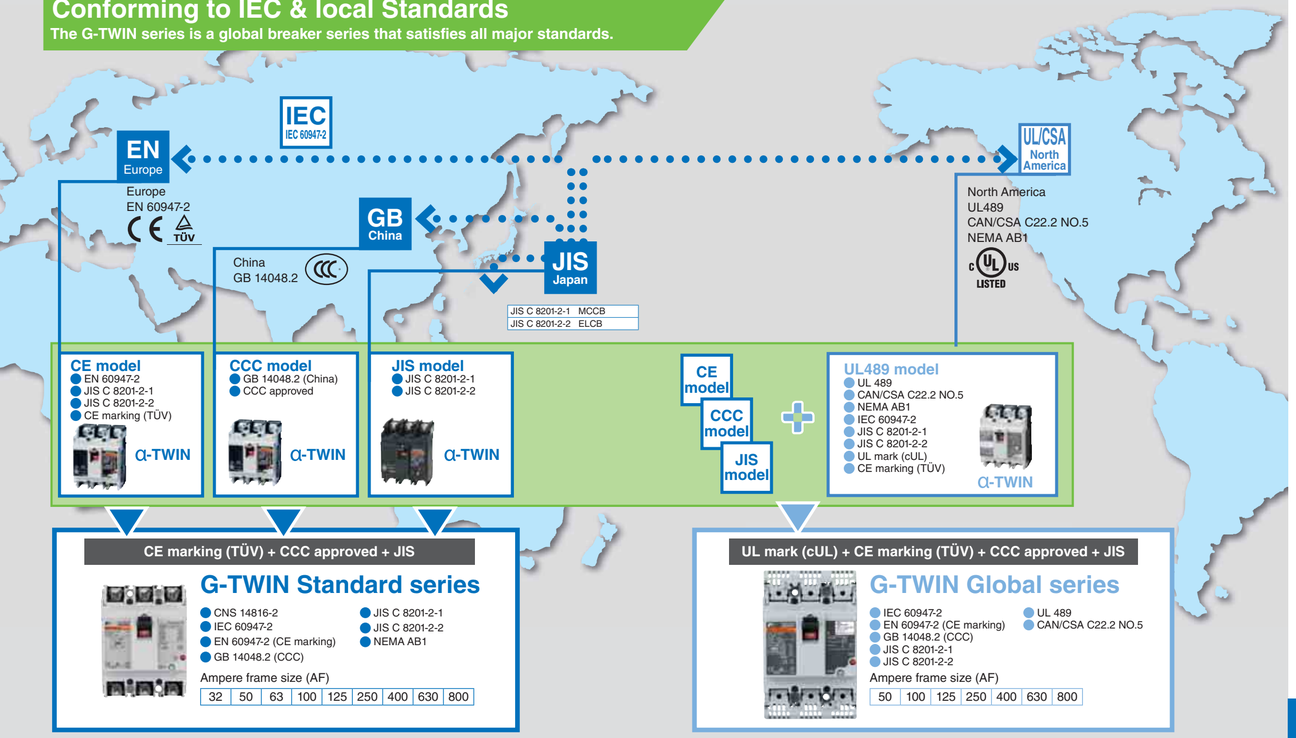
GLOBAL-TWIN

Conforming to IEC & local Standards

The G-TWIN series is a global breaker series that satisfies all major standards.



Compact & High performance

Compact size meeting UL489 480V requirements & same dimensions as ELCB

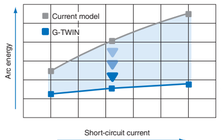
ELCB
Rated voltage 480V
(W105×H181×D68mm)

Same dimentions

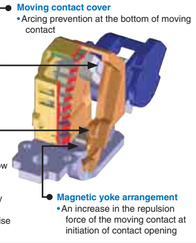
MCCB
Rated voltage 480V
(W105×H181×D68mm)

Technical innovation

Arc and gas flow control technology
Effect of "ablation breaking technology"



Decrease by 30%!



Moving contact cover
- Arcing prevention at the bottom of moving contact

Narrow slit resin
- Increased arc voltage due to narrow slit effect
- Increased arc voltage and high-speed moving contact opening by ablation effect
- Suppression of internal pressure rise by adjusting the narrow slit width

Magnetic yoke arrangement
- An increase in the repulsion force of the moving contact at initiation of contact opening

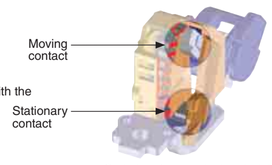
Ecology

Advanced environmental technology Conforming to the RoHS Directive

The G-TWIN Series is designed to lower environmental impact.

Recycling
- For easier recycling, all major parts are marked with the names of the materials used.

Conforming to the RoHS Directive
- Lead-free (Pb-free) solder is used.
- Free of hexavalent chromium (Cr^{6+}-free) (125 to 800AF)



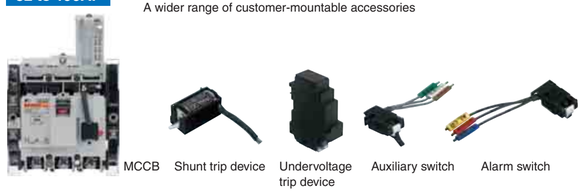
Cadmium-free contact material

Usefulness Leading the way in user-friendliness

Unifying and reducing the types of internal accessories

32 to 100AF

- Internal and external accessories
  A wider range of customer-mountable accessories



MCCB Shunt trip device Undervoltage trip device Auxiliary switch Alarm switch

125 to 250AF

- Sharing internal accessories of 125/250AF breakers.

Number of types of internal accessories

AF	α-TWIN	G-TWIN
125	8	8
160/250	8	

MCCB Shunt trip device Undervoltage trip device Auxiliary switch Alarm switch

400 to 800AF

- The number of types of internal accessories of 400/630/800AF has been significantly reduced.

Number of types of internal accessories

AF	α-TWIN	G-TWIN
400	26	6
630		
800		

MCCB Shunt trip device Undervoltage trip device Auxiliary switch Alarm switch

Fuji Electric

Innovating Energy Technology

FUJI Molded Case Circuit Breakers

62D9-E-0221a

Fuji Electric FA Components & Systems Co., Ltd.

FUJI MCCB and ELCB GLOBAL TWIN

The Twin Breakers have advanced to an entirely new stage.

Conforming to IEC & local Standards

Conforming to certifications and standards in major world markets
Expanded frame sizes in G-TWIN Global Series

Compact & High performance

Compact models with unified dimensions meeting UL489 480V and IEC 440V requirements

Ecology

Lower environmental impact Advanced green engineering and energy-saving support Conforaming to the RoHS Directive

Usefulness

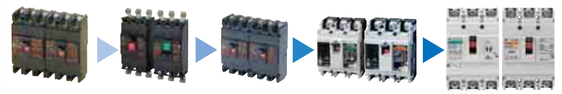
Leading the way in user-friendliness

G-TWIN
Standard series
MCCB

G-TWIN
Global series
MCCB

Fuji Electric launched the Twin Breaker Series to world markets in 1990, in which molded case circuit breaker (MCCB) and earth leakage circuit breaker (ELCB) types were unified in external dimensions for the first time in the world. The Twin Breaker Series was highly evaluated and gained strong support, and the concept of Twin Breakers was established as Japan's de facto standards for MCCBs and ELCBs.
In 1992, Fuji Electric released the Super Twin Breaker Series, which enabled user installation of internal accessories for the first time in Japan.
In 1995, Fuji Electric released the Super 60 Series and advanced modularization via uniform external dimensions. In 2001, Fuji Electric launched the α-Twin Series to further advance the miniaturization and modularization of economic types with 100A frame or less as Japan's first multi-standard circuit breakers satisfying domestic and international standards. Since then, Fuji Electric has been making further product improvements by predicting market trends.
In recent years, market globalization has increasingly accelerated.
At the end of 2004, the Japanese Industrial Standards (JIS) were aligned with the IEC standards, and the globalization in this field has been further accelerated.
Based on the Twin Breaker Series, Fuji Electric has expanded the range of its products conforming to and approved by international standards for global markets, always advanced the innovative development of fundamental technologies in response to the market demand, and developed the G-TWIN Series of MCCBs and ELCBs.

GLOBAL TWIN History



1990 TWIN Breaker | 1992 Super TWIN | 1995 Super 60 | 2001 α-TWIN | **2006 G-TWIN**

Fuji Electric FA Components & Systems Co., Ltd.
5-7, Nihonbashi Odemma-cho, Chuo-ku, Tokyo 103-0011, Japan
URL http://www.fujielectric.co.jp/fcs/eng/

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Fuji Electric

FUJI Molded Case Circuit Breakers

Innovating Energy Technology

G-TWIN series

IEC/EN60947-2, GB14048.2, JISC8201-2-1

32AF / 50AF / 63AF / 100AF / 125AF / 250AF






Type			BW32AAG		BW32SAG		BW50AAG		BW50EAG		BW50SAG		BW50ZSG	BW50RAG		BW63EAG		BW63SAG		BW63ZSG	BW63RAG		BW100AAG	BW100EAG		BW125JAG			BW125RAG			BW125HAG	BW250EAG		BW250JAG			BW250RAG			BW250HAG
Pole			2	3	2	3	2	3	2	3	2	3	3	2	3	2	3	2	3	3	2	3	3	2	3	2	3	4*3	2	3	4	3	2	3	2	3	4*3	2	3	4	3
Rated current	In [A]		3, 5, 10, 15, 20, 30, (32)*3				5, 10, 15, 20, 30, (32)*3 40, 50							10, 15, 20, 30, (32)*3 40, 50		60, (63)*3							60, (63)*3 75, 100	50, 60, (63)*3 75, 100		15, 20, 30, 40, 50, 60, 75, 100, 125								125, 150, 160, 175, 200, 225, 250							
Rated impulse withstand voltage	Uimp [kV]		6				6									6							6			6							6							
Isolation compliant			Approved				Approved									Approved							Approved			Approved							Approved							
Rated insulation voltage	Ui [V]	AC	500		690		500		690		690		690	690		690		690		690	690		500	690		690								690							
		DC	–		250*1		–		250*1		250*1		–	250*1		250*1		250*1		–	250*1		–	250*1		250					–			250						–
Rated frequency		[Hz]	50-60				50-60									50-60		50-60		50-60	50-60		50-60	50-60		50-60								50-60							
Rated breaking capacity [kA]	CNS14816-2 IEC60947-2 EN60947-2 JIS8201-2-1 Icu/Ics	AC 690V	–		–		–		–		–		–	–		–		–		–	–		–	–		–					–			–						–
		AC 500V	–		1.5/1		–		1.5/1		5/3		–	7.5/4		1.5/1		5/3		–	7.5/4		–	7.5/4		5/3	15/8			36/18			15/4	10/5		15/8			36/18			15/4
		AC 440V	1.5/1		2.5/2		1.5/1		2.5/2		7.5/4		7.5/4	10/5		2.5/2		7.5/4		7.5/4	10/5		–	10/5		30/15				50/25			65/17	18/9		30/15			50/25			65/17
		AC 415V	1.5/1		2.5/2		1.5/1		2.5/2		7.5/4		7.5/4	10/5		2.5/2		7.5/4		7.5/4	10/5		1.5/1	10/5		30/15				50/25			65/17	18/9		30/15			50/25			65/17
		AC 400V																																							
		AC 380V																																							
		AC 240V	2.5/2		5/3		2.5/2		5/3		10/5		15/8	25/13		5/3		10/5		15/8	25/13		5/3	25/13		50/25				100/50			125/63	36/18		50/25			100/50			125/63
		AC 230V																																							
		DC 250V	–		2.5/2*1		–		2.5/2*1		5/3*1		–	5/3*1		2.5/2*1		5/3*1		–	5/3*1		–	5/3*1		15/8				40/20			40/20	10/5		20/10			30/15			40/20
	GB14048.2 Icu/Ics	AC 400V	1.5/1		2.5/2		1.5/1		2.5/2		7.5/4		–	10/5		2.5/2		7.5/4		–	10/5		1.5/1	10/5		30/15				50/25			–	18/9		30/15			50/25			–
		AC 230V	2.5/2		5/3		2.5/2		5/3		10/5		–	25/13		5/3		10/5		–	25/13		5/3	25/13		50/25				100/50			–	36/18		50/25			100/50			–
	NEMA AB1*2	AC 480V/Y	1.5*2		2.5*2		1.5*2		2.5*2		7.5*2		7.5*2	10*2		2.5*2		7.5*2		7.5*2	10*2		–	10*2		30		30*2		50			–	18		30		30*2	50			–
		AC 240V	2.5*2		5*2		2.5*2		5*2		10*2		15*2	25*2		5*2		10*2		15*2	25*2		5*2	25*2		50		50*2		100			–	36		50		50*2	100			–
Dimensions	[mm]	a	50	75	50	75	50	75	50	75	50	75	75	50	75	50	75	50	75	75	50	75	75	50	75	60	90	120	90	90	120	90	105	105	105	140	105	105	140	105
		b	100		100		100		100		100		100	100		100		100		100	100		100	100		155				155				165		165			165			
		c	60		60		60		60		60		60	60		60		60		60	60		60	60		68				68				68		68			68			
		d	84		84		84		84		84		84	84		84		84		84	84		84	84		95				95				95		95			95			
Mass	[kg]		0.4	0.5	0.4	0.5	0.4	0.5	0.4	0.5	0.4	0.5	0.5	0.4	0.5	0.4	0.6	0.4	0.6	0.6	0.4	0.6	0.6	0.4	0.6	0.8	1.2	1.6	1.0	1.2	1.6	1.2	1.4	1.6	1.4	1.6	2.2	1.4	1.6	2.2	1.6
Tripping device			Hydraulic-magnetic																							Thermal-magnetic															

400AF / 630AF / 800AF



Type			BW400EAG		BW400SAG		BW400RAG			BW400HAG			BW630EAG	BW630RAG		BW630HAG		BW800EAG	BW800RAG		BW800HAG	
Pole			2	3	2	3	2	3	4*3	2	3	4	3	3	4*3	3	4	3	3	4*3	3	4
Rated current	In [A]		250, 300, 350, 400										500, 600, 630					700, 800				
Rated impulse withstand voltage	Uimp [kV]		8										8					8				
Isolation compliant			Approved										Approved					Approved				
Rated insulation voltage	Ui [V]	AC	690										690					690				
		DC	250										250					250				
Rated frequency		[Hz]	50-60										50-60					50-60				
Rated breaking capacity [kA]	CNS14816-2 IEC60947-2 EN60947-2 JIS8201-2-1 Icu/Ics	AC 690V	–		10/5		15/8			15/8			–	15/8		15/8		–	15/8		15/8	
		AC 500V	18/9		22/11		36/18			42/21			22/11	36/18		42/21		22/11	36/18		42/21	
		AC 440V	30/15		36/18		50/25			70/35			36/18	50/25		70/35		36/18	50/25		70/35	
		AC 415V																				
		AC 400V																				
		AC 380V																				
		AC 240V	50/25		85/43		100/50			125/63			50/25	100/50		125/63		50/25	100/50		125/63	
		AC 230V																				
		DC 250V	10/5		20/10		30/15			40/20			20/10	40/20		40/20		20/10	40/20		40/20	
	GB14048.2 Icu/Ics	AC 400V	30/15		36/18		50/25			70/35			30/15	50/25		70/35		36/18	50/25		70/35	
		AC 230V	50/25		85/43		100/50			125/63			36/18	100/50		125/63		50/25	100/50		125/63	
	NEMA AB1*2	AC 480V/Y	30		36		50		50*2	70			36	50	50*2	70		36	50	50*2	70	
		AC 240V	50		85		100		100*2	125			85	100	100*2	125		85	100	100*2	125	
Dimensions	[mm]	a	140		140		140	140	185	140	140	185	210	210	280	210	280	210	210	280	210	280
		b	257		257		257			257			275	275		275		275	275		275	
		c	103		103		103			103			103	103		103		103	103		103	
		d	146		146		146			146			146	146		146		146	146		146	
Mass	[kg]		4.3	5.1	4.3	5.1	4.3	5.1	6.8	4.3	5.1	6.8	7.8	7.8	10.3	7.8	10.3	8.3	8.3	11	8.3	11
Tripping device			Thermal-magnetic																			

*1 Specify DC only when ordering circuit breakers for DC circuit.
*2 The rating "NEMA AB-1" does not appear on the nameplates of the BW32 to BW100, BW125JAG-4P to BW250JAG-4P, and BW400RAG-4P to BW800RAG-4P.
*3 Contact FUJI.

H series, S series







Type			225AF H203R	400AF H403R	600AF H603R	800AF H803R	1000AF S1003	1200AF S1203	1600AF SE1603
Pole			3	3	3	3	3	3	3
Rated current	In [A]		40, 50, 60, 75, 100, 125, 150, 175, 200, 225	250, 300, 350, 400	500, 600	700, 800	1000	1200	Selectable*5 1000- 1200- 1400- 1600
Rated insu lation voltage	Ui [v]	AC	660	690			660*4		660*4
		DC	250	250			–		–
Rated frequency		[Hz]	50-60	50-60			50 or 60*4		
Rated breaking capacity [kA]	IEC60947-2 JISC8201-2-1 Icu/Ics IEC157-1*6	AC 660V	–	–	–	–	30	30	35
		AC 600V	35	–	–	–	30	30	65
		AC 500V	42	85/43	85/43	85/43	35	35	65
		AC 440V	85	125/63	125/63	125/63	50	50	85
		AC 415V							
		AC 400V	100				50	50	85
		AC 380V							
		AC 230V	125	125/63	125/63	125/63	85	85	130
		DC 250V	40	40/20	40/20	40/20	–	–	–
Dimensions	[mm]	a	105	140	210	210	210	210	210
		b	165	257	275	275	400	400	406
		c	99	103	103	103	105	105	140
		d	127	146	146	146	158	158	193
Mass	[kg]		2.3	5	9	10	21	21	34
Tripping device			Thermal-magnetic				Thermal-adjastable magnetic		Solid state

*4 Specify frequency when using in AC circuits (50Hz or 60Hz)
*5 Breakers with 1000A or 1200A fixed rated current can be made if specified. *6 Applies to the H203R, S1003, S1203, and SE1603.