in kA for 0.5, 1 or 3 seconds. This is an essential characteristic for air circuit breakers. It is not significant for molded-case circuit breakers for which the design targets fast opening and high limiting capacity.
Service breaking capacity (Ics)	Expressed as a percentage of Icu, it provides an indication on the robustness of the device under severe conditions. It is confirmed by a test with one opening and one closing/opening at Ics, followed by a check that the device operates correctly at its rated current, i.e. 50 cycles at In, where temperature rise remains within tolerances and the protection system suffers no damage.
Short-circuit making capacity (Icm)	Value indicating the capacity of the device to make and carry a high current without repulsion of the contacts. It is expressed in kA peak.
Suitability for isolation (see also below Positive contact indication)	This capability means that the circuit breaker meets the conditions below. ■ In the open position, it must withstand, without flashover between the upstream and downstream contacts, the impulse voltage specified by the standard as a function of the Uimp indicated on the device. ■ It must indicate contact position by one or more of the following systems: □ Position of the operating handle □ Separate mechanical indicator □ Visible break of the moving contacts ■ Leakage current between each pole, with the contacts open, at a test voltage of 1.1 x the rated operating voltage, must not exceed: □ 0.5 mA per pole for new devices □ 2 mA per pole for devices already subjected to normal switching operations □ 6 mA, the maximum value that must never be exceeded. ■ It must not be possible to install padlocks unless the contacts are open. Locking in the closed position is permissible for special applications. ComPacT NSX complies with this requirement by positive contact indication.
Suitable for isolation with positive contact indication (see also above Suitability for isolation)	Suitability for isolation is defined here by the mechanical reliability of the position indicator of the operating mechanism, where: ■ The isolation position corresponds to the O (OFF) position ■ The operating handle cannot indicate the "OFF" position unless the contacts are effectively open. The other conditions for isolation must all be fulfilled: ■ Locking in the open position is possible only if the contacts are effectively open ■ Leakage currents are below the Standardized limits ■ Overvoltage impulse withstand between upstream and downstream connections.
Ultimate breaking capacity (Icu)	Expressed in kA, it indicates the maximum breaking capacity of the circuit breaker. It is confirmed by a test with one opening and one closing/opening at Icu, followed by a check that the circuit is properly isolated. This test ensures user safety.

Communication

BSCM (Breaker status and control module)	The optional BSCM for ComPacT NSX is used to acquire device status indications and control the communicating remote-control function. It includes a memory used to manage the maintenance indicators. It serves as a converter between the analog outputs of the device indication contacts (O/F, SD, SDE) and the digital communicating functions.
Ethernet TCP/IP (Transmission Control Protocol/ Internet Protocol)	Ethernet is a very common network protocol and complies with IEEE standard 802.3. Ethernet TCP/IP is the protocol that brings web functions to Ethernet networks. Most PCs have an Ethernet 10/100 card (10 or 100 Mbit/s) for connection to the internet. Data communicated from ComPacT NSX via Modbus are accessible on a PC via a TCP/IP-Modbus gateway such as MPS100 or EGX100.
FDM121 switchboard display	An FDM121 switchboard display unit can be connected to a ULP IMU using a prefabricated cord to display all measurements, alarms, histories and event tables, maintenance indicators, management of installed devices on a screen. The result is a veritable 96 x 96 mm Power Meter. The FMD121 display unit requires a 24 V DC power supply. The FDM121 is a switchboard display unit that can be integrated in the ComPacT NSX100 to 630 A, PowerPacT H/J/L/P/R, ComPacT NS or MasterPacT systems.
FDM128 switchboard display	The FDM128 is an intelligent Ethernet display. It collects the data from up to 8 devices via Ethernet network. The FDM128 is a large display, but requires very little depth. The anti-glare graphic screen is backlit for very easy reading even under poor ambient lighting and at sharp angles.

Glossary

IFE Ethernet interface, **IFE Ethernet interface + gateway**	The IFE Ethernet interface for LV circuit breaker enables an intelligent modular unit (IMU), for example a MasterPacT NT/NW/MTZ or ComPacT NSX circuit breaker to be connected to an Ethernet network.
IFM Module interface Modbus	This module required for connection to the network, contains the Modbus address (1 to 99) declared by the user via the two dials in front. It automatically adapts (baud rate, parity) to the Modbus network in which it is installed. It is equipped with a lock-out switch to enable or disable operations involving writing to MicroLogic, i.e. reset, counter reset, setting modifications, device opening and closing commands, etc. There is a built-in test function to check the connections of the Modbus interface module with the MicroLogic and FDM121 display unit.
I/O application module	The I/O (Input/Output) application module for LV breaker is part of an ULP system with built-in functionalities and applications to enhance the application needs. The ULP system architecture can be built without any restrictions using the wide range of circuit breakers. The I/O application module is compliant with the ULP system specifications. Two I/O application modules can be connected in the same ULP network.
Network	Set of communicating devices that are interconnected by communication lines in order to share data and resources.
Open protocol	A protocol for system communication, interconnection or data exchange for which technical specifications are public, i.e. there are no restrictions on access or implementation. An open protocol is the opposite of a proprietary protocol.
Protocol	Standardized specification for dialog between digital components that exchange data. It is an operating mode based on the length and structure of binary words and it must be used by all the components exchanging data between themselves. Communication is not possible without using a protocol.
RJ45 connector	Universal, 8-wire connector that is widely used in digital communication networks. The RJ45 connector is used to interconnect computer equipment (Ethernet, Modbus, etc.), telephones and audiovisual equipment.
RS485 Modbus	Modbus is the most widely used communication protocol in industrial networks. It operates in master-slave mode. An RS485 multipoint link connects the master and slaves via a pair of wires offering throughputs of up to 38400 bits/second over distances up to 1200 m). The master cyclically polls the slaves which send back the requested information. The Modbus protocol uses frames containing the address of the targeted slave, the function (read, write), the datum and the CRC (cyclical redundancy check).
SDTAM	Relay module with two static outputs specifically for the motor-protection MicroLogic trip units 1 M, 2 M and 6 E-M. An output, linked to the contactor controller, opens the contactor when an overload or other motor fault occurs, thus avoiding opening of the circuit breaker. The other output stores the opening event in memory.
SDx	Relay module with two outputs that remotes the trip or alarm conditions of ComPacT NSX circuit breakers equipped with a MicroLogic electronic trip unit.
Smartlink SI B	Smartlink SI B collects data from Smartlink Modbus and transfers them via the Ethernet network.
Smartlink Modbus	Smartlink Modbus is used to transfer data from devices to a PLC or monitoring system via the communication system: Modbus serial line.
Static output	Output of a relay made up of a thyristor or triac electronic component. The low switching capability means that a power relay is required. This is the case for the SDx and SDTAM outputs.
ULP (Universal Logic Plug) 	Connection system used by ComPacT NSX to communicate information to the Modbus interface via a simple RJ45 cable. Compatible modules are indicated by the symbol opposite.

Glossary

Components

ASIC (Application Specific Integrated Circuit)	Integrated circuit designed, built and intended for a specific application. It carries out repetitive sequences of instructions engraved in the silicon chip. For that reason, it is extremely reliable because it cannot be modified and is not affected by environment conditions. MicroLogic trip units use an ASIC for the protection functions. The ASIC cyclically polls the network status at a high frequency, using the values supplied by captors. Comparison with the settings forms the basis for orders to the electronic trip units.
Microprocessor	A microprocessor is a more general purpose device than an ASIC. In MicroLogic, a microprocessor is used for measurements and it can be programmed. It is not used for the main protection functions that are carried out by the ASIC.

Controls

Communicating motor mechanism	For ComPacT NSX remote control via the communication system, a communicating motor mechanism is required. Except for the communication function, it is identical to the standard motor mechanism module and connects to and controlled by the BSCM module.
CNOMO machine-tool rotary handle	Handle used for machine-tool control enclosures and providing IP54 and IK08.
Direct rotary handle	This is an optional control handle for the circuit breaker. It has the same three positions I (ON), O (OFF) and TRIPPED as the toggle control. It provides IP40, IK07 and the possibility, due to its extended travel, of using early-make and early-break contacts. It maintains suitability for isolation and offers optional locking using a keylock or a padlock.
Emergency off	In a circuit equipped with a circuit breaker, this function is carried out by an opening mechanism using an MN undervoltage release or an MX shunt release in conjunction with an emergency off button.
Extended rotary handle	Rotary handle with an extended shaft to control devices installed at the rear of switchboards. It has the same characteristics as direct rotary handles. It offers multiple locking possibilities using a keylock, a padlock or a door interlock.
Failsafe remote tripping	Remote tripping is carried out by an opening mechanism using an MN undervoltage release in conjunction with an emergency off button. If power is lost, the protection device opens the circuit breaker.
Manual toggle control	This is the standard control mechanism for the circuit breaker, with a toggle that can be flipped up or down. In a molded-case circuit breaker (MCCB), there are three positions, I (ON), O (OFF) and TRIPPED. Once in the TRIPPED position, manual reset is required by switching to O (OFF position before reclosing.The TRIPPED position does not offer isolation with positive contact indication. This is guaranteed only by the O (OFF) position.
MCC rotary handle	Handle used for motor control centres and providing IP43 and IK07.
Motor mechanism module	The optional motor mechanism module is used to remotely open, close and recharge the circuit breaker.

Selectivity/Cascading

Cascading	Cascading implements the current-limiting capacity of a circuit breaker, making it possible to install downstream circuit breakers with lower performance levels. The upstream circuit breaker reduces any high short-circuit currents. This makes it possible to install downstream circuit breakers with breaking capacities less than the prospective short-circuit current at their point of installation. The main advantage of cascading is to reduce the overall cost of switchgear. Because the current is limited throughout the circuit downstream of the limiting circuit breaker, cascading applies to all the devices located downstream.
Current selectivity	Selectivity based on the difference between the current-protection settings of the circuit breakers. The difference in settings between two successive circuit breakers in a circuit must be sufficient to allow the downstream breaker to clear the fault before the upstream breaker trips.

Selectivity	Selectivity is ensured between upstream and downstream circuit breakers if, when a fault occurs, only the circuit breaker placed immediately upstream of the fault trips. Selectivity is the key to ensuring the continuity of service of an installation.
Energy selectivity	This function is specific to ComPacT NSX (see Reflex tripping on page G-7) and supplements the other types of selectivity.
Partial selectivity	Selectivity is partial if the conditions for total selectivity are not met up to the ultimate short-circuit current Icu, but only up to a lesser value. This value is called the selectivity limit. If a fault exceeds the selectivity limit, both circuit breakers trip.
Time selectivity	Selectivity based on the difference between the time-delay settings of the circuit breakers. The upstream trip unit is delayed to provide the downstream breaker the time required to clear the fault.
Total selectivity	Total selectivity is ensured between upstream and downstream circuit breakers if, for all fault values, from overloads up to solid short-circuits, only the downstream circuit breaker trips and the upstream circuit breaker remains closed.
Zone selective interlocking (ZSI)	A number of circuit breakers with MicroLogic electronic trip units are interconnected one after another by a pilot wire. In the event of a short-time or ground fault: ■ In the absence of information from downstream, the circuit breaker directly concerned by the fault (i.e. located just upstream of the fault) shifts to the shortest time delay and sends a signal upstream ■ The upstream device, on receiving the signal from the downstream device, maintains its normal time delay. In this manner, the fault is cleared rapidly by the circuit breaker closest to the fault.

Environment

EMC (Electromagnetic compatibility)	EMC is the capacity of a device not to disturb its environment during operation (emitted electromagnetic disturbances) and to operate in a disturbed environment (electromagnetic disturbances affecting the device). The standards define various classes for the types of disturbances. MicroLogic trip units comply with annexes F and J in standard IEC IE60947-2.
Power loss **Pole resistance**	The flow of current through the circuit-breaker poles produces Joule-effect losses caused by the resistance of the poles.
Product environmental profile (PEP) **LCA: Life-cycle assessment** **ISO 14040**	An assessment on the impact of the construction and use of a product on the environment, in compliance with standard ISO 14040, Environmental management, life-cycle assessment (LCA), principles and framework. For ComPacT NSX, this assessment is carried out using the Standardized EIME (Environmental Impact and Management Explorer) software, which makes possible comparisons between the products of different manufacturers. It includes all stages, i.e. manufacture, distribution, use and end of life, with set usage assumptions: ■ Use over 20 years at a percent load of 80% for 14 hours per day and 20% for ten hours ■ According to the European electrical-energy model. It provides the information presented below. ■ Materials making up the product: composition and proportions, with a check to make sure no substances forbidden by the RoHS directive are included. ■ Manufacture: on Schneider Electric production sites that have set up an environmental management system certified ISO 14001. ■ Distribution: packaging in compliance with the 94/62/EC packaging directive (optimized volumes and weights) and optimized distribution flows via local centres. ■ Use: no aspects requiring special precautions for use. Power lost through Joule effect in Watts (W) must be < 0.02% of total power flowing through the circuit breaker. Based on the above assumptions, annual consumption from 95 to 200 kWh. ■ End of life: products dismantled or crushed. For ComPacT NSX, 81% of materials can be recycled using standard recycling techniques. Less than 2% of total weight requires special recycling.

Glossary

Product environmental profile (PEP) **Environmental indicators**	Environmental indicators are also frequently used for the PEP (sheet available on request for ComPacT NSX): ■ Depletion of natural resources ■ Depletion of energy ■ Depletion of water ■ Potential for atmospheric warming (greenhouse effect) ■ Potential for stratospheric ozone depletion ■ Creation of atmospheric ozone (ozone layer) ■ Acidification of air (acid rain) ■ Production of hazardous waste.
RoHS directive (Restriction of Hazardous substances)	European directive 2002/95/EC dated 27 January 2003 aimed at reducing or eliminating the use of hazardous substances. The manufacturer must attest to compliance, without third-party certification. Circuit breakers are not included in the list of concerned products, which are essentially consumer products. That not withstanding, Schneider Electric decided to comply with the RoHS directive. ComPacT NSX products are designed in compliance with RoHS and do not contain (above the Authorized levels) lead, mercury, cadmium, hexavalent chromium or flame retardants (polybrominated biphenyls PBB and polybrominated diphenyl ether PBDE).
Safety clearances	When installing a circuit breaker, minimum distances (safety clearances) must be maintained between the device and panels, bars and other protection systems installed nearby. These distances, which depend on the ultimate breaking capacity, are defined by tests carried out in accordance with standard IEC 60947-2.
Temperature derating	An ambient temperature varying significantly from 40°C can modify operation of magnetic or thermal-magnetic protection functions. It does not affect electronic trip units. However, when electronic trip units are used in high-temperature situations, it is necessary to check the settings to ensure that only the permissible current for the given ambient temperature is let through.
Vibration withstand IEC 60068-2-6	Circuit breakers are tested in compliance with standard IEC 60068-2-6 for the levels required by merchant-marine inspection organizations (Veritas, Lloyd's, etc.): ■ 2 to 13.2 Hz: amplitude of ±1 mm ■ 13.2 to 100 Hz: constant acceleration of 0.7 g.
WEEE directive (Waste of Electrical and Electronic Equipment)	European directive on managing the waste of electrical and electronic equipment. Circuit breakers are not included in the list of concerned products. However, ComPacT NSX products respect the WEEE directive.

Harmonics

Current harmonics	Non-linear loads cause harmonic currents that flow in the 50 Hz (or 60 Hz) distribution system. Total harmonic current is the sum of sinusoidal AC currents for which the rms values can be measured and broken down into: ■ The fundamental current at the 50/60 Hz frequency of the distribution system, with an rms value of IH_1 ■ Harmonic currents with whole, odd multiples (3, 5, 7, etc.) of the 50/60 Hz frequency, called the third-order, fifth-order, etc. harmonics. For example, IH_3, the third-order harmonic at 150/180 Hz, IH_5, the fifth-order harmonic at 250/300 Hz, etc. The presence of harmonics in the system must be monitored and limited because it results in temperature rise, currents in the neutral (caused by the third-order harmonics and multiples), malfunctions of sensitive electronic devices, etc. MicroLogic E trip units take into account harmonics up to order 15 in the THDI and THDU calculations.
Non-linear load	Systems producing harmonics are present in all industrial, commercial and residential sectors. Harmonics are caused by non-linear loads. A load is said to be non-linear when the current drawn does not have the same waveform as the supply voltage. Typically, loads using power electronics are non-linear. Examples of non-linear loads include computers, rectifiers, variable-speed drives, arc furnaces and fluorescent lighting.
Total harmonic distortion of current (THDI)	THDI characterizes the distortion of the current wave by harmonics. It indicates the quantity of harmonics in the resulting waveform. It is expressed in percent. The higher the THDI, the more the current is distorted by harmonics. THDI should remain below 10%. Above that level, there is said to be harmonic pollution that is considered severe when it rises above 50%.

Total harmonic distortion of voltage (THDU)	THDU characterizes the distortion of the voltage wave by harmonics. It indicates the quantity of harmonics in the resulting waveform. It is expressed in percent. The higher the THDU, the more the system voltage is distorted by harmonics. It is advised not to exceed 5% for low-voltage systems.
Voltage harmonics	For each current harmonic IHk, there is a voltage harmonic UHk of the same order k, where the resulting voltage is the sum of the two waves. The voltage wave is therefore distorted with respect to the standard sinusoidal wave.

Measurements

Contact wear	Each time ComPacT NSX opens, the MicroLogic 5/6 trip unit measures the interrupted current and increments the contact-wear indicator as a function of the interrupted current, according to test results stored in memory.
Current transformer with iron-core toroid	It is made up of a coil wound around an iron frame through which a power busbar runs. The current flowing in the bar, on passing through the sensor, induces a magnetic field that reverses for each half period. This variation in the field in turn creates an induced current in the coil. This current is proportional to the current flowing in the bar. It is sufficient to supply the measurement electronics. The disadvantage of iron-core measurement current transformers (CT) is that they rapidly saturate for currents > 10 In.
Current transformer with Rogowski toroid or air-core CT	It is made up of a coil without an iron frame, through which a power busbar runs. The output voltage at the coil terminals is proportional to the current flowing through the bar. The result is a current transformer (CT) with a voltage output. The advantage is that it never saturates whatever the primary current and thus enables measurement of high currents. The output is however a very low current that is too low to supply the measurement electronics. For MicroLogic, Rogowski CTs measure the current and a second CT, with an iron core, provides the electrical supply.
Demand current, demand power and peak values	Average of the instantaneous current or power values over an adjustable fixed or sliding time interval. The highest value observed over the time interval is the peak value. The time interval runs from the last reset.
Instantaneous current	True rms value of the current measured by the current transformers over a sliding time interval. Available on MicroLogic 5/6 E.
Instantaneous voltage	True rms value of the voltage measured by the voltage sensors over a sliding time interval. Available on MicroLogic 5/6 E.
Maximeters/minimeters	MicroLogic 5 and 6 E can record the minimum and maximum values of electrical parameters over set time periods.
Overvoltage category (OVC - Overvoltage category) IEC 60947-1. Annex H	Standard IEC 60664-1 stipulates that it is up to the user to select a measurement device with a sufficient overvoltage category, depending on the network voltage and the transient overvoltages likely to occur. Four overvoltage categories define the field of use for a device. ■ Cat. I. Devices supplied by a SELV isolating transformer or a battery. ■ Cat. II. Residential distribution, handheld or laboratory tools and devices connected to Standardized 2P + earth electrical outlets (230 V). ■ Cat. III. Industrial distribution, fixed distribution circuits in buildings (main low voltage switchboards, rising mains, elevators, etc.). ■ Cat. IV. Utility substations, overhead lines, certain industrial equipment.
Percent load	Percentage of current flowing through the circuit breaker with respect to its rated current. MicroLogic 6 E-M offers this information and can sum it over the total operating time to provide the load profile for the following ranges, 0 to 49%, 50 to 79%, 80 to 89% and ≥ 90%.
Phase sequence	The order in which the phases are connected (L1, L2, L3 or L1, L3, L2) determines the direction of rotation for three-phase asynchronous motors. MicroLogic 6 E-M trip units provide this information.
Power and energy metering (consumption)	The digital electronics in MicroLogic 5/6 E calculate the instantaneous power levels, apparent (S in kVA), active (P in kW) and (Q in kV), and integrate over a time interval to determine the corresponding energies (kVAh, kWh kvarh). Calculations are for each phase and for the total.

Glossary

Time-stamped histories	MicroLogic trip units store information on events (e.g. alarms and their cause) that are time-stamped to within a millisecond.

Protection

Ground-fault protection G (Ig)	Protection function specific to electronic circuit breakers, symbolized by G (Ground). This protection can calculate high-threshold residual earth-leakage currents (in the order of tens of Amperes) on the basis of phase-current measurements. MicroLogic 5/6 offers this protection function with adjustable pick-up Ig and time delay.
Instantaneous protection I (Ii)	This protection supplements Isd. It provokes instantaneous opening of the device. The pick-up may be adjustable or fixed (built-in). This value is always lower than the contact-repulsion level.
Long-time protection L (Ir)	Protection function where the adjustable Ir pick-up determines a protection curve similar to the thermal-protection curve (inverse-time curve I^2t). The curve is generally determined on the basis of the Ir setting which corresponds to a theoretically infinite tripping time (asymptote) and of the point at 6 Ir at which the tripping time depends on the rating.
Magnetic protection (Ii)	Short-circuit protection provided by magnetic trip units (see this term). The pick-up setting may be fixed or adjustable.
Neutral protection (IN)	The neutral is protected because all circuit-breaker poles are interrupted. The setting may be that used for the phases or specific to the neutral, i.e. reduced neutral (0.5 times the phase current) or OSN (oversized neutral) at 1.6 times the phase current. For OSN protection, the maximum device setting is limited to 0.63 In.
Residual-current earth-leakage protection (IΔn)	Protection provided by VigiPacT add-on, in which the residual-current toroids directly detect low-threshold earth-leakage currents (in the order of tens of mA) caused by insulation faults.
Short-delay protection S (Isd)	Protection function specific to electronic circuit breakers, symbolized by S (Short delay or short time). This protection supplements thermal protection. The reaction time is very short, but has a slight time delay to enable selectivity with the upstream device. The short-delay pick-up Isd is adjustable from approximately 1.5 to 10 Ir.
Short-delay protection with fixed time delay So (Isd)	Short-delay protection, but with a fixed time delay. This function is available on MicroLogic 2. It is symbolized by So. It ensures selectivity with downstream devices.
Thermal protection (Ir)	Overload protection provided by thermal trip units (see this term) using an inverse-time curve (I^2t).

Relays and auxiliary contacts

Auxiliary contact IEC 60947-1	Contact included in an auxiliary circuit and mechanically operated by the switching device.
Break contact IEC 60947-1	Control or auxiliary contact which is open when the main contacts of the mechanical switching device are closed and closed when they are open.
Make contact IEC 60947-1	Control or auxiliary contact which is closed when the main contacts of the mechanical switching device are closed and open when they are open.
Relay (electrical) IEC 60947-1	Device designed to produce sudden, predetermined changes in one or more electrical output circuits when certain conditions are fulfilled in the electrical input circuits controlling the device.
Relay module with static output	Output of a relay made up of a thyristor or triac electronic component. The low interrupting capacity means that a power relay is required. This is the case for the SDx and SDTAM outputs.

Switchgear

Circuit breaker
IEC 60947-2

Mechanical switching device, capable of making, carrying and breaking currents under normal circuit conditions and also making, carrying for a specified time and breaking currents under specified abnormal circuit conditions such as those of short circuit. Circuit breakers are the device of choice for protection against overloads and short-circuits. Circuit breakers may, as is the case for ComPacT NSX, be suitable for isolation.

Circuit-breaker utilization category
IEC 60947-2

The standard defines two utilization categories, A and B, depending on breaker selectivity with upstream breakers under short-circuit conditions.
- Category A. Circuit breakers not specifically designed for selectivity applications.
- Category B. Circuit breakers specifically designed for selectivity, which requires a short time-delay (which may be adjustable) and a rated short-time withstand current in compliance with the standard.

ComPacT NSX100 to 630 circuit breakers are category A, however, by design, they provide selectivity with downstream devices (see the Selectivity, Cascading and Coordination Guide).

Contactor
IEC 60947-1

Mechanical switching device having only one position of rest, operated otherwise than by hand, capable of making, carrying and breaking currents under normal circuit conditions including operating overload conditions. A contactor is provided for frequent opening and closing of circuits under load or slight overload conditions. It must be combined and coordinated with a protective device against overloads and short-circuits, such as a circuit breaker.

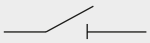
Contactor utilization categories
IEC 60947-4-1

The standard defines four utilization categories, AC1, AC2, AC3 and AC4 depending on the load and the control functions provided by the contactor. The class depends on the current, voltage and power factor, as well as contactor withstand capacity in terms of frequency of operation and endurance.

Current-limiting circuit breaker
IEC 60947-2

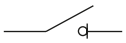
A circuit-breaker with a break-time short enough to prevent the short-circuit current reaching its otherwise attainable peak value.

Disconnector
IEC 60947-3



Mechanical switching device which, in the open position, complies with the requirements specified for the isolating function. A disconnector serves to isolate upstream and downstream circuits. It is used to open or close circuits under no-load conditions or with a negligible current level. It can carry the rated circuit current and, for a specified time, the short-circuit current.

Switch-disconnector
IEC 60947-3



Switch which, in the open position, satisfies the isolating requirements specified for a disconnector. A switch-disconnector serves for switching and isolation. The switch function breaks the circuit under load conditions and the disconnection function isolates the circuit. Protection is not provided. It may be capable of making short-circuit currents if it has the necessary making capacity, but it cannot break short-circuit currents. ComPacT NSX100 to 630 NA switch-disconnectors have a making capacity.

Switch-disconnector utilization category
IEC 60947-3

The standard defines six utilization categories, AC-21A or B, AC-22 A or B, AC23 A or B. They depend on the rated operational current and the mechanical durability (A for frequent operation or B for infrequent operation). ComPacT NSX NA switch-disconnectors comply with utilization categories AC22A or AC23A.

Three-phase asynchronous motors and their protection

Locked-rotor protection (Ijam)

This function steps in when the motor shaft cannot or can no longer drive the load. The result is a high overcurrent.

Long-start protection (Ilong)

An overly long start means the current drawn remains too high or too low for too long, with respect to the starting current. In all cases, the load cannot be driven and the start must be interrupted. The resulting temperature rise must be taken into account before restarting.

Phase-unbalance or phase- loss protection (Iunbal)

This protection function steps in if the current values and/or the unbalance in the three phases supplying the motor exceeds tolerances. Currents should be equal and displacement should be one third of a period. Phase loss is a special case of phase unbalance.

Glossary

Starting current	Start-up of a three-phase, asynchronous motor is characterized by: ■ A high inrush current, approximately 14 In for 10 to 15 ms ■ A starting current, approximately 7.2 In for 5 to 30 seconds ■ Return to the rated current after the starting time.
Starting time	Time after which the motor ceases to draw the starting current and falls back to the operating current Ir (≤ In).
Thermal image of the rotor and stator	The thermal image models the thermal behaviour of a motor rotor and stator, taking into account temperature rise caused by overloads or successive starts, and the cooling constants. For each motor power rating, the algorithm takes into account a theoretical amount of iron and copper which modifies the cooling constants.
Thermal protection	Protection against overcurrents following an inverse time curve I^2t = constant, which defines the maximum permissible temperature rise for the motor. Tripping occurs after a time delay that decreases with increasing current.
Trip class IEC 60947-4-1	The trip class determines the trip curve of the thermal protection device for a motor feeder. The standard defines trip classes 5, 10, 20 and 30. These classes are the maximum durations, in seconds, for motor starting with a starting current of 7.2 Ir, where Ir is the thermal setting indicated on the motor rating plate.
Under-load protection (lund)	This function steps in when the driven load is too low. It detects a set minimum phase current which signals incorrect operation of the driven machine. In the example of a pump, under-load protection detects when the pump is no longer primed.

Trip units

Electronic trip unit (MicroLogic)	Trip unit that continuously measures the current flowing through each phase and the neutral if it exists. For MicroLogic, the measurements are provided by built-in current sensors linked to an analog-digital converter with a high sampling frequency. The measurement values are continuously compared by the ASIC to the protection settings. If a setting is overrun, a Mitop release trips the circuit-breaker operating mechanism. This type of trip unit offers much better pick-up and delay setting accuracy than thermal-magnetic trip units. It also provides a wider range of protection functions.
Magnetic release	Release actuated by a coil or a lever. A major increase in the current (e.g. a short-circuit) produces in the coil or the lever a change in the magnetic field that moves a core. This trips the circuit breaker operating mechanism. Action is instantaneous. The pick-up setting may be adjustable.
Reflex tripping	ComPacT NSX circuit breakers have a patented reflex-tripping system based on the energy of the arc and that is independent of the other protection functions. It operates extremely fast, before the other protection functions. It is an additional safety function that operates before the others in the event of a very high short-circuit.
Release IEC 60947-1	Device, mechanically connected to a mechanical switching device (e.g. a circuit breaker), which releases the holding means and permits the opening or the closing of the switching device. For circuit breakers, releases are often integrated in a trip unit.
Shunt release (MX)	This type of release operates when supplied with current. The MX release provokes circuit-breaker opening when it receives a pulse-type or maintained command.
Thermal-magnetic trip unit	Trip unit combining thermal protection for overloads and magnetic protection.
Thermal release	Release in which a bimetal strip is heated by the Joule effect. Above a temperature-rise threshold that is a function of the current and its duration (I^2t curve = constant, which is representative of temperature rise in cables), the bimetal strip bends and releases the circuit-breaker opening mechanism. The pick-up setting may be adjustable.
Undervoltage release (MN)	This type of release operates when the supply voltage drops below the set minimum.

Additional Characteristics

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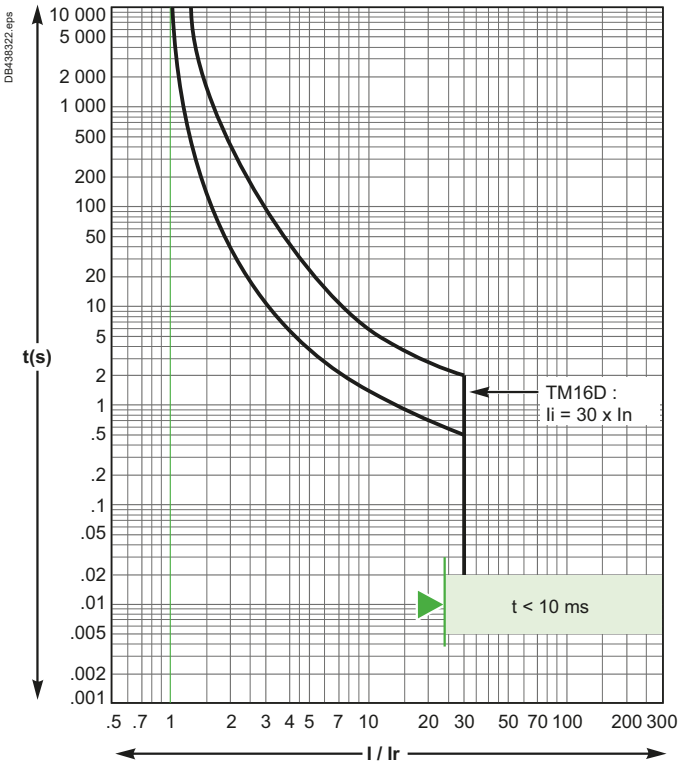
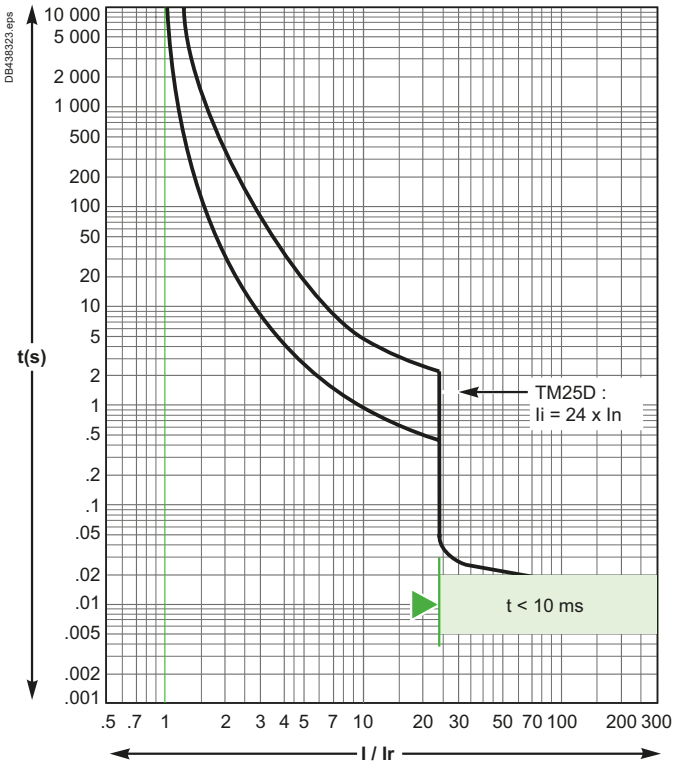
ComPacT NSXm up to 160 A

TMD Magnetic Trip Units, Tripping Curves
Protection of Distribution Systems

TM16D

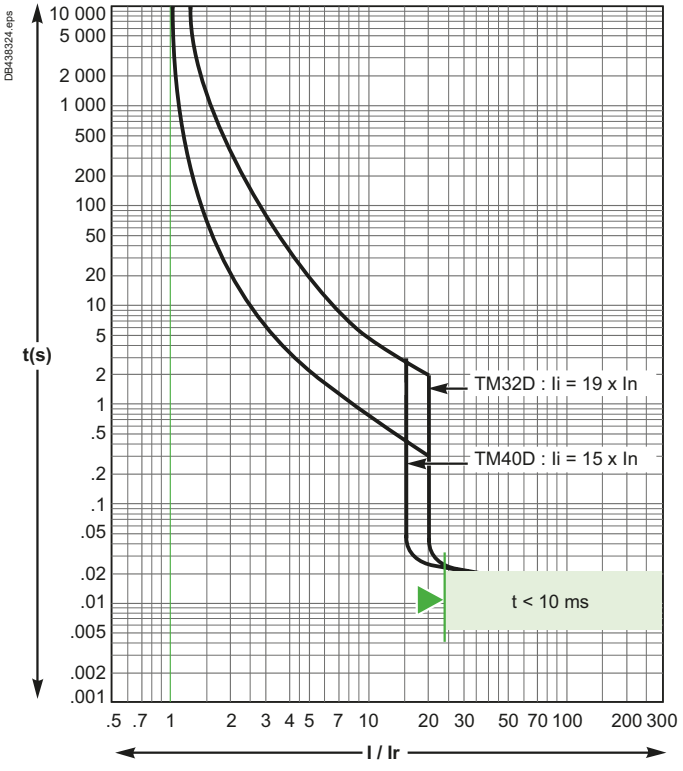


TM25D

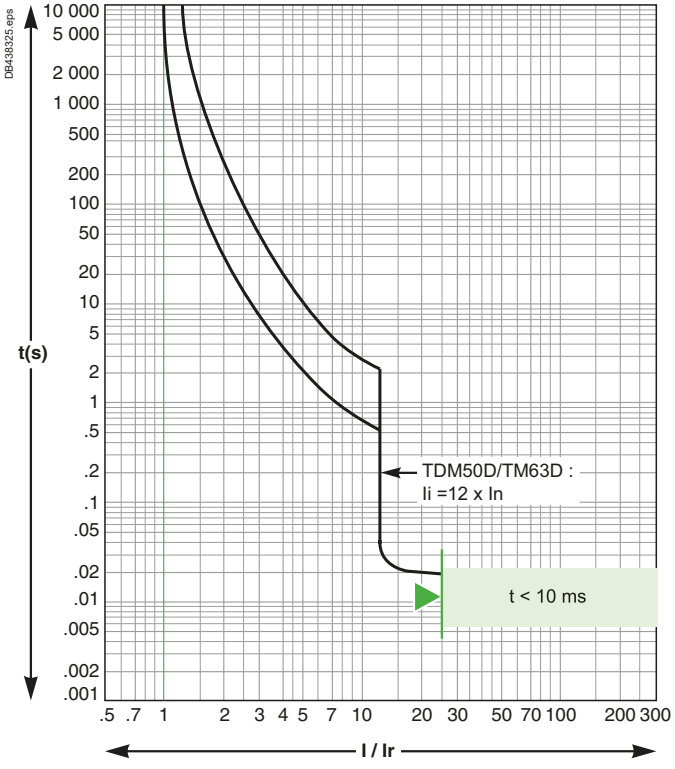


Reflex tripping.

TM32D/TM40D



TM50D/TM63D



Reflex tripping.

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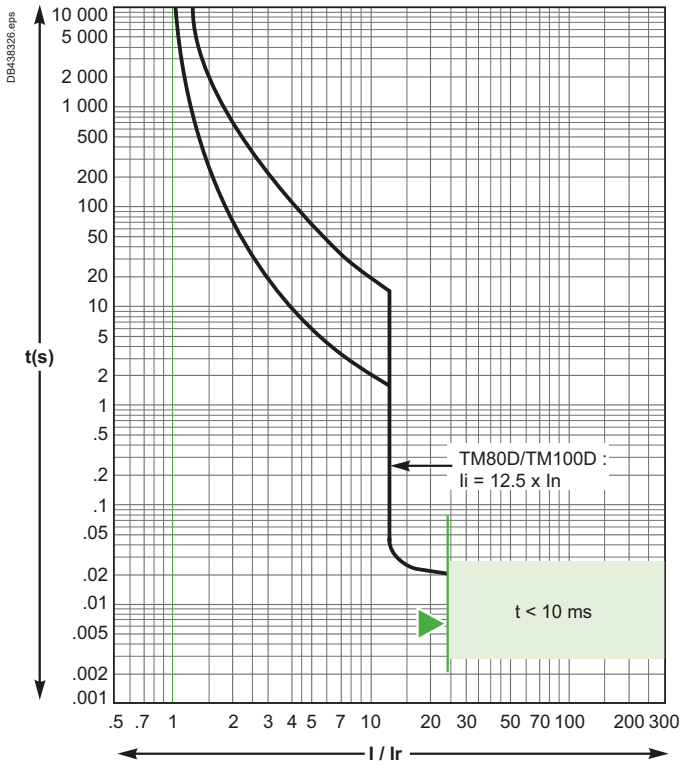
ComPacT NSXm up to 160 A

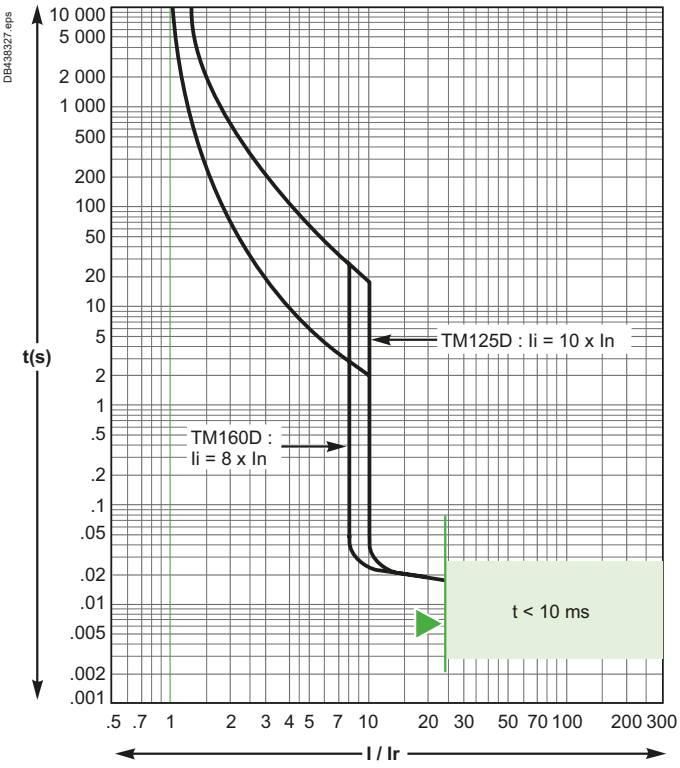
TMD Magnetic Trip Units, Tripping Curves

Protection of Distribution Systems

TM80D/TM100D



TM125D/TM160D



Reflex tripping.

For all TMD curves:
Values are given for 40 °C ambiant, Ir = 1xIn, 3 poles loaded, cold start.
For Ir = k x In, read the time corresponding to 1/k times given current.
For 1 pole tripping, read the time corresponding to 0.85 times given current.
For hot start (0.9 x Ir), divide max. time by 2, min. time by 4.

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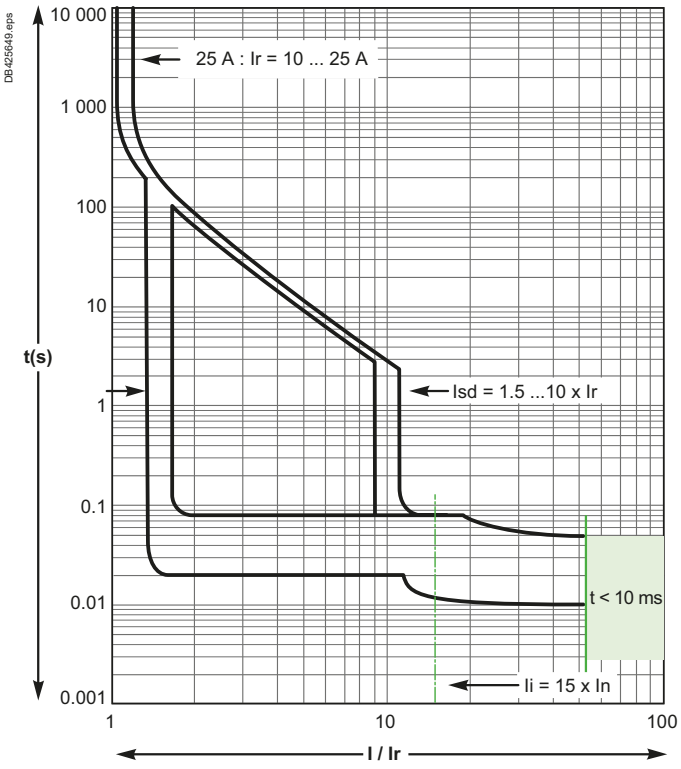
ComPacT NSXm up to 160 A

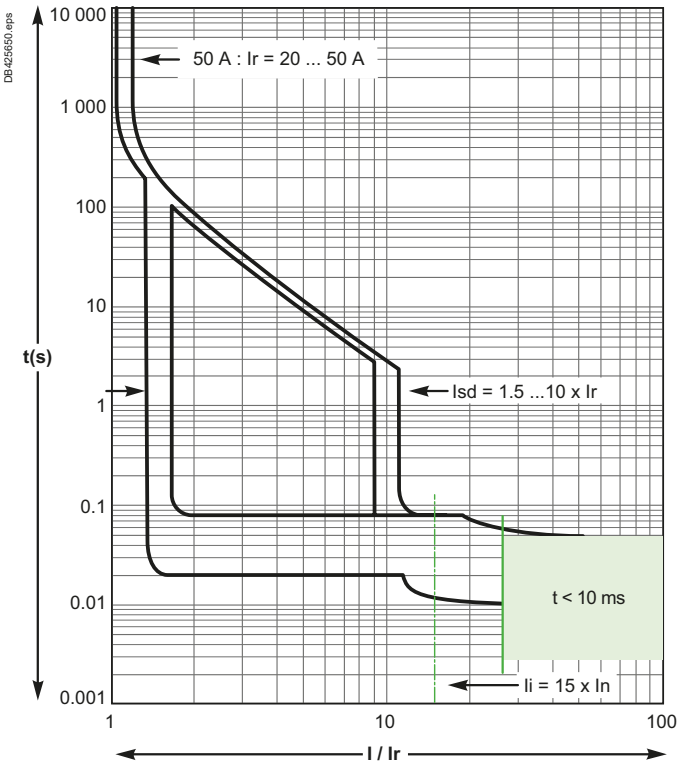
MicroLogic Vigi 4.1, Tripping Curves

Protection of Distribution Systems

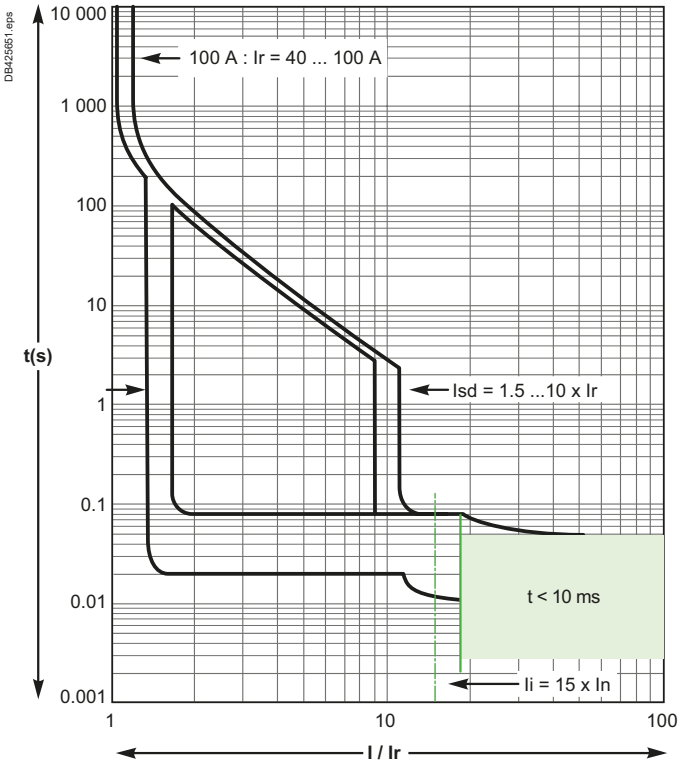
25 A



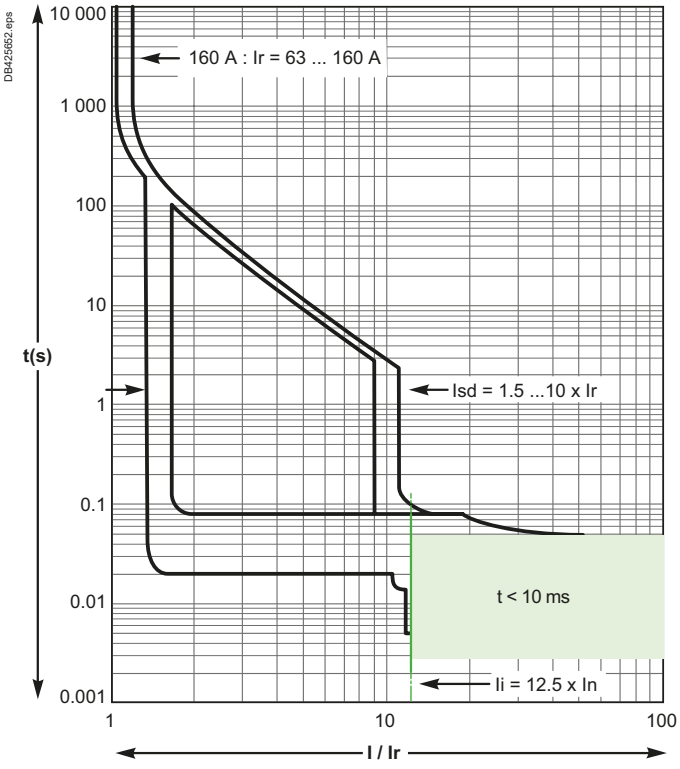
50 A



100 A



160 A



Reflex tripping.

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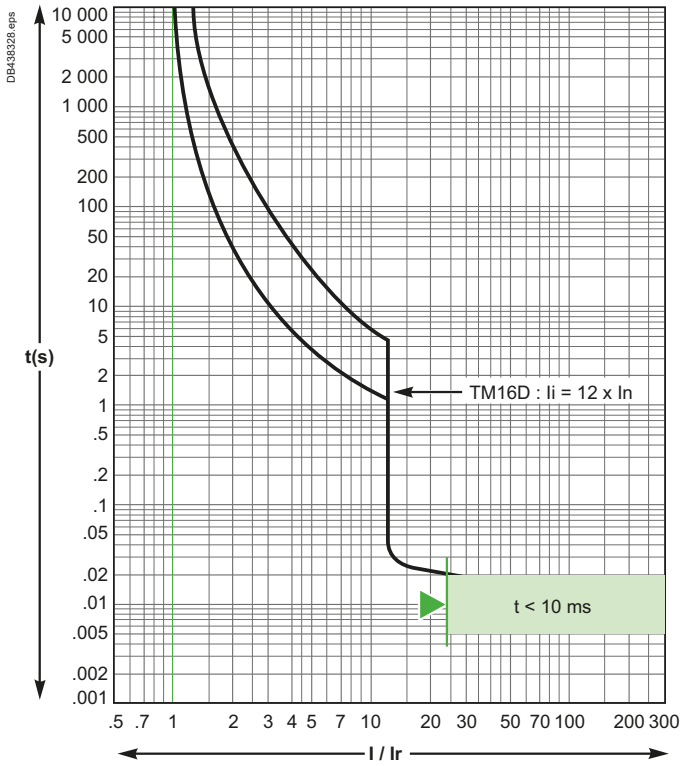
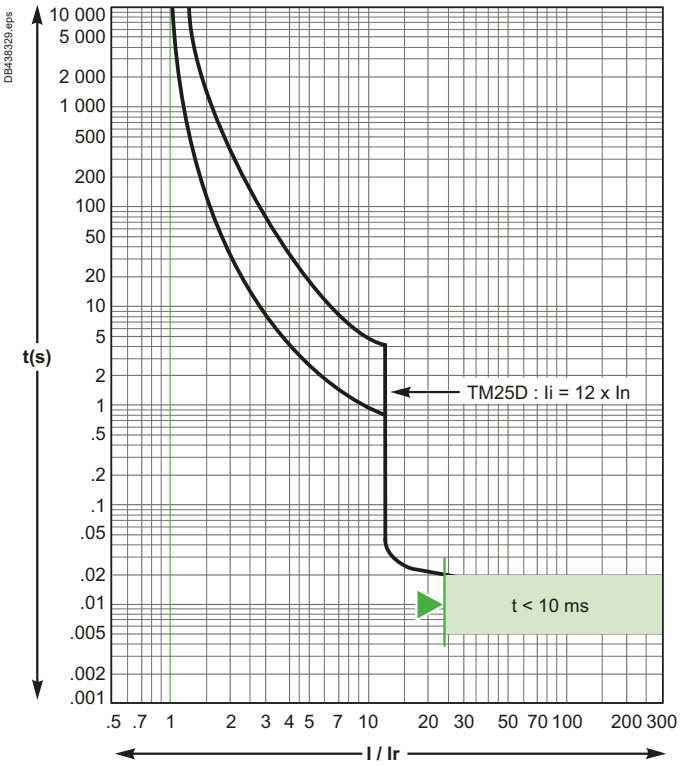
TM16D

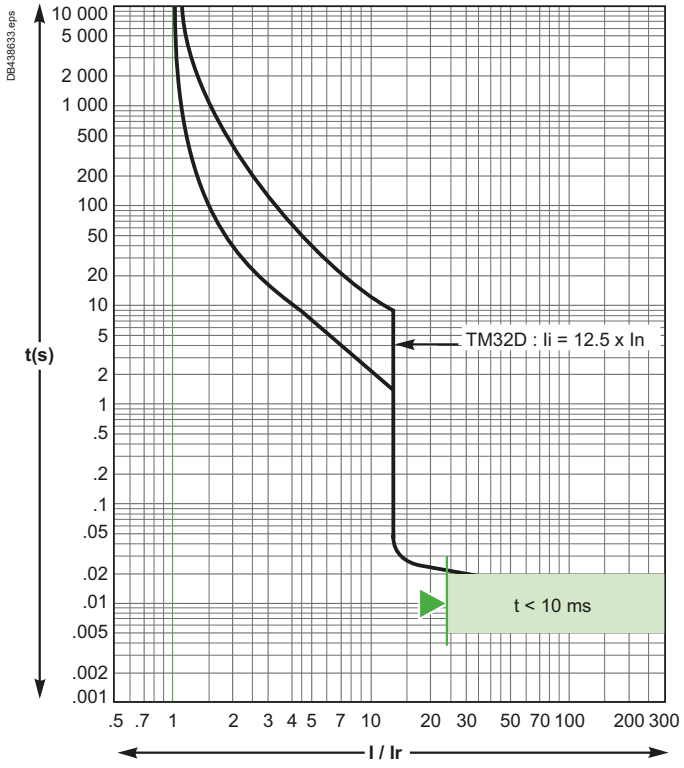


TM25D

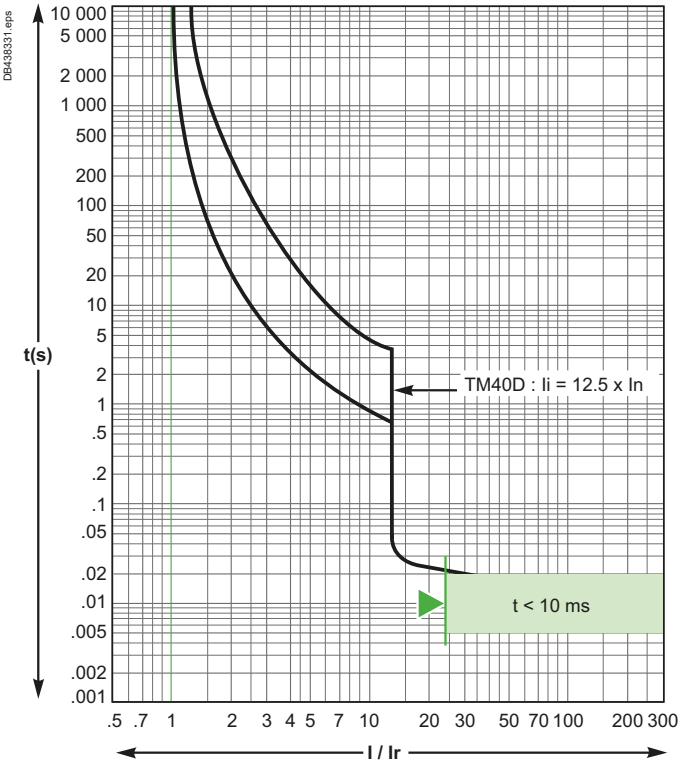


Reflex tripping.

TM30D/TM32D



TM40D



Reflex tripping.

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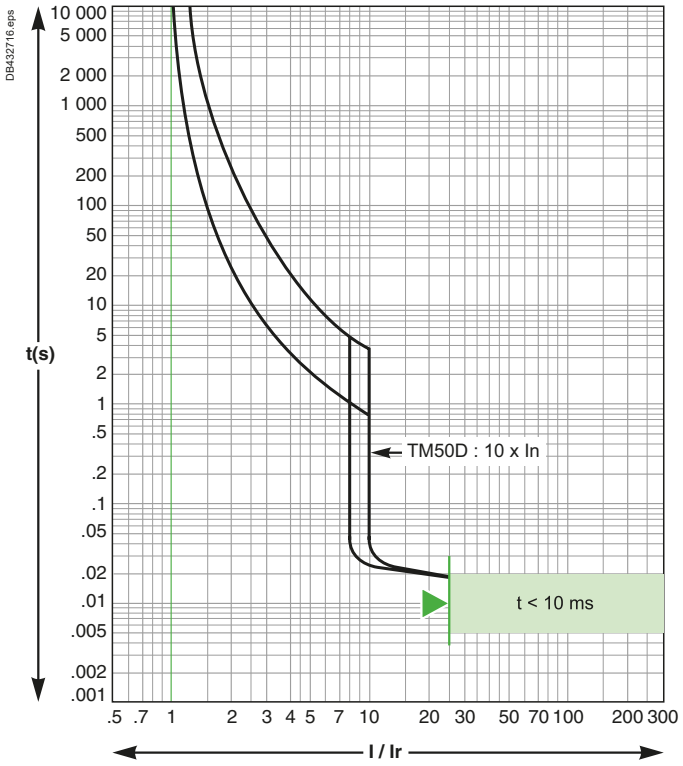
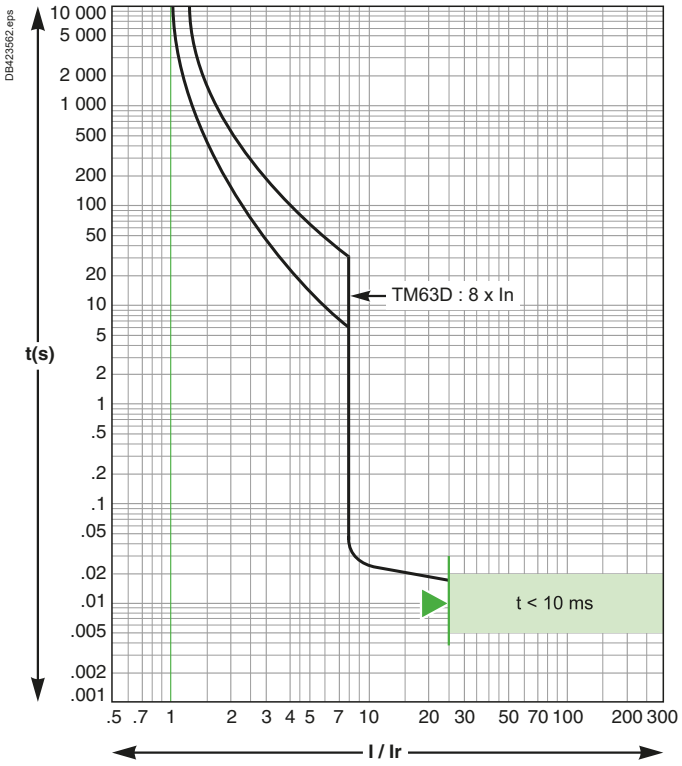
ComPacT NSX100 to 250

TMD Magnetic Trip Units, Tripping Curves
Protection of Distribution Systems

TM50D

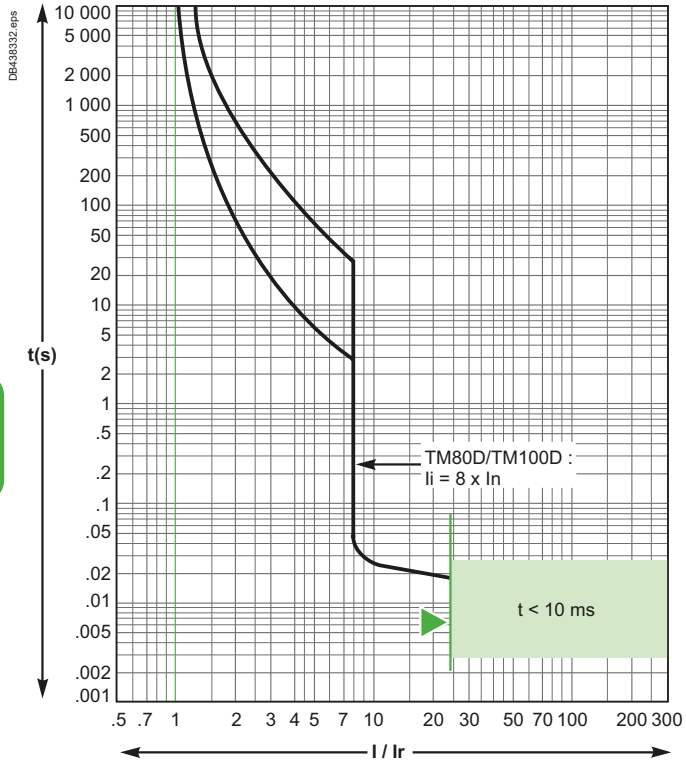


TM63D

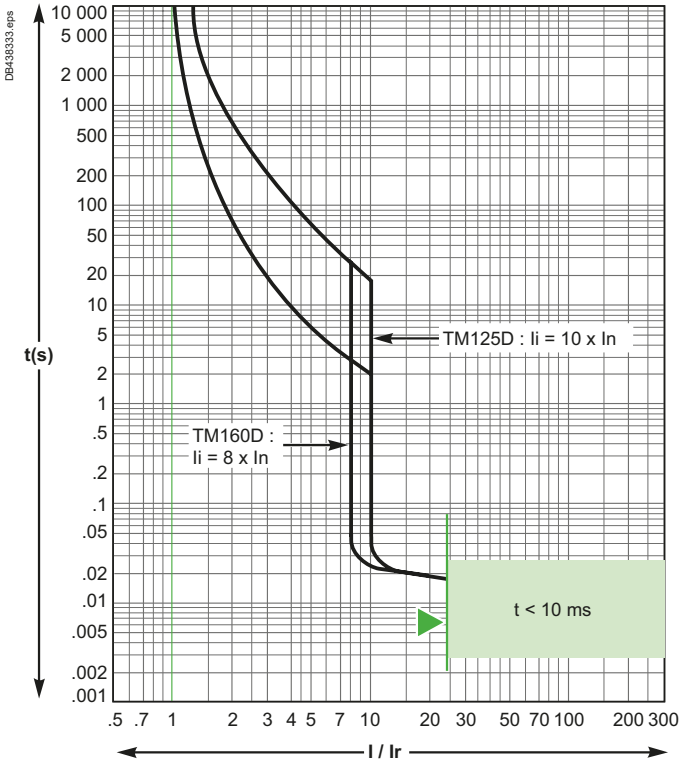


Reflex tripping.

TM80D/TM100D



TM125D/TM160D



Reflex tripping.

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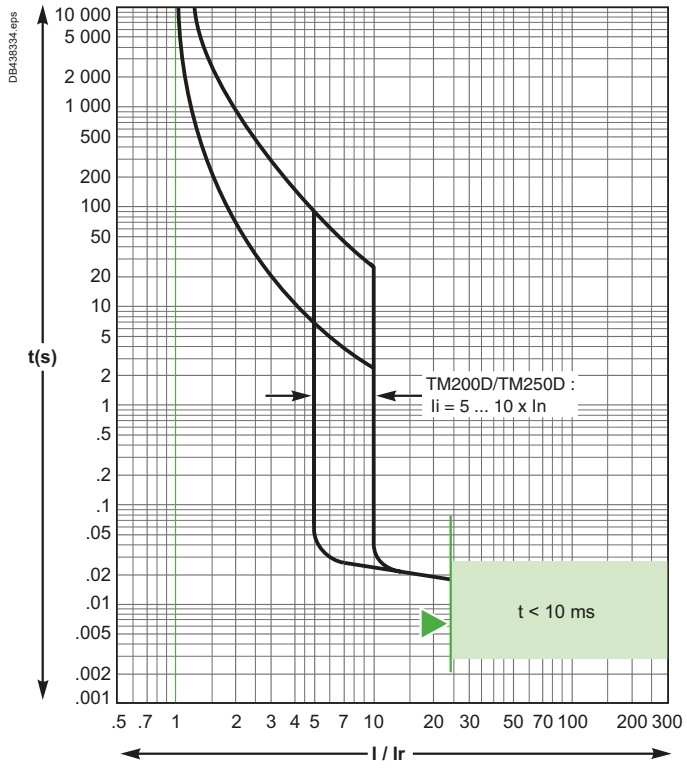
TM200D/TM250D



Reflex tripping.

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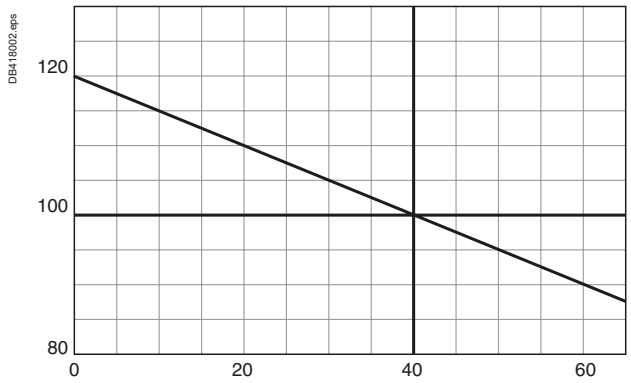
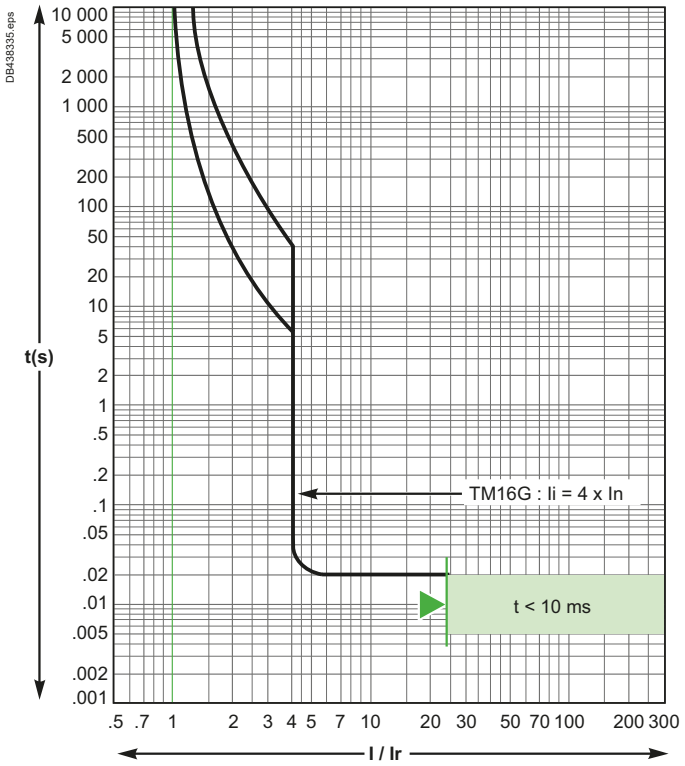


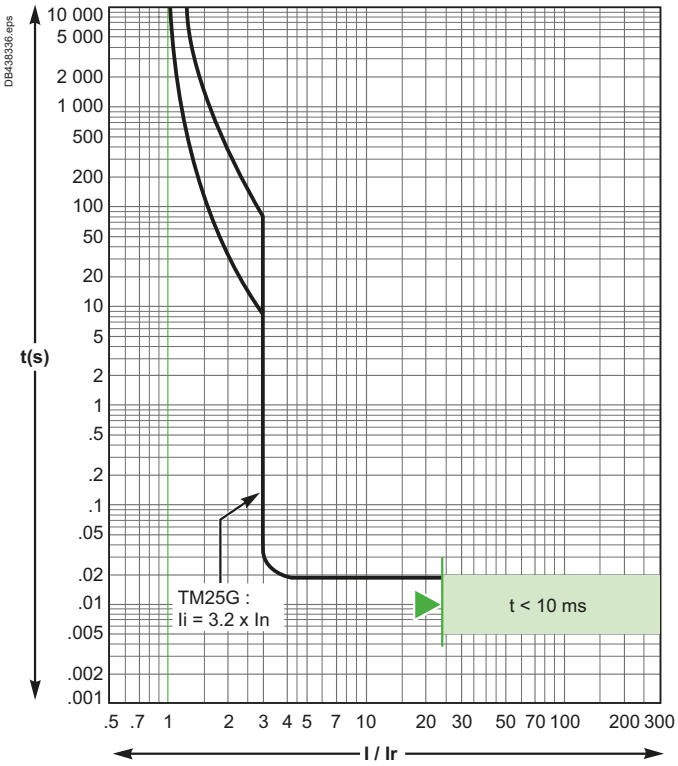
ComPacT NSX100 to 250

TMG Magnetic Trip Units, Tripping Curves
Protection of Distribution Systems

TM16G

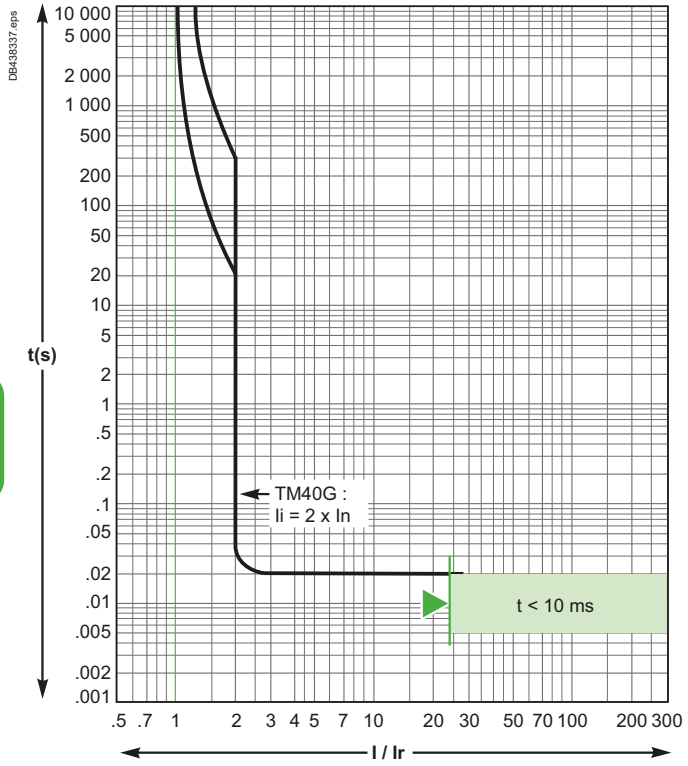


TM25G

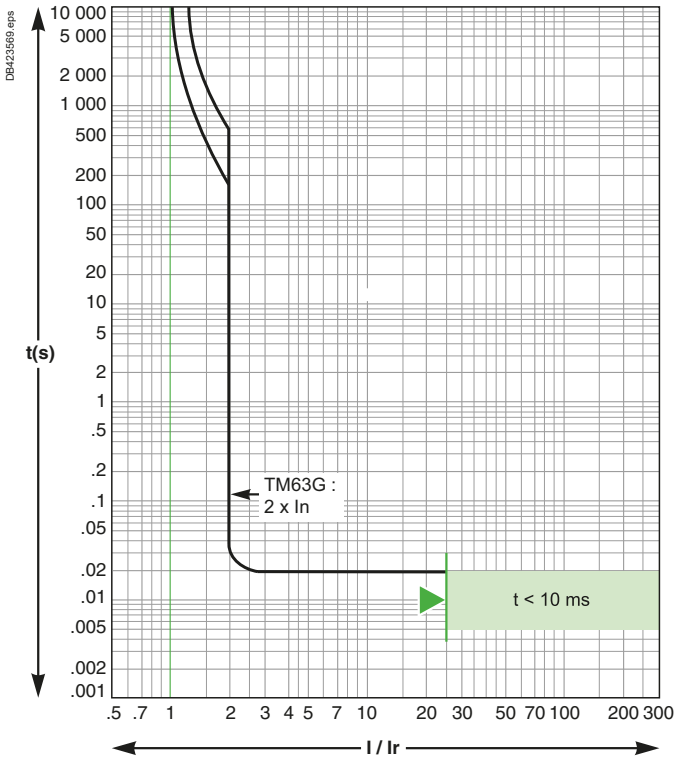


Reflex tripping.

TM40G



TM63G



Reflex tripping.

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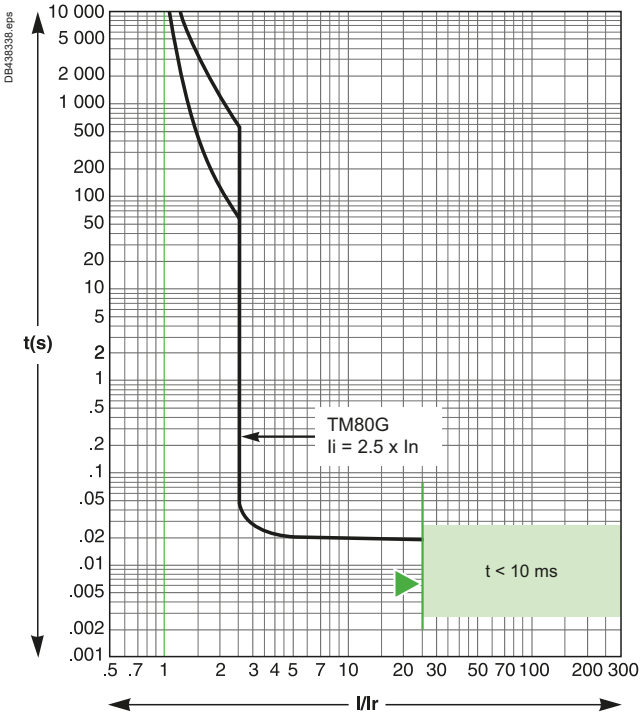
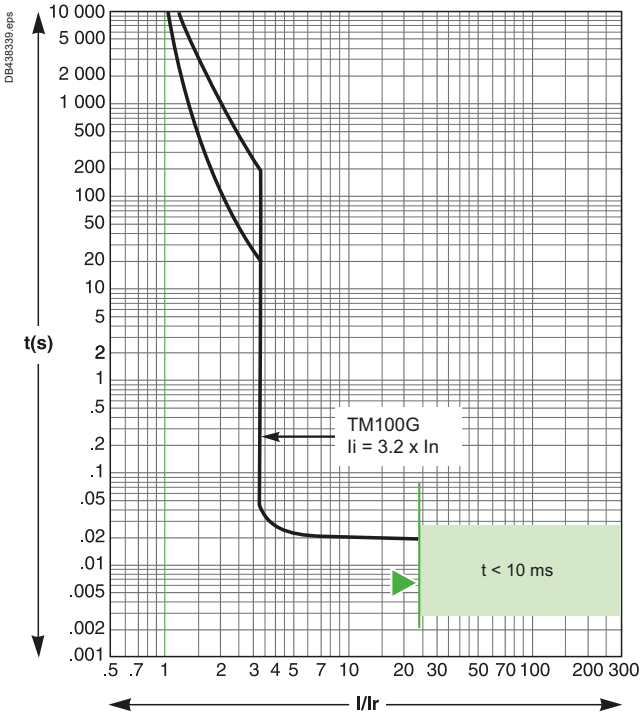
TM80G

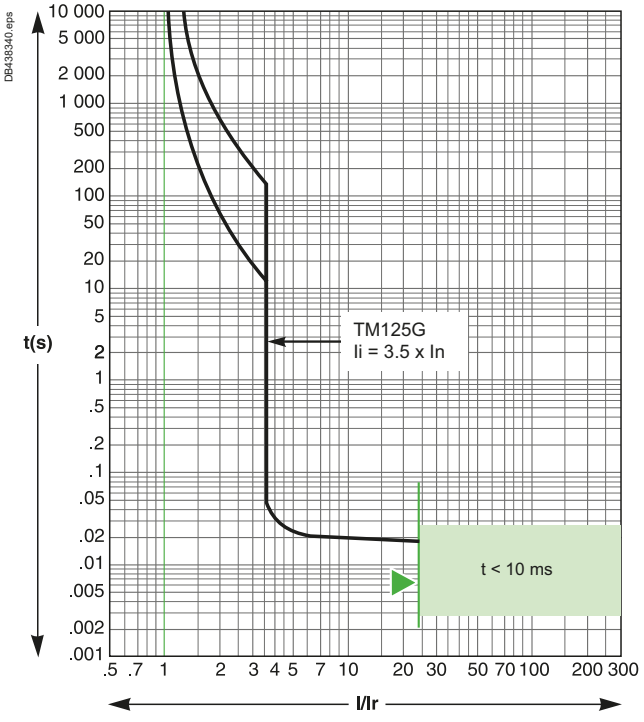


TM100G

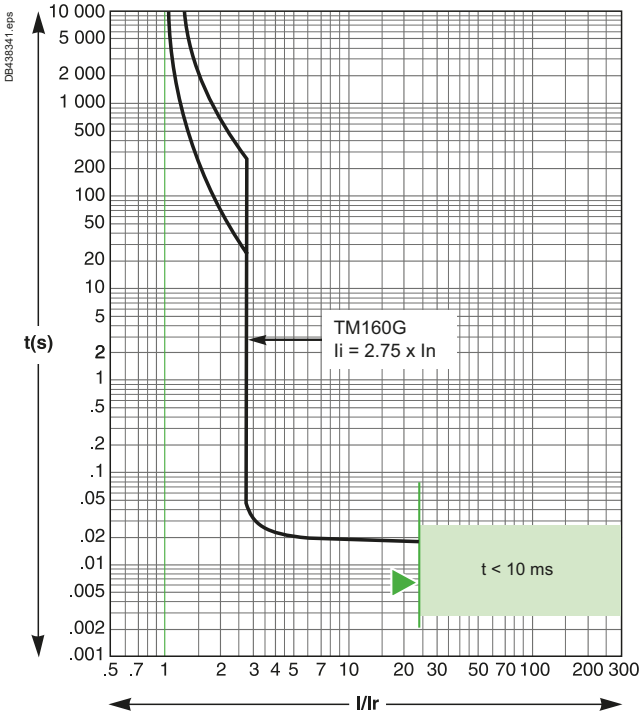


Reflex tripping.

TM125G



TM160G



Reflex tripping.

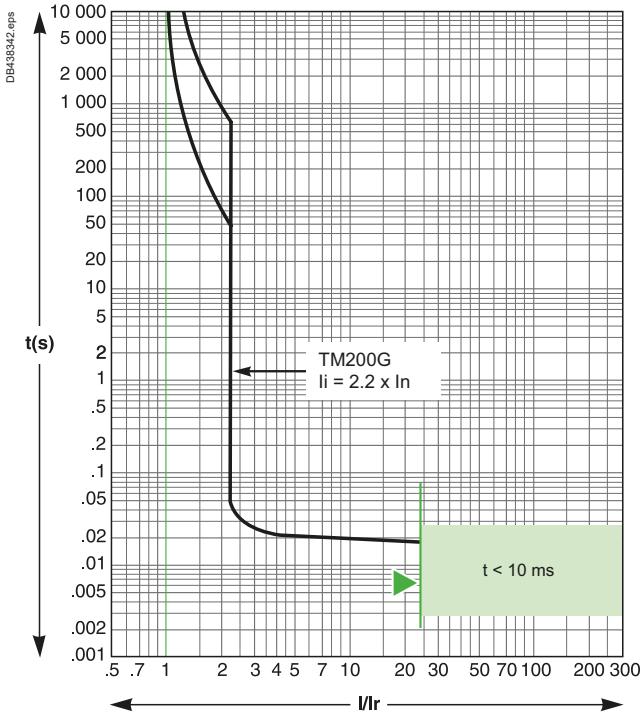
H

ComPacT NSX100 to 250

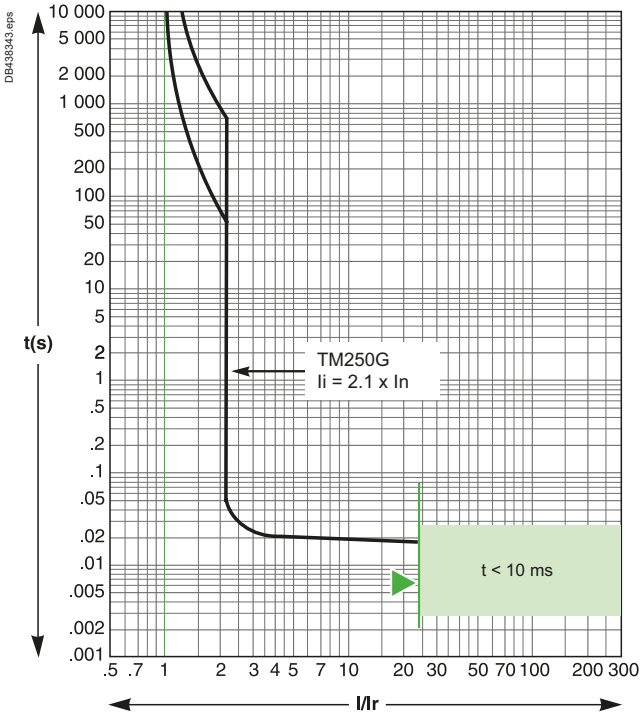
TMG Magnetic Trip Units, Tripping Curves

Protection of Distribution Systems

TM200G



TM250G



Reflex tripping.

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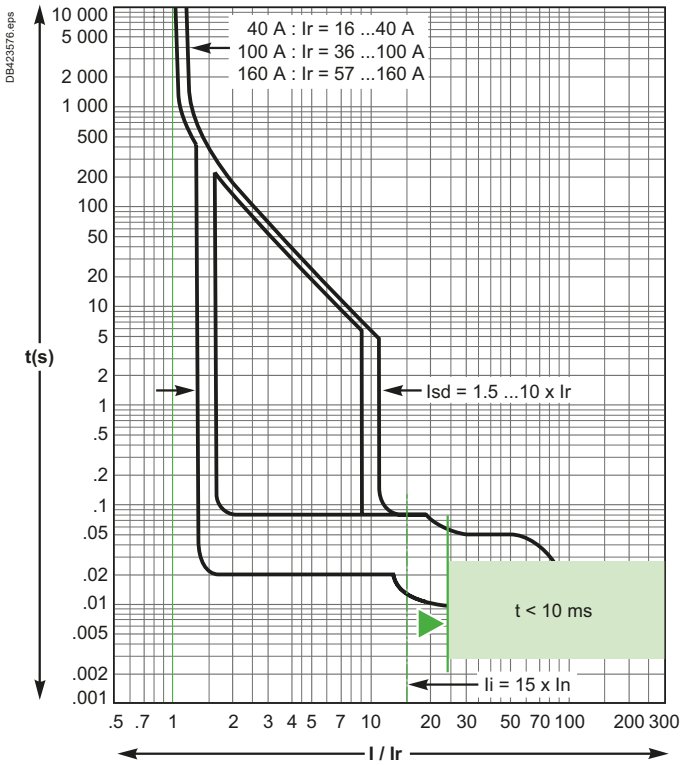
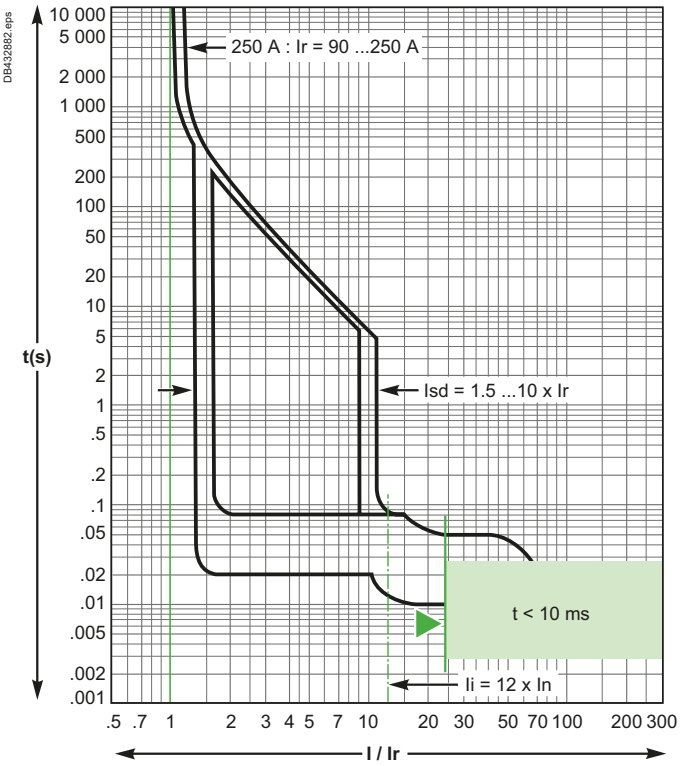
MicroLogic 2.2, 4.2 and 2.2 G Electronic Trip Units, Tripping Curves, Protection of Distribution Systems

MicroLogic 2.2, 4.2 - 40... 160 A

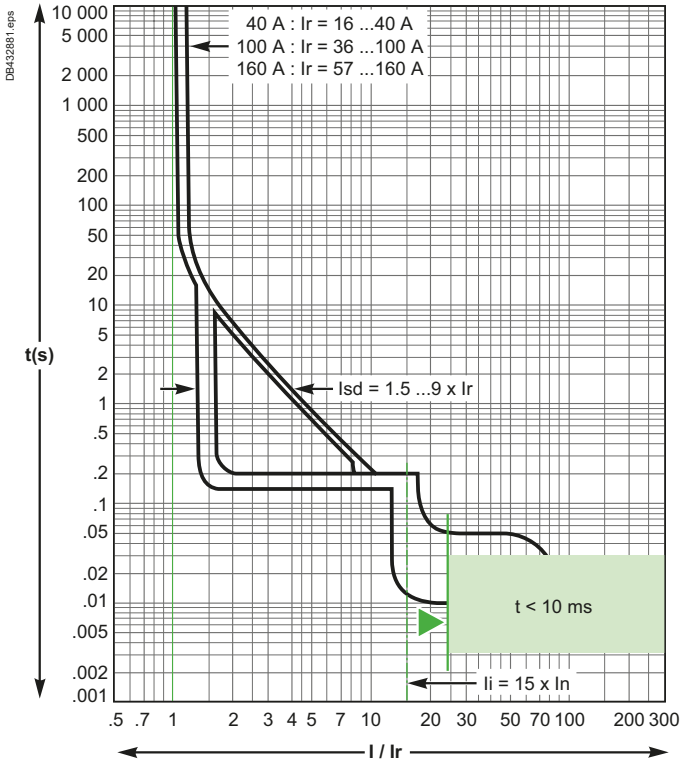


MicroLogic 2.2, 4.2 - 250 A

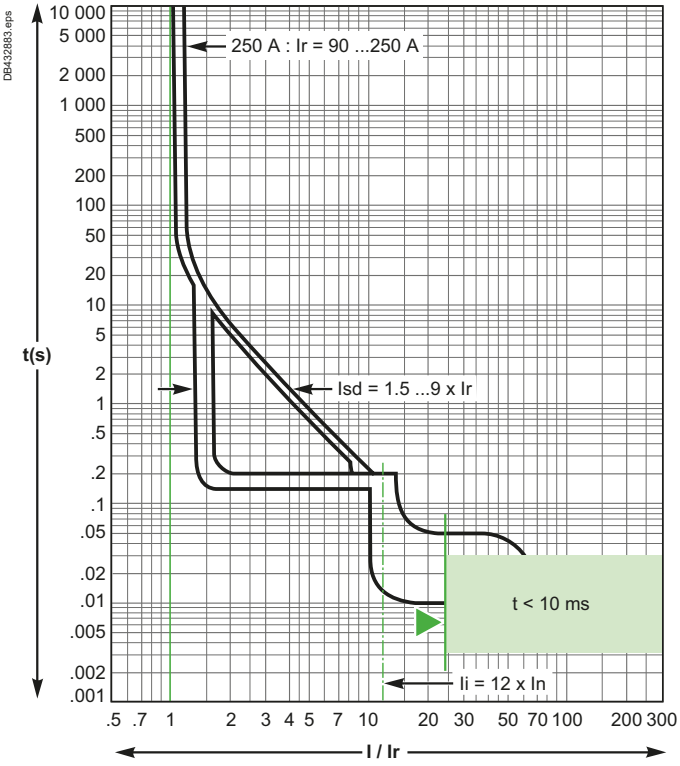


Reflex tripping.

MicroLogic 2.2 G - 40... 160 A



MicroLogic 2.2 G - 250 A



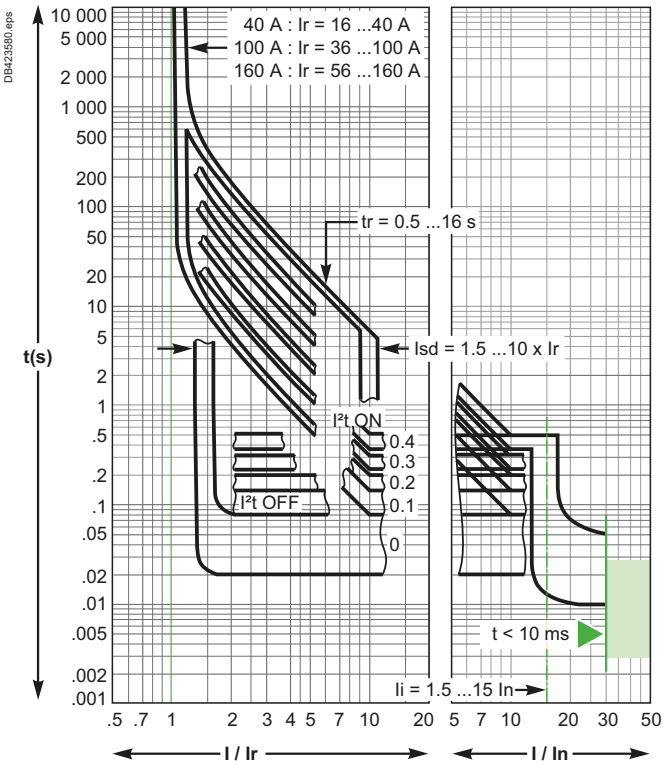
Reflex tripping.

H

ComPacT NSX100 to 250

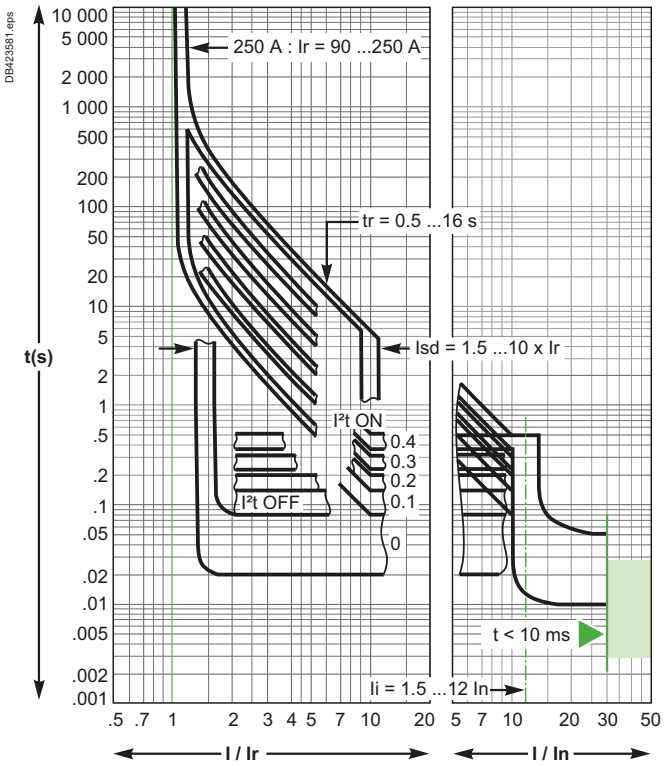
MicroLogic 5.2 and 6.2 E and 7.2 E Electronic Trip Units, Tripping Curves - Protection of Distribution Systems

MicroLogic 5.2 E, 6.2 E and 7.2 E - 40... 160 A

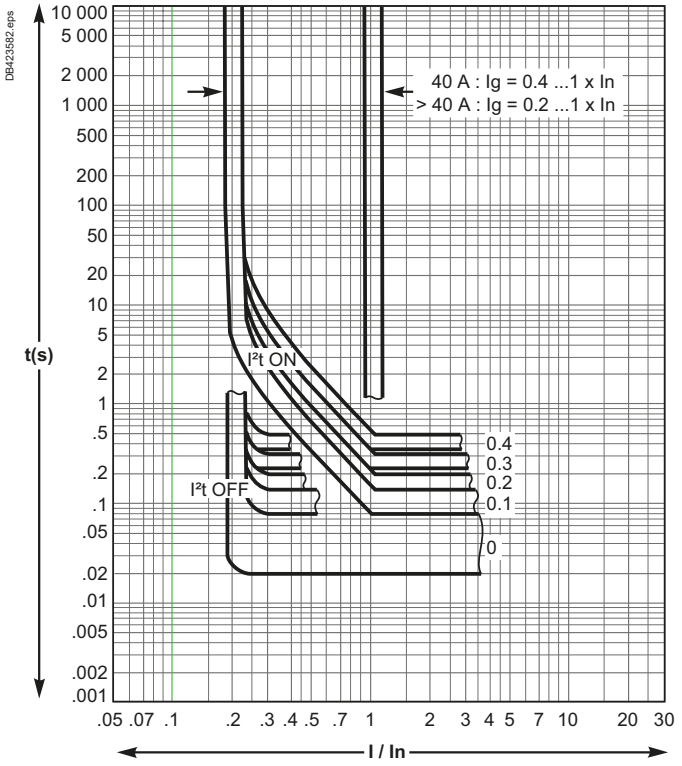


Reflex tripping.

MicroLogic 5.2 E, 6.2 E and 7.2 E - 250 A



MicroLogic 6.2 E (Ground-Fault Protection)

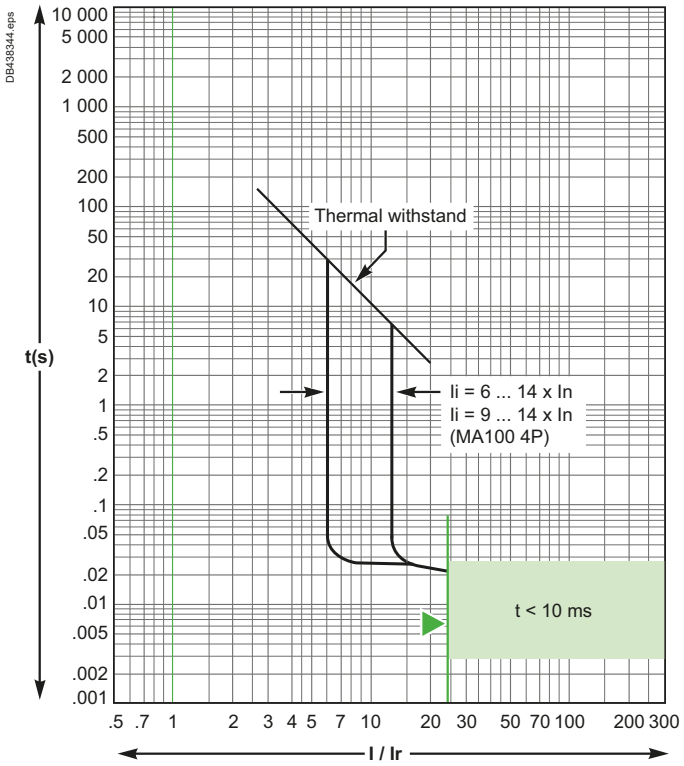


Reflex tripping.

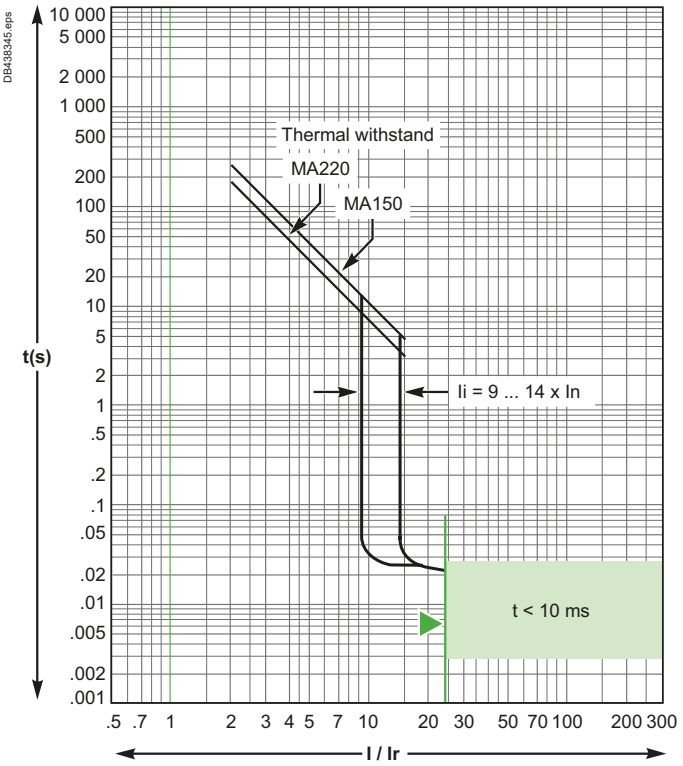
ComPacT NSX100 to 250

MA Magnetic Trip Units, MicroLogic 2.2 M Electronic Trip Units, Tripping Curves - Motor Protection

MA2.5... MA100

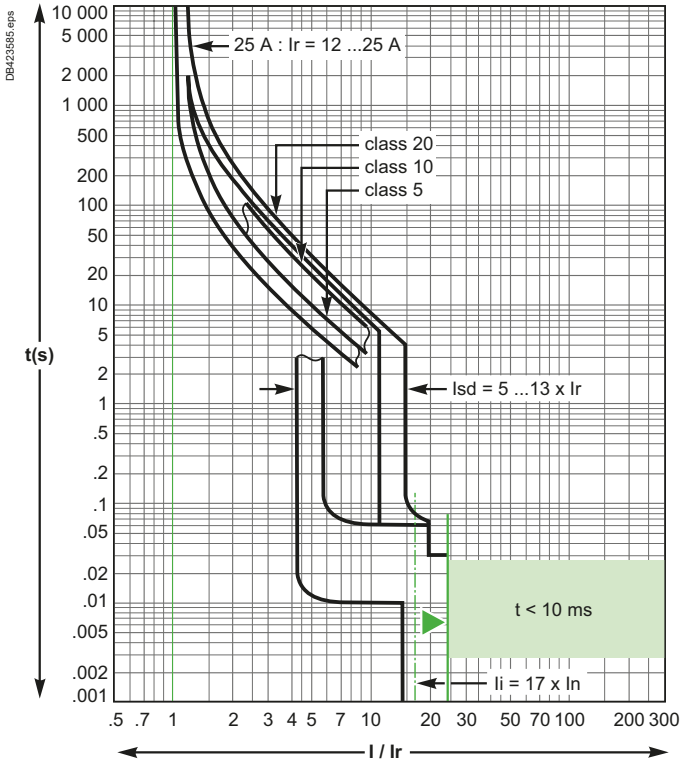


MA150 and MA220

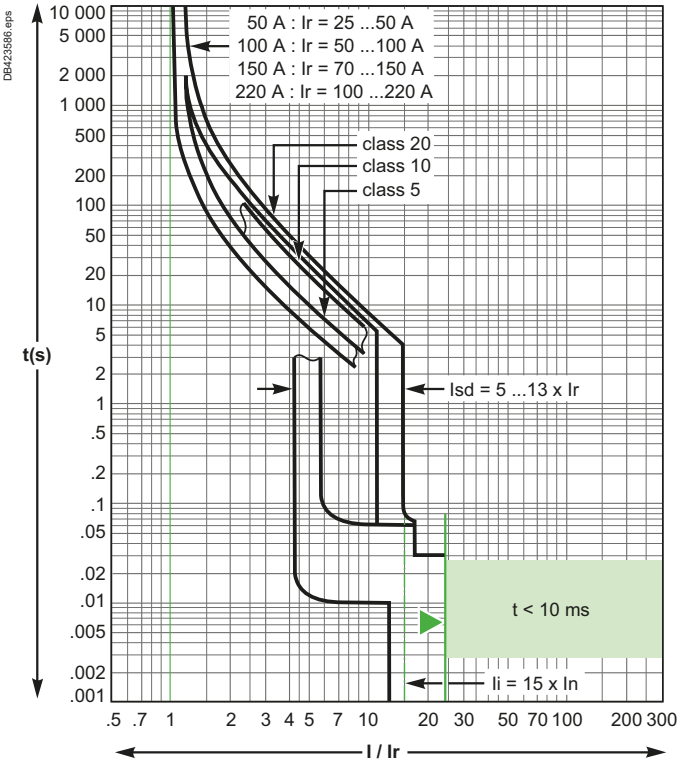


Reflex tripping.

MicroLogic 2.2 M - 25 A



MicroLogic 2.2 M - 50... 220 A

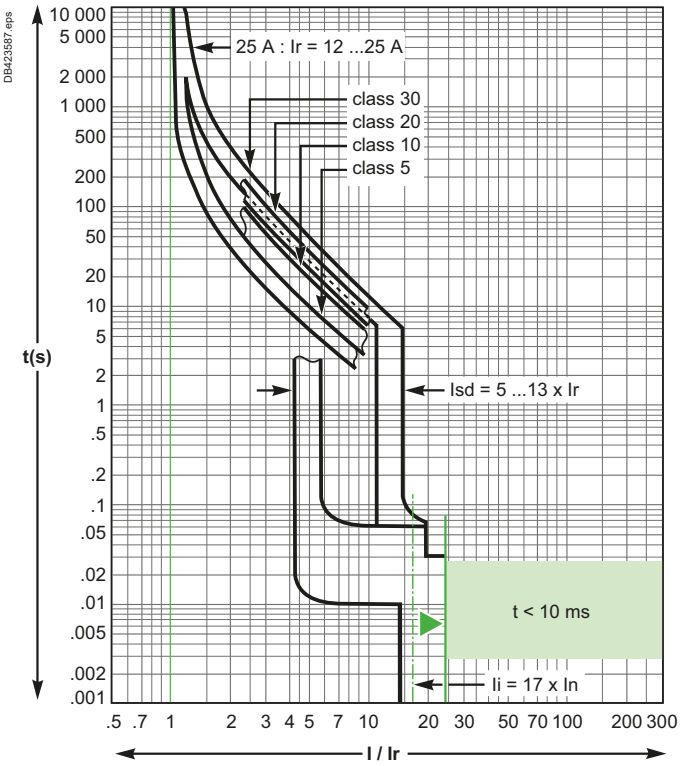


Reflex tripping.

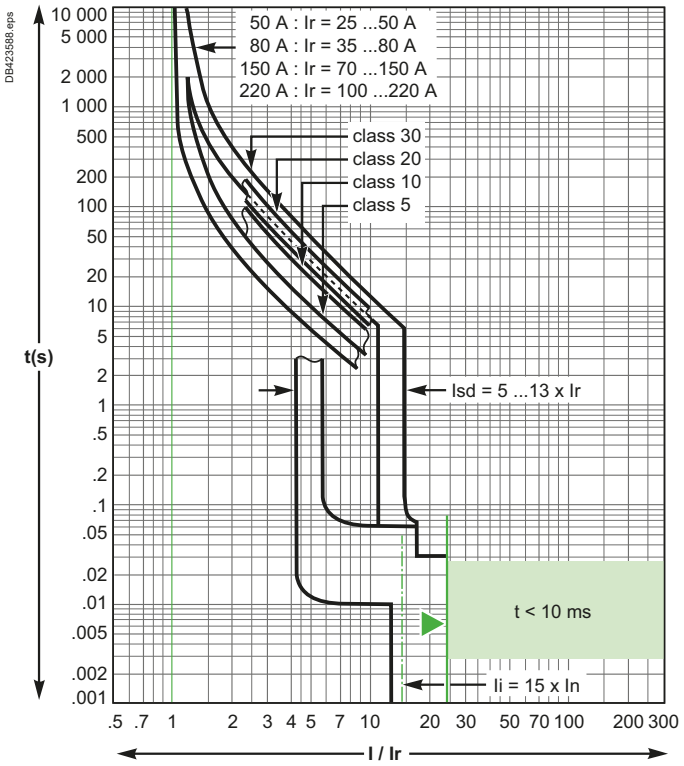
ComPacT NSX100 to 250

MicroLogic 6.2 E-M Electronic Trip Units, Tripping Curves
Motor Protection

MicroLogic 6.2 E-M - 25 A

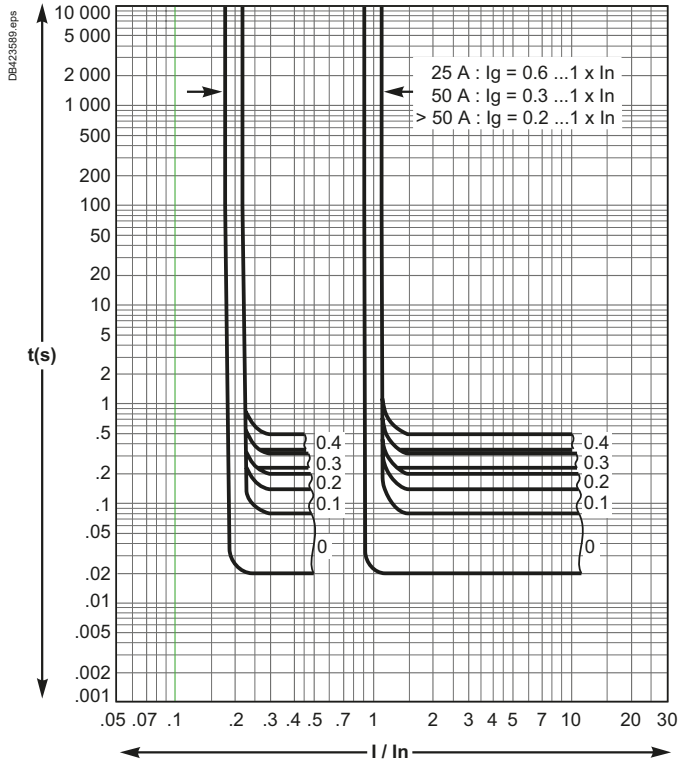


MicroLogic 6.2 E-M - 50... 220 A



Reflex tripping.

MicroLogic 6.2 E-M (Ground-Fault Protection)



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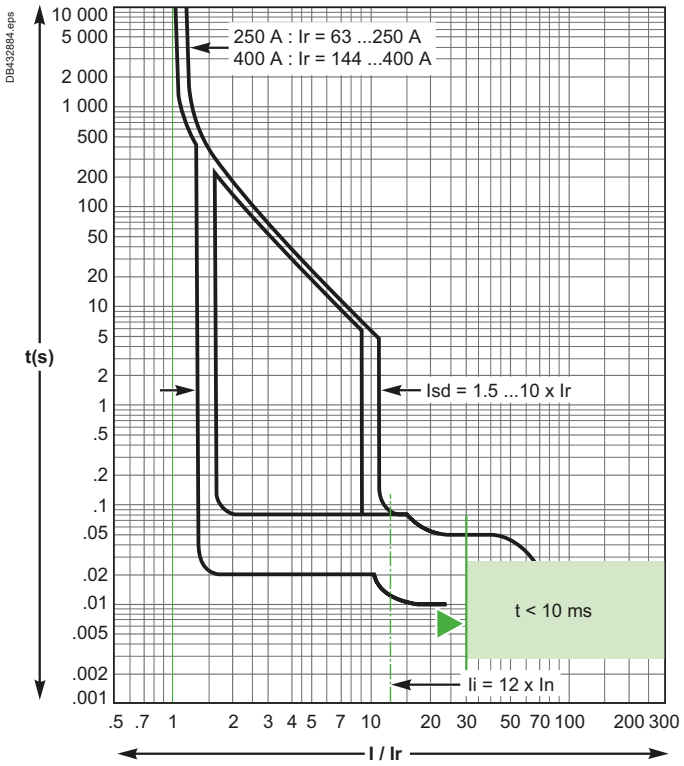
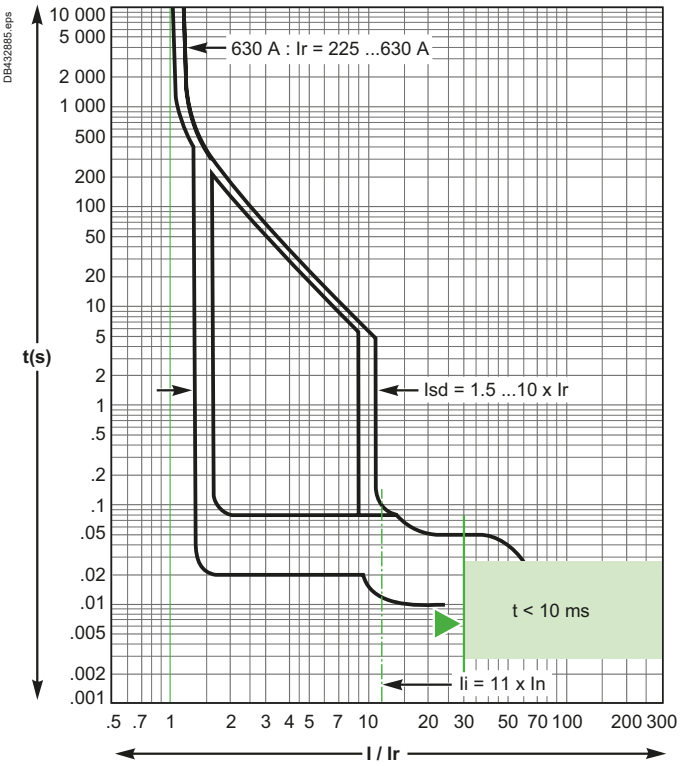
ComPacT NSX400 to 630

MicroLogic 2.3, 4.3, 5.3 and 6.3 E and 7.3 E Electronic Trip Units, Tripping Curves - Protection of Distribution Systems

MicroLogic 2.3, 4.3 - 250... 400 A

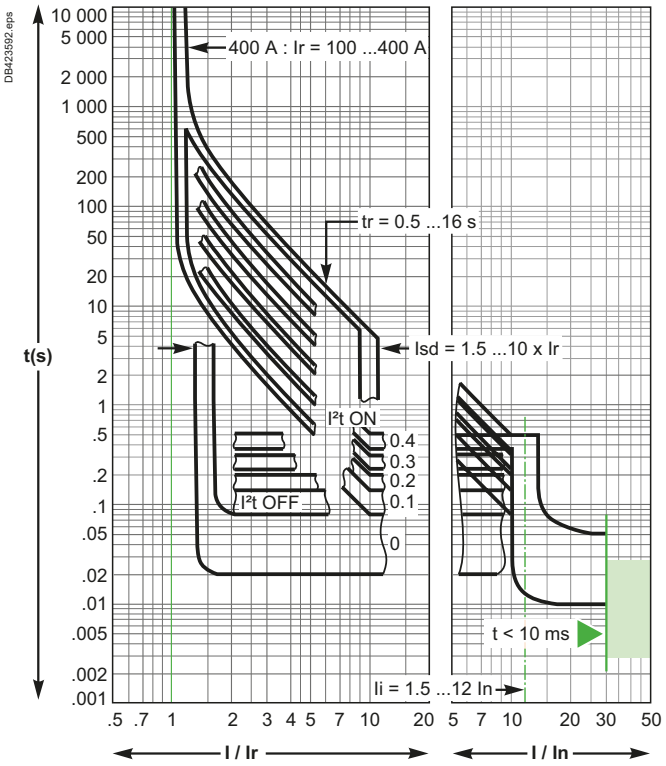


MicroLogic 2.3 - 630 A, 4.3 up to 570 A

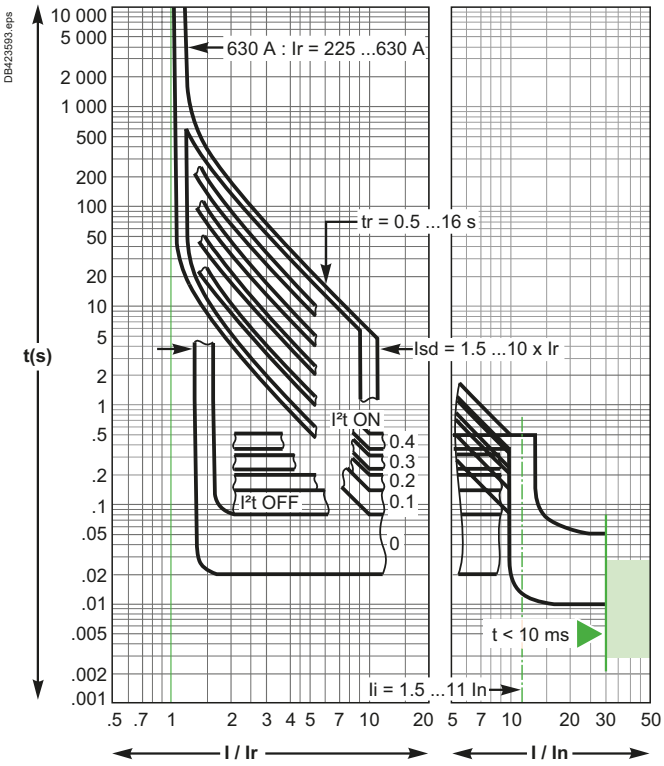


Reflex tripping.

MicroLogic 5.3 and 6.3 E and 7.3 E - 400 A



MicroLogic 5.3 and 6.3 E - 630 A, and 7.3 E up to 570 A



Reflex tripping.

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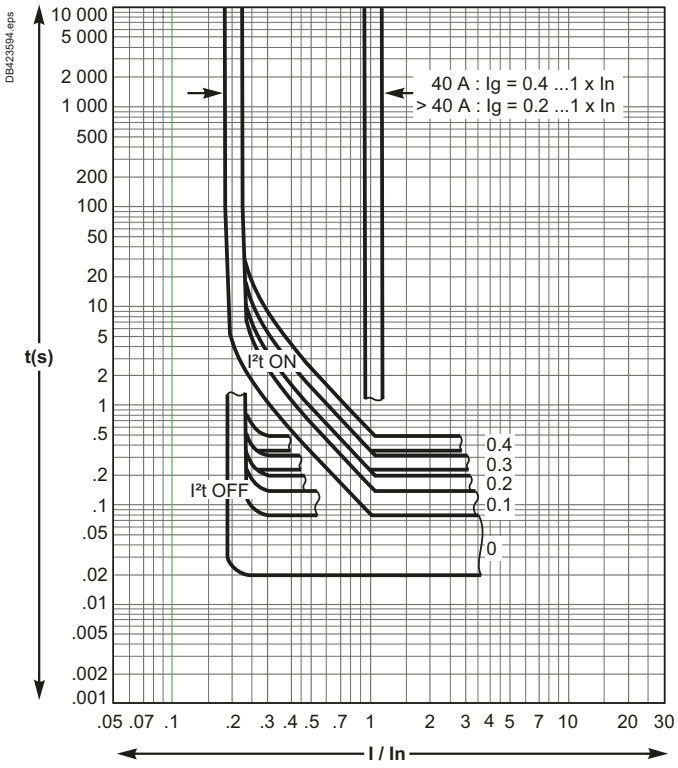
ComPacT NSX400 to 630

MicroLogic 6.3 E and 7.3 E Electronic Trip Units, Tripping Curves - Protection of Distribution Systems

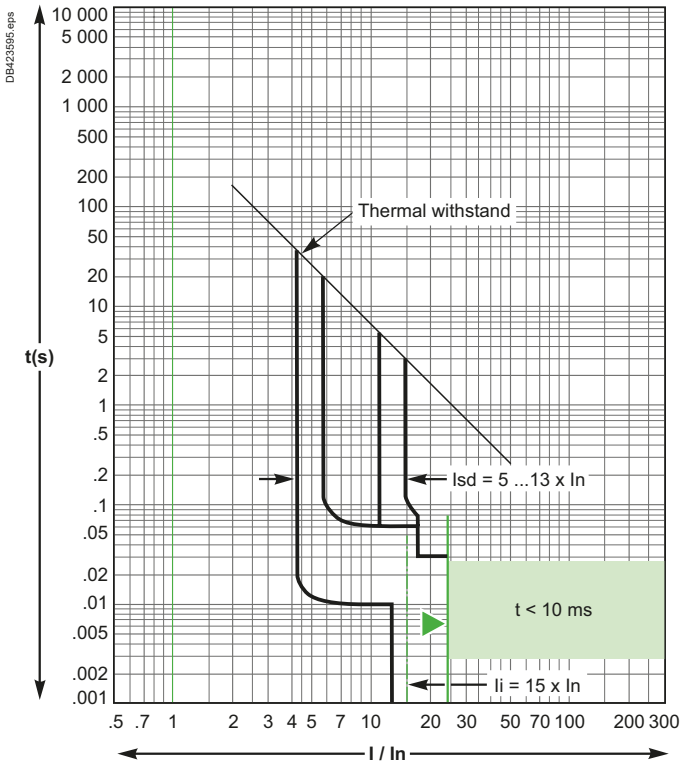
MicroLogic 6.3 E and 7.3 E (up to 570 A) (Ground-Fault Protection)



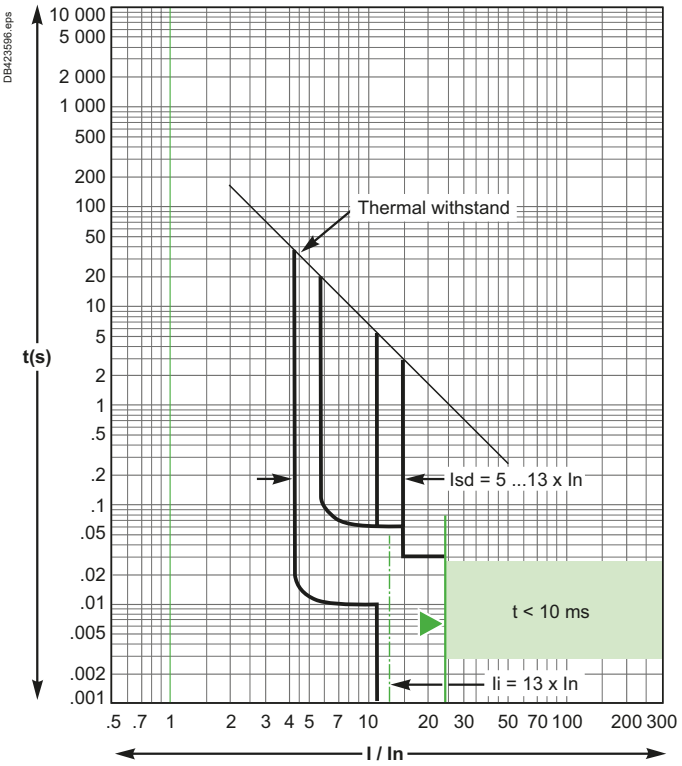
ComPacT NSX400 to 630

MicroLogic 1.3 M and 2.3 M Electronic Trip Units, Tripping Curves
Motor Protection

MicroLogic 1.3 M - 320 A

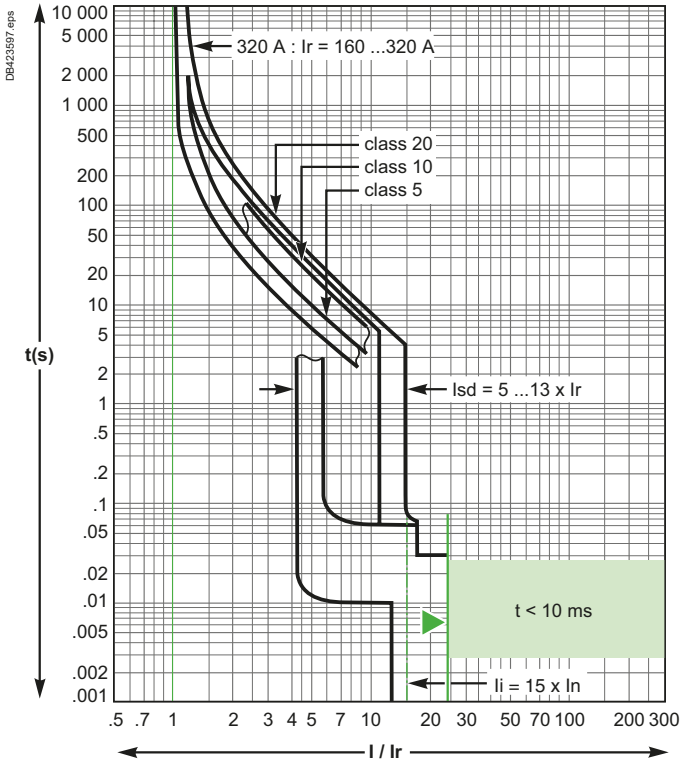


MicroLogic 1.3 M - 500 A

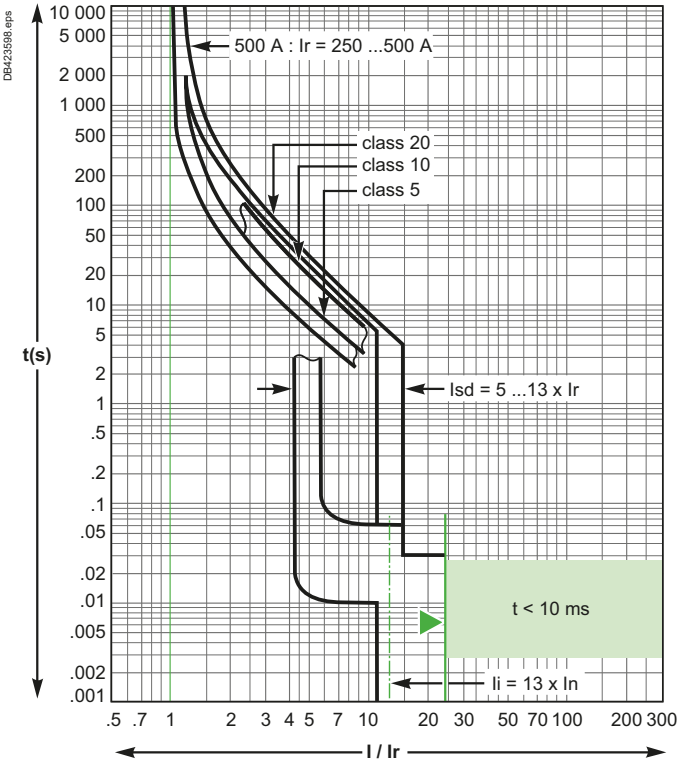


Reflex tripping.

MicroLogic 2.3 M - 320 A



MicroLogic 2.3 M - 500 A



Reflex tripping.

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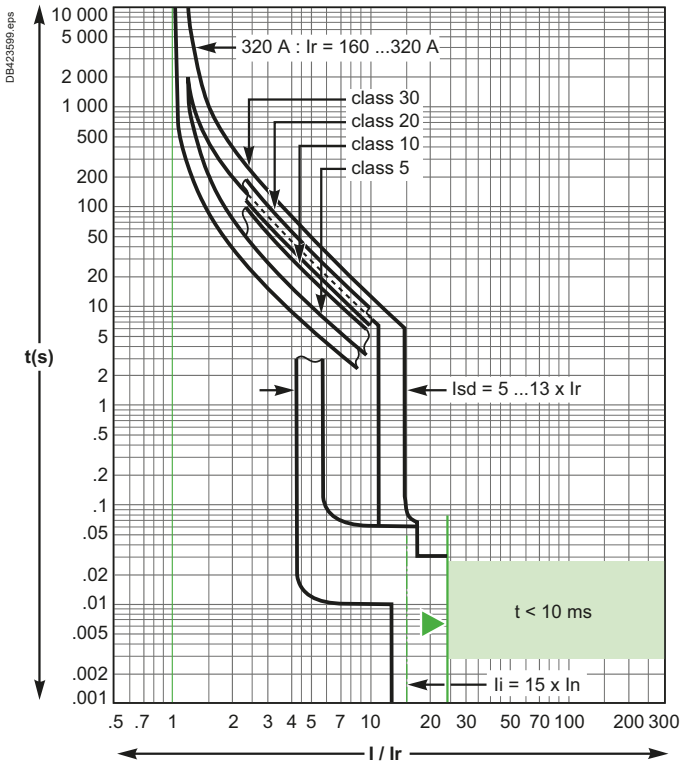
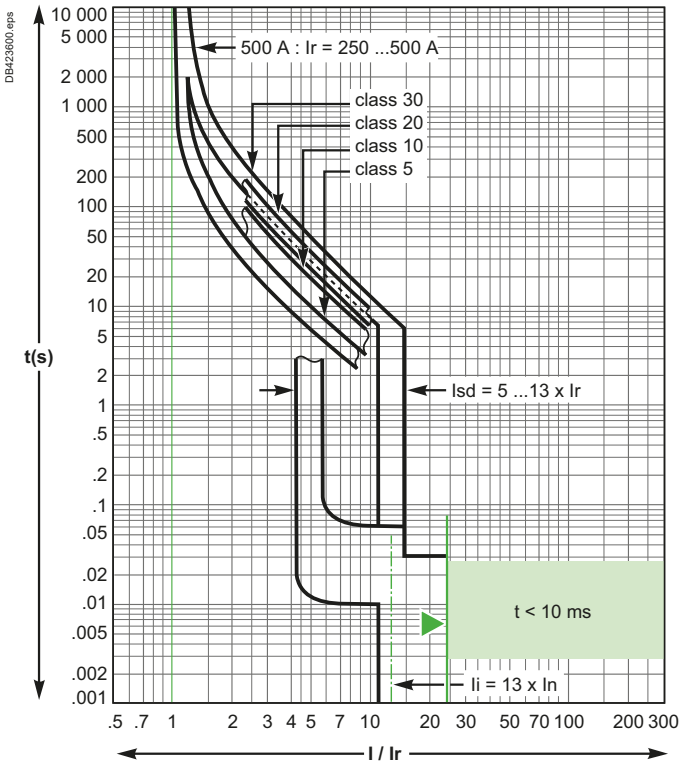
ComPacT NSX400 to 630

MicroLogic 6.3 E-M Electronic Trip Units, Tripping Curves
Motor Protection

MicroLogic 6.3 E-M - 320 A

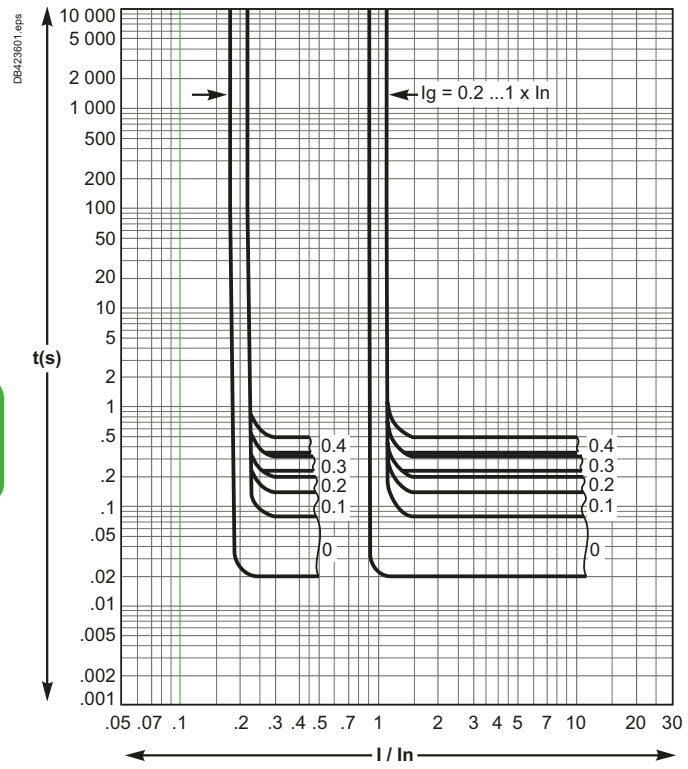


MicroLogic 6.3 E-M - 500 A



Reflex tripping.

MicroLogic 6.3 E-M (Ground Fault Protection)



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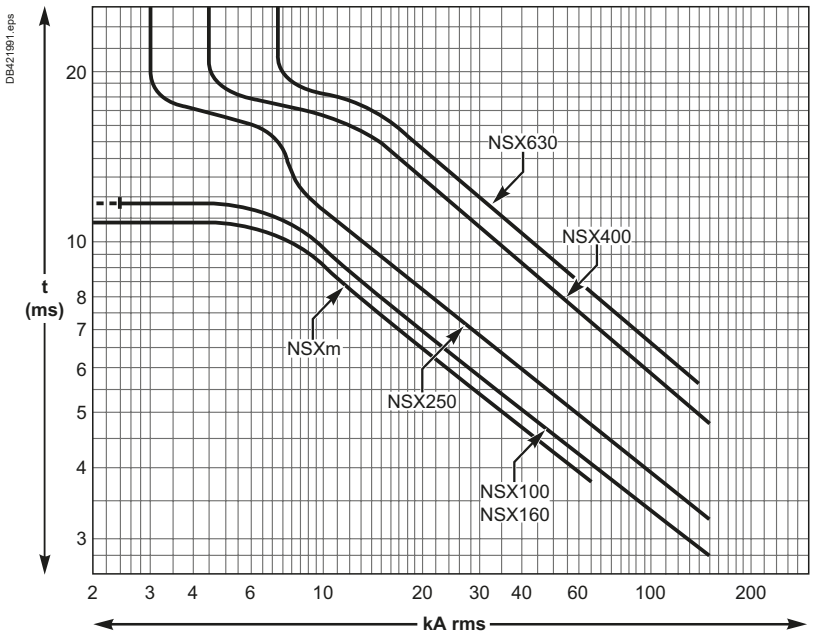
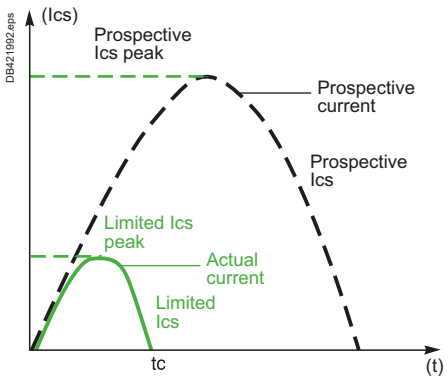
Tripping Curves ComPacT NSXm and NSX
Reflex Tripping

ComPacT NSXm and NSX100 to 630 devices incorporate the exclusive reflex-tripping system.
This system breaks very high fault currents. The device is mechanically tripped via a "piston" actuated directly by the pressure produced in the breaking units by the short-circuit.
For high short-circuits, this system provides a faster break, thereby ensuring selectivity.
Reflex-tripping curves are exclusively a function of the circuit-breaker rating.



Current and Energy Limiting Curves

The limiting capacity of a circuit breaker is its aptitude to let through a current, during a short-circuit, that is less than the prospective short-circuit current.



The exceptional limiting capacity of the Com**PacT** range is due to the rotating double-break technique (very rapid natural repulsion of contacts and the appearance of two arc voltages in-series with a very steep wave front).

> Selectivity, Cascading and Coordination Guide, Complementary Technical Information

LVPED318033EN

Ics = 100 % Icu

The exceptional limiting capacity of the ComPacT NSX and NSXm ranges greatly reduces the forces created by fault currents in devices.
The result is a major increase in breaking performance.
In particular, the service breaking capacity Ics is equal to 100 % of Icu.
The Ics value, defined by IEC standard 60947-2, is guaranteed by tests comprising the following steps:

- ■ Break three times consecutively a fault current equal to 100 % of Icu
- ■ Check that the device continues to function normally, that is:
- □ It conducts the rated current without abnormal temperature rise
- □ Protection functions perform within the limits specified by the standard
- □ Suitability for isolation is not impaired.

Longer service life of electrical installations

Current-limiting circuit breakers greatly reduce the negative effects of short-circuits on installations.

Thermal effects
Less temperature rise in conductors, therefore longer service life for cables.

Mechanical effects
Reduced electrodynamic forces, therefore less risk of electrical contacts or busbars being deformed or broken.

Electromagnetic effects
Fewer disturbances for measuring devices located near electrical circuits.

Economy by means of cascading

Cascading is a technique directly derived from current limiting. Circuit breakers with breaking capacities less than the prospective short-circuit current may be installed downstream of a limiting circuit breaker. The breaking capacity is reinforced by the limiting capacity of the upstream device. It follows that substantial savings can be made on downstream equipment and enclosures.
Nevertheless, the following limitation curves cannot be used to estimate cascading performance of two circuit-breakers. Reinforced breaking capacity is provided in cascading tables of the “Selectivity, Cascading and Coordination Guide”.

Current and energy limiting curves

The limiting capacity of a circuit breaker is expressed by two curves which are a function of the prospective short-circuit current (the current which would flow if no protection devices were installed):

- ■ The actual peak current (limited current)
- ■ Thermal stress (A^2s), i.e. the energy dissipated by the short-circuit in a conductor with a resistance of 1 Ω.

Example
What is the real value of a 70 kA rms prospective short-circuit (i.e. 100 kA peak) limited by an NSXm160H upstream ?
The answer is 20 kA peak.

Maximum permissible cable stresses

The table below indicates the maximum permissible thermal stresses for cables depending on their insulation, conductor (Cu or Al) and their cross-sectional area (CSA). CSA values are given in mm² and thermal stresses in A^2s.

CSA		1.5 mm²	2.5 mm²	4 mm²	6 mm²	10 mm²
PVC	Cu	$2.97x10^4$	$8.26x10^4$	$2.12x10^5$	$4.76x10^5$	$1.32x10^6$
	Al					$5.41x10^5$
PRC	Cu	$4.10x10^4$	$1.39x10^5$	$2.92x10^5$	$6.56x10^5$	$1.82x10^6$
	Al					$7.52x10^5$
CSA		**16 mm²**	**25 mm²**	**35 mm²**	**50 mm²**	
PVC	Cu	$3.4x10^6$	$8.26x10^6$	$1.62x10^7$	$3.31x10^7$	
	Al	$1.39x10^6$	$3.38x10^6$	$6.64x10^6$	$1.35x10^7$	
PRC	Cu	$4.69x10^6$	$1.39x10^7$	$2.23x10^7$	$4.56x10^7$	
	Al	$1.93x10^6$	$4.70x10^6$	$9.23x10^6$	$1.88x10^7$	

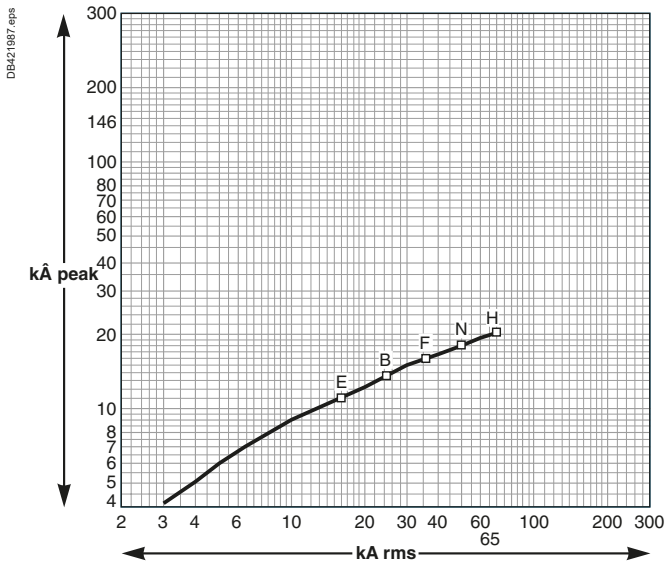
Example
Is a Cu/PVC cable with a CSA of 10 mm² adequately protected by an NSX160F?
The table above indicates that the permissible stress is $1.32x10^6$ A^2s.
All short-circuit currents at the point where an NSX160F (Icu = 35 kA) is installed are limited with a thermal stress less than $6x10^5$ A^2s.
Cable protection is therefore ensured up to the limit of the breaking capacity of the circuit breaker.

Current and Energy Limiting Curves
ComPacT NSXm

Current-limiting curves

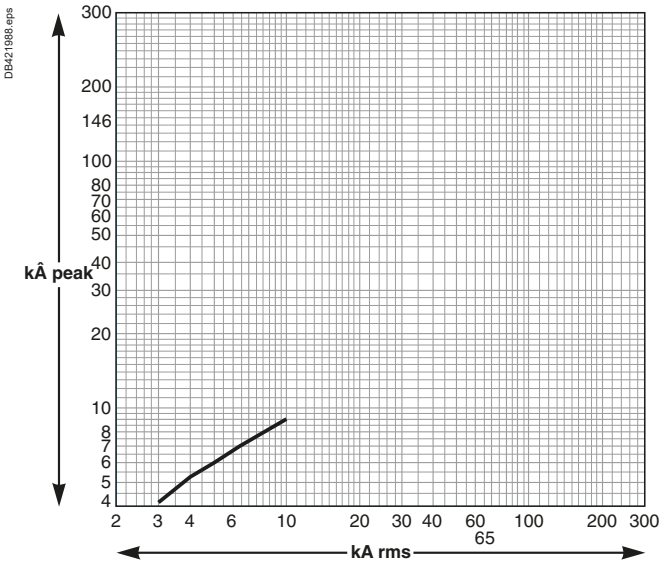
Voltage 400/440 V AC

Limited short-circuit current (kÂ peak)



Voltage 660/690 V AC

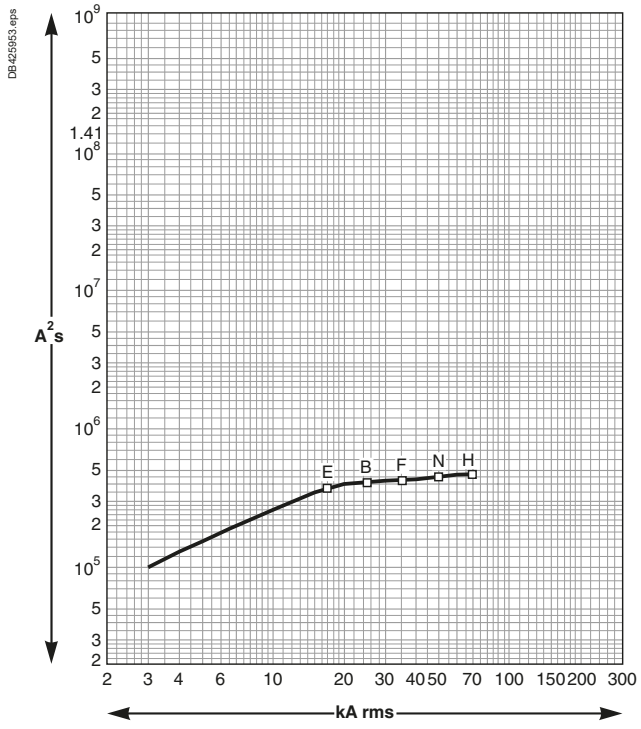
Limited short-circuit current (kÂ peak)



Energy-limiting curves

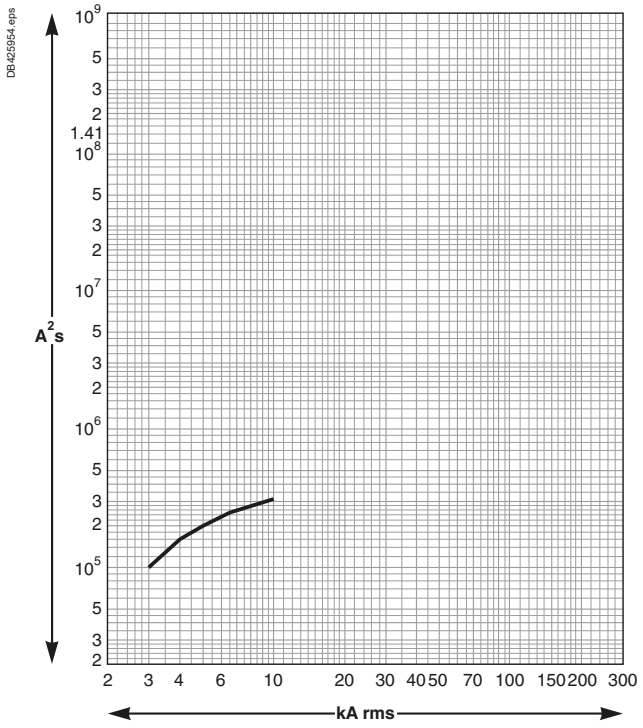
Voltage 400/440 V AC

Limited energy



Voltage 660/690 V AC

Limited energy



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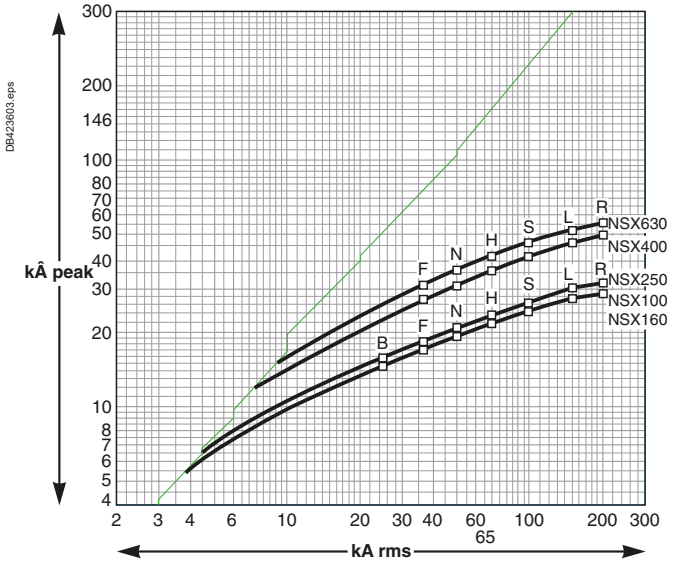
Current and Energy Limiting Curves
ComPacT NSX

Current-limiting curves

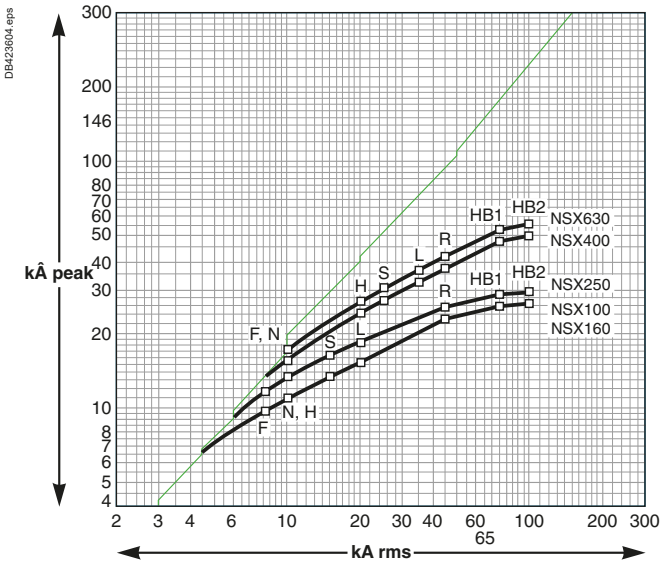
Voltage 400/440 V AC

Limited short-circuit current (kÂ peak)



Voltage 660/690 V AC

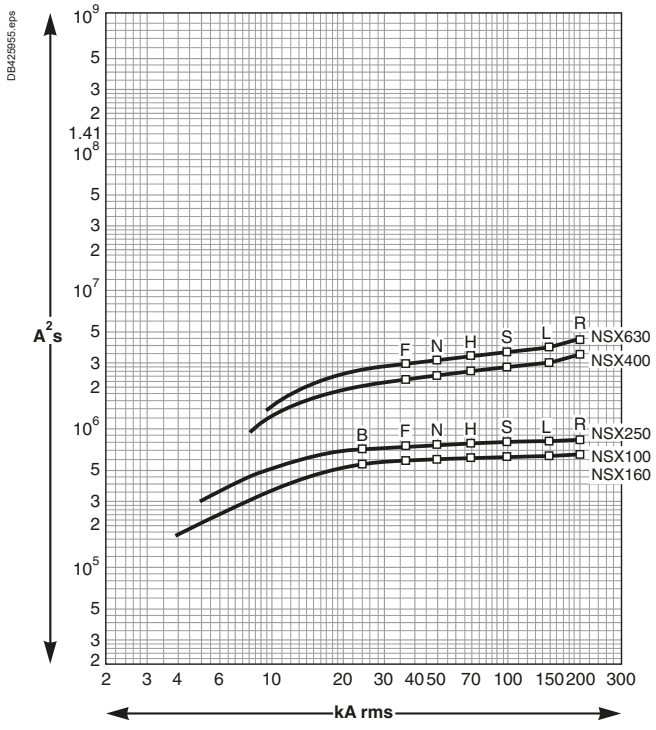
Limited short-circuit current (kÂ peak)



Energy-limiting curves

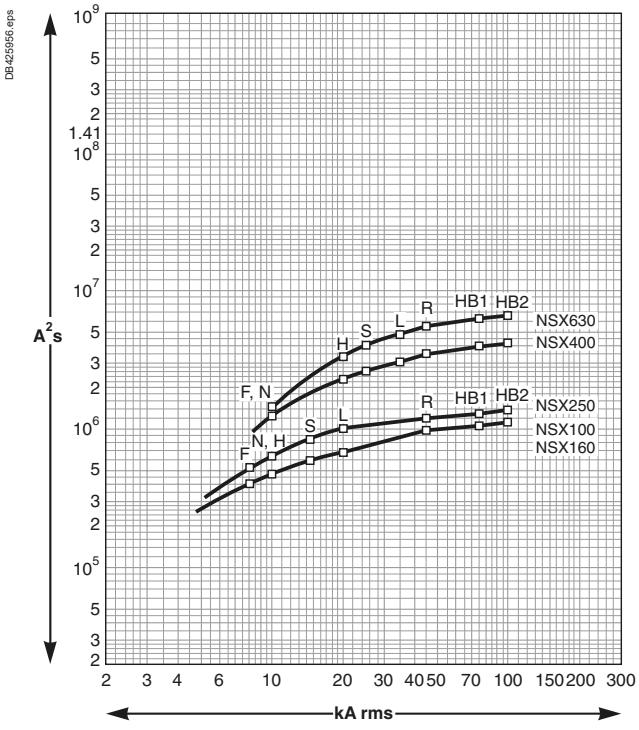
Voltage 400/440 V AC

Limited energy



Voltage 660/690 V AC

Limited energy



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Schneider Electric Industries SAS

35, rue Joseph Monier
CS 30323
92506 Rueil Malmaison Cedex
France

RCS Nanterre 954 503 439
Capital social 928 298 512 €
www.se.com

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