■ Inching and plugging operations (Conforming to IEC 60947-4-1)

In applications where inching and plugging operations are included the contact wear will be increased. Therefore, it is necessary to select ones having larger frame sizes than in standard applications so as to minimize the needs of maintenance and replacement.

Voltage	Motor ratings Capacity (kW)	Full load current (A)	50% inching operation Electrical durability 100,000 operations	500,000 operations
200V | 240V	0.2	1.8	SC-03	SC-03
	0.4	3.2	SC-03	SC-03
	0.75	4.8	SC-03	SC-0, 05
	1.5	8.0	SC-03	SC-4-1, 5-1
	2.2	11.1	SC-4-0	SC-N1
	3.7	17.4	SC-4-1, 5-1	SC-N2
	5.5	26	SC-N1	SC-N3
	7.5	34	SC-N2	SC-N5A
	11	48	SC-N2S	SC-N7
	15	65	SC-N4	SC-N8
	18.5	79	SC-N5A	SC-N10
	22	93	SC-N6	SC-N11
	30	124	SC-N7	SC-N14
	37	152	SC-N8	SC-N14
	45	180	SC-N10	–
	55	220	SC-N11	–
	75	300	SC-N14	–
380V | 440V	0.75	2.4	SC-03	SC-03
	1.5	4.0	SC-03	SC-03
	2.2	5.6	SC-03	SC-4-0
	3.7	8.7	SC-03	SC-4-1, 5-1
	5.5	13	SC-4-0	SC-N1
	7.5	17	SC-4-1, 5-1	SC-N2S
	11	24	SC-N1	SC-N3
	15	32.5	SC-N2	SC-N5A
	18.5	39.5	SC-N2S	SC-N6
	22	46.5	SC-N3	SC-N7
	30	62	SC-N4	SC-N8
	37	76	SC-N5A	SC-N10
	45	90	SC-N6	SC-N11
	55	110	SC-N8	SC-N12
	75	150	SC-N10	SC-N14
	90	180	SC-N11	–
	110	220	SC-N12	–
	132	264	SC-N14	–
	150	300	SC-N14	–
	160	320	SC-N14	–

Notes: 1. Inching % = $\frac{\text{No. of inching operations}}{\text{Total No. of switching operations}} \times 100\%$

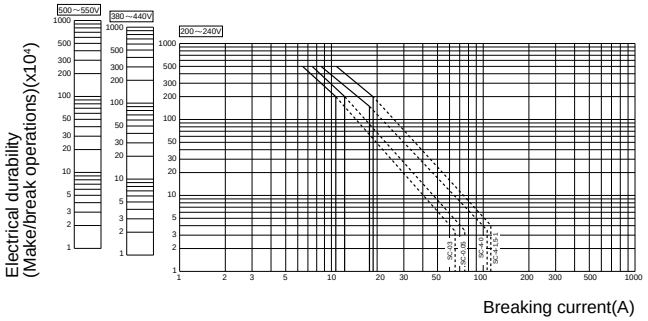
2. Light inching: 50%
Printing machine and similar equipment
Heavy inching: 75 – 100%
Machine tool, hoist and similar equipment (In cases when there are frequent on/off operations involving starting rush current).

■ Standard conditions for operation in service

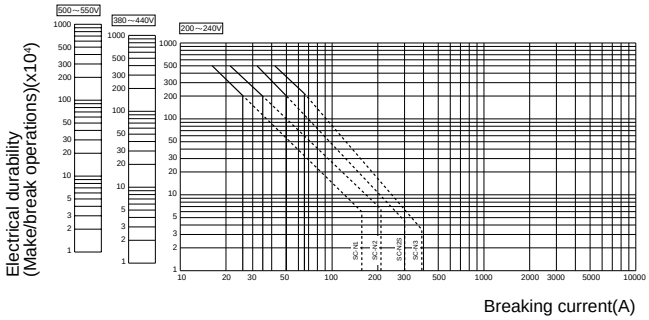
- Temperature range:
  Operating: –5°C to+40°C
  (–5°C to + 55°C inside panel box)
  Storage: –40°C to + 65°C
- Humidity: 45 to 85% RH
- Vibration: 10 to 55Hz, 15m/s^2
- Shock: 50m/s^2
- Altitude: 2000m (6600ft) or lower
- IP40

■ Breaking current and electrical durability

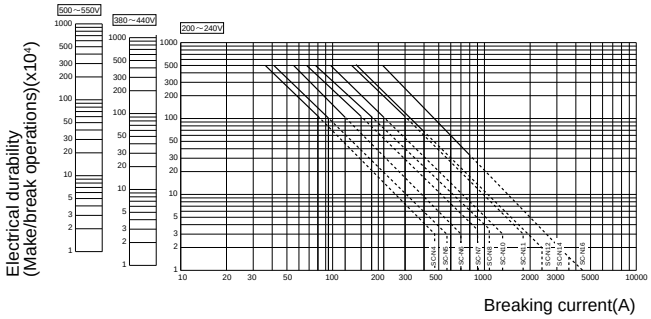
SC-03 to 5-1



SC-N1 to N3

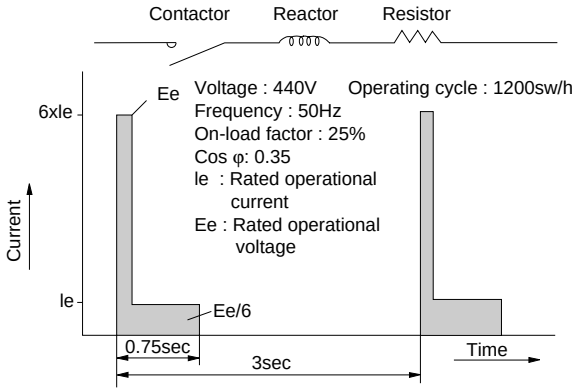


SC-N4 to N16



■ Testing method—Category AC-3

The method of determining the life expectancy and performance is prescribed by IEC as below.



A current equal to six times that of the rated operational current of the starter is applied to the terminals the switch is closed and the current immediately reduced to the rated operational current and then interrupted.