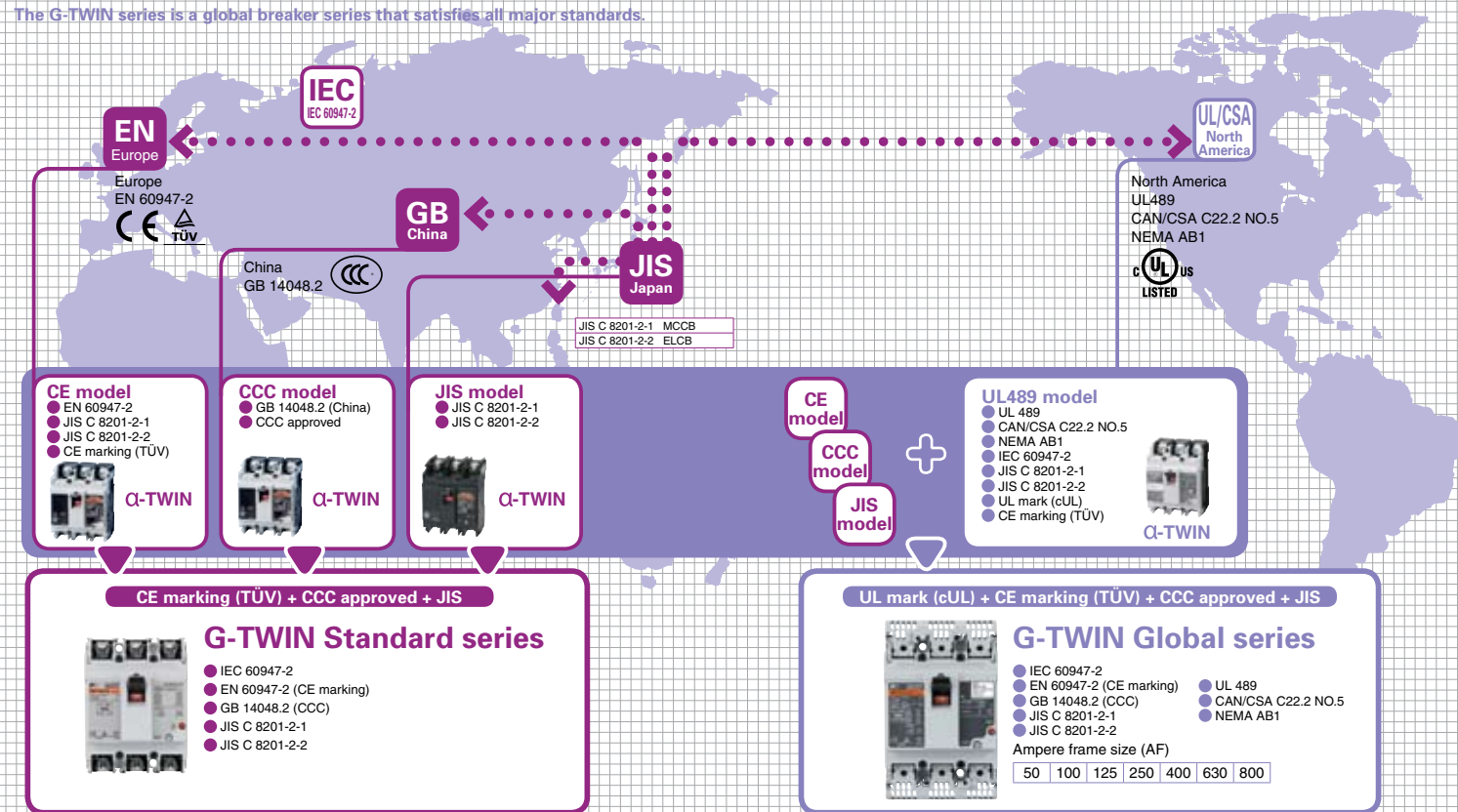


GLOBAL-TWIN

Conforming to IEC & local Standards

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



FUJI Molded Case Circuit Breakers



ETH131

Fuji Electric FA Components & Systems Co., Ltd.

Compact & High performance

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

ELCB
Rated voltage 480V
(W105xH181xD68mm)

MCCB
Rated voltage 480V
(W105xH181xD68mm)

Same dimensions

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 (Cr⁶⁺-free) (125 to 800AF)

Moving contact
Stationary contact
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

125 to 250AF • Sharing internal accessories of 125/250AF breakers.

AF	G-TWIN	G-TWIN
125	8	8
160/250	8	8

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

AF	G-TWIN	G-TWIN
400	26	6
630	26	6
800	26	6

MCCB Shunt trip device Undervoltage trip device Auxiliary switch Alarm switch

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

G-TWIN Standard series MCCB

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

G-TWIN Global series MCCB

GLOBAL TWIN History



FUJI MCCB and ELCB GLOBAL TWIN

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

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.

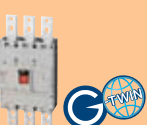
In 1992, Fuji Electric released the Super Twin Breaker Series, which enabled user installation of internal accessories for the first time in Japan.

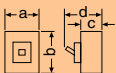
In 1995, Fuji Electric released the Super 60 Series and advanced modularization via uniform external dimensions. In 2001, Fuji Electric launched the α-Twin Series to further advance the miniaturization and modularization of economic types with 100A frame or less as Japan's first multi-standard circuit 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.

Usefulness
Leading the way in user-friendliness

G-TWIN series IEC/EN60947-2, GB14048.2, JISC8201-2-2																																															
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]	IEC60947-2 EN60947-2 JISC8201-2-1 Icu/Ics	AC	690V	—		10/5		15/8		15/8		—		15/8		15/8		—		15/8		15/8																									
			500V	18/9		20/10		36/18		42/21		20/10		36/18		42/21		20/10		36/18		42/21																									
			440V	30/15		36/18		50/25		70/35		36/18		50/25		70/35		36/18		50/25		70/35																									
			415V																																												
			400V																																												
			380V																																												
	GB14048.2 Icu/Ics	AC	240V	50/25		85/43		100/50		125/63		50/25		100/50		125/63		50/25		100/50		125/63																									
			230V																																												
			250V	10/5		20/10		30/15		40/20		20/10		40/20		40/20		20/10		40/20		40/20																									
			400V	30/15		36/18		50/25		70/35		36/18		50/25		70/35		36/18		50/25		70/35																									
			230V	50/25		85/43		100/50		125/63		50/25		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																									
240V	50		85		100		100*2		125		85		100		100*2		125																														
Dimensions [mm]																																															

H series, S series		50AF		100AF		225AF		400AF	630AF	800AF	1000AF	1200AF	1600AF								
																					
Type		H52BA	H53BA	H102BA	H103BA	H202BA	H203BA	H203R	H403R	H603R	H803R	S1003	S1203	SE1603							
Pole		2	3	2	3	2	3	3	3	3	3	3	3	3							
Rated current		In [A]	15, 20, 30, 40, 50	15, 20, 30, 40, 50, 60, 75, 100	125, 150, 175, 200, 225	40, 50, 60, 75, 100, 125, 150, 175, 200, 225	250, 300, 350, 400	500, 600	700, 800	1000	1200	Selectable* ⁶ 1000-1200-1400-1600									
Rated insu lation voltage		Ui [V]	AC	690	690	690	660	690	690	690	690	660* ⁵	660* ⁵	660* ⁵							
		DC	250	250	250	250	250	250	250	250	250	250* ⁴	-								
Rated frequency		[Hz]	50-60	50-60	50-60	50-60	50-60	50-60	50-60	50-60	50 or 60* ⁵										
Rated breaking capacity [kA]		IEC60947-2 JIS8201-2-1 lcu/lcs IEC157-1* ⁷	AC	660V	—	—	—	—	—	—	—	—	30	30	35						
				600V	25/7	25/7	25/7	35	—	—	—	30	30	65							
				500V	35/9	35/9	35/9	42	85/43	85/43	85/43	35	35	65							
				440V	65/17	65/17	65/17	85	125/63	125/63	125/63	50	50	85							
				415V																	
				400V																	
				380V																	
				230V	125/32	125/32	125/32	125	125/63	125/63	125/63	85	85	130							
DC	250V	40/10	40/10	40/10	40	40/20	40/20	40/20	40* ⁴	40* ⁴	—										
Dimensions		[mm]	a	90	90	105	105	140	210	210	210	210	210	210							
		b	155	155	165	165	165	257	275	275	400	400	406								
		c	60	60	60	99	103	103	103	105	105	140									
		d	82	82	84	127	146	146	146	158	158	193									
		Mass		[kg]	1.1	1.2	1.1	1.2	1.1	1.3	2.3	5	9	10	21	21	34				
Tripping device		Thermal-magnetic										Thermal-adjustable magnetic		Solid state							

*6 Breakers with 1000A or 1200A fixed rated current can be made if specified. *7 Applies to the H203R, S1003, S1203, and SE1603.