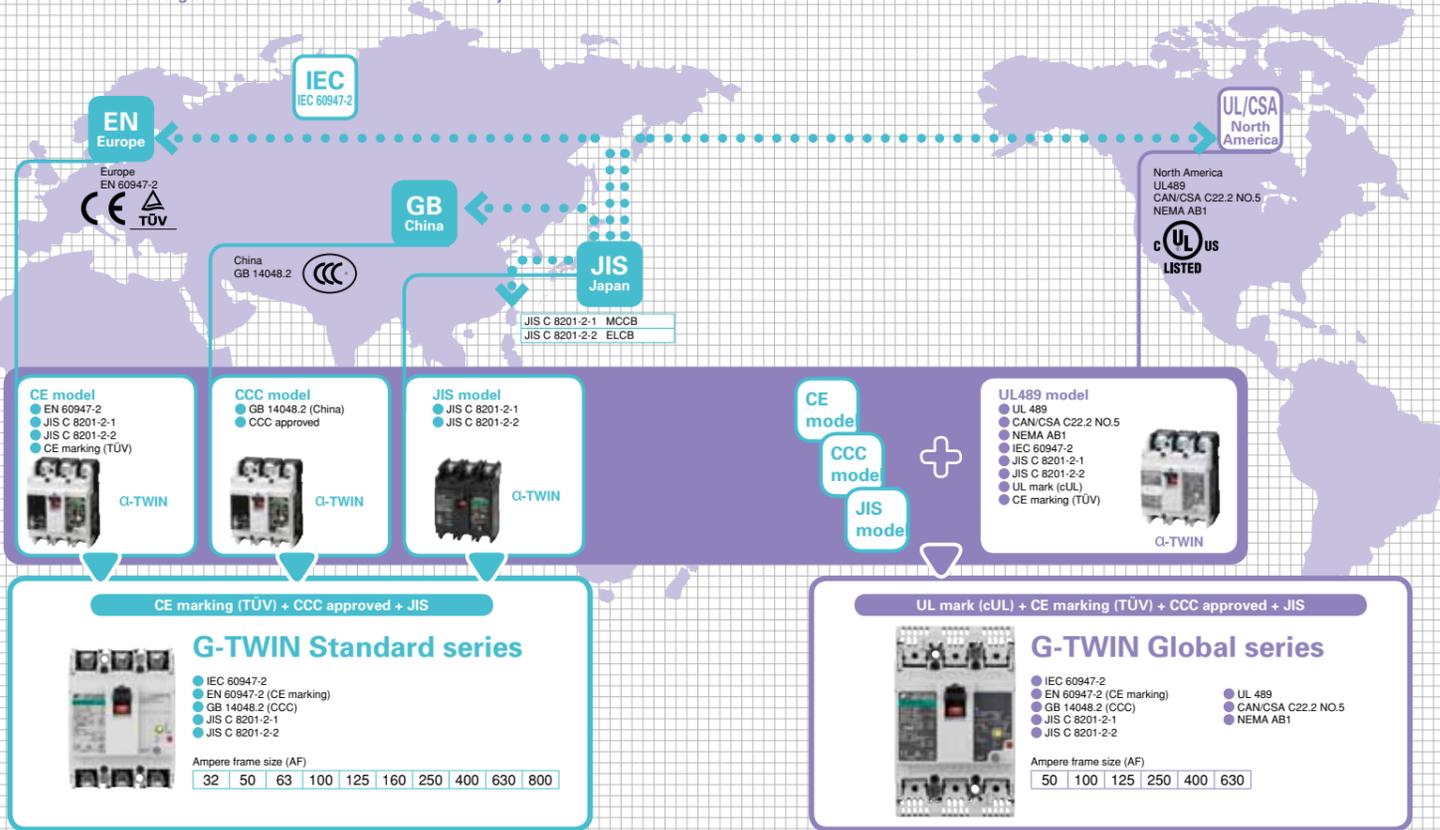


The G-TWIN series is a global breaker series that satisfies all major standards.



# FUJI Earth Leakage Circuit Breakers



ETH132a

Fuji Electric FA Components & Systems Co., Ltd.

## Compact & High performance

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

**ELCB**

Rated voltage 480V (W105xH181xD68mm)

Same dimensions

**MCCB**

Rated voltage 480V (W105xH181xD68mm)

**Technical innovation**

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

**Decrease by 30%!**

**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

**Moving contact cover**

- Arcing prevention at the bottom of moving contact

**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<sup>6+</sup>-free) (125 to 800AF)

**Cadmium-free contact material**

## Usefulness Leading the way in user-friendliness

**32 to 100AF** - Internal and external accessories  
A wider range of customer-mountable accessories

ELCB

Undervoltage trip device  
Shunt trip device

Auxiliary switch

Alarm switch

**125 to 250AF** - Sharing internal accessories of 125/160/250AF breakers.

AF	α-TWIN	G-TWIN
125	8	8
160/250	8	8

Shunt trip device

Undervoltage trip device

Auxiliary switch

Alarm switch

Earth Alarm switch

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

AF	α-TWIN	G-TWIN
400	26	6
630		
800		

ELCB

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 ELCB

**Compact & High performance**

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

G-TWIN Global series ELCB

**GLOBAL TWIN History**

1990 TWIN Breaker

1992 Super TWIN

1995 Super 60

2001 α-TWIN

2006 G-TWIN

## 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 ELCB

G-TWIN Global series ELCB

**Usefulness**

Leading the way in user-friendliness

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.

**Fuji Electric FA Components & Systems Co., Ltd.**

5-7, Nihonbashi Odemma-cho, Chuo-ku, Tokyo 103-0011, Japan  
Phone: +81-3-5847-8041 Fax: +81-3-5847-8171  
URL <http://www.fujielectric.co.jp/fcs/eng/>

**Fuji Electric Taiwan Co., Ltd.**

10F., No.168, Songjiang Rd., Taipei City 10459, Taiwan (R.O.C)  
Phone: +886-2-2511-1820 Fax: +886-2-2511-1830

<b>G-TWIN series</b> CNS5422(IEC/EN60947-2, GB14048.2, JISC8201-2-2)				32AF				50AF				63AF				100AF				125AF																			
Type	EW32AAG		EW32EAG	EW32SAG		EW50AAG		EW50EAG	EW50SAG		EW50RAG		EW63EAG		EW63SAG	EW63RAG		EW100AAG		EW100EAG	EW125JAG		EW125RAG	EW125HAG															
Pole	2	3	3	3		3		3	3		3		3		3	3		3		2	3	3	4 <sup>2</sup>	3	4	3													
Rated current	In [A]				5, 10, 15, 20, 30, (32) <sup>*2</sup>				3, 5, 10, 15, 20, 30, (32) <sup>*2</sup>				5, 10, 15, 20, 30, (32) <sup>*2</sup> , 40, 50				10, 15, 20, 30, (32) <sup>*2</sup> , 40, 50				60, (63) <sup>*2</sup>				60, (63) <sup>*2</sup> , 75, 100				50, 60, (63) <sup>*2</sup> , 75, 100				15, 20, 30, 40, 50, 60, 75, 100, 125						
Rated impulse withstand voltage	Uimp [kV]		2.5	4	4		4		2.5		4	6		6		6		4		4		6		6		6													
Isolation compliant	Approved																																						
Rated voltage	Ue [V AC]																																						
Instantaneous trip type		Rated sensitive current [mA]		15, 30, 100		15, 30, 100		30, 100/200/500		15, 30, 100		15, 30, 100/200		30, 100/200/500		30, 100/200/500		15, 30, 100/200		30, 100/200/500		30, 100/200/500		30, 100/200		30, 100/200/500		30											
		Tripping time [s]		0.1		0.1		0.1		0.1		0.1		0.1		0.1		0.1		0.1		0.1		0.1		0.1		0.1											
Instantaneous/time delay trip type		Rated sensitive current [mA]		-		-		-		-		-		-		-		-		-		-		-		-		100/200/500/1000 changeover											
		Tripping time [s]		-		-		-		-		-		-		-		-		-		-		-		-		0.1/0.4/1/2 changeover											
		Inertia non-tripping time [s]		-		-		-		-		-		-		-		-		-		-		-		-		0/0.2/0.5/1											
Rated frequency	[Hz]																																						
Rated breaking capacity Icu/Ics [kA]		CNS5422 IEC60947-2 EN60947-2 JIS8201-2-2		AC		440V		-		1.5/1		2.5/2		-		2.5/2		7.5/4		10/5		2.5/2		7.5/4		10/5		-		-		10/5		30/15		50/25		65/17	
						415V		-																															
						400V		-																															
						380V		-																															
						240V		-																															
						230V		2.5/2		2.5/2		5/3		2.5/2		5/3		10/5		25/13		5/3		10/5		25/13		5/3		10/5		25/13		5/3		10/5			
						100V		2.5/2		5/3		5/3		2.5/2		5/3		10/5		25/13		5/3		10/5		25/13		5/3		10/5		25/13		5/3		10/5			
						GB14048.2		AC		400V		-		1.5/1		2.5/2		7.5/4		10/5		2.5/2		7.5/4		10/5		-		-		10/5		30/15		50/25		65/17	
										230V		2.5/2		2.5/2		5/3		10/5		25/13		5/3		10/5		25/13		5/3		10/5		25/13		5/3		10/5			
Dimensions	[mm]																																						
		a		50		75		75		75		75		75		75		75		75		75		75		75		75		75		75		75		75			
		b		100		100		100		100		100		100		100		100		100		100		100		100		100		100		100		100		100			
		c		60		60		60		60		60		60		60		60		60		60		60		60		60		60		60		60		60			
		d		84		84		84		84		84		84		84		84		84		84		84		84		84		84		84		84		84			
Mass	[kg]																																						
		0.4		0.5		0.5		0.6		0.4		0.6		0.6		0.6		0.6		0.6		0.6		0.6		0.6		0.6		0.6		0.6		0.6		0.6			
Tripping device	Hydraulic-magnetic																																						

<b>G-TWIN series</b> CNS5422(IEC/EN60947-2, GB14048.2, JISC8201-2-2)				50AF				400AF				630AF				800AF																	
Type	EW250EAG		EW250JAG	EW250RAG		EW250HAG		EW400EAG		EW400SAG	EW400RAG		EW400HAG		EW630EAG		EW630RAG	EW630HAG		EW800EAG		EW800RAG	EW800HAG										
Pole	3	3	4 <sup>2</sup>	3	4	3		3		3	4	3	4	3		3	3	3		3		3											
Rated current	In [A]				125, 150, 160, 175, 200, 225, 250 <sup>*1</sup>				250, 300, 350, 400				500, 600, 630				700, 800																
Rated impulse withstand voltage	Uimp [kV]																																
Isolation compliant	Approved																																
Rated voltage	Ue [V AC]																																
Instantaneous trip type		Rated sensitive current [mA]		30		30		-		-		-		-		-		-		-		-		-									
		Tripping time [s]		0.1		0.1		-		-		-		-		-		-		-		-		-									
Instantaneous/time delay trip type		Rated sensitive current [mA]		100/200/500/1000 changeover		100/200/500/1000 changeover		100/200/500/1000 changeover		100/200/500/1000 changeover		100/200/500/1000 changeover		100/200/500/1000 changeover		100/200/500/1000 changeover		100/200/500/1000 changeover		100/200/500/1000 changeover		100/200/500/1000 changeover											
		Tripping time [s]		0.1/0.4/1/2 changeover		0.1/0.4/1/2 changeover		0.1/0.4/1/2 changeover		0.1/0.4/1/2 changeover		0.1/0.4/1/2 changeover		0.1/0.4/1/2 changeover		0.1/0.4/1/2 changeover		0.1/0.4/1/2 changeover		0.1/0.4/1/2 changeover		0.1/0.4/1/2 changeover											
		Inertia non-tripping time [s]		0/0.2/0.5/1		0/0.2/0.5/1		0/0.2/0.5/1		0/0.2/0.5/1		0/0.2/0.5/1		0/0.2/0.5/1		0/0.2/0.5/1		0/0.2/0.5/1		0/0.2/0.5/1		0/0.2/0.5/1											
Rated frequency	[Hz]																																
Rated breaking capacity Icu/Ics [kA]		CNS5422 IEC60947-2 EN60947-2 JIS8201-2-2		AC		440V		18/9		30/15		50/25		65/17		30/15		36/18		50/25		70/35		36/18		50/25		70/35					
						415V		-																									
						400V		-																									
						380V		-																									
						240V		36/18		50/25		100/50		125/63		50/25		85/43		100/50		125/63		50/25		100/50		125/63					
						230V		-																									
						100V		-																									
						GB14048.2		AC		400V		18/9		30/15		50/25		65/17		30/15		36/18		50/25		70/35							
										230V		36/18		50/25		100/50		125/63		50/25		85/43		100/50		125/63							
Dimensions	[mm]																																
		a		105		105		140		105		140		105		140		140		185		140		185		210		210		210		210	
		b		165		165		165		165		165		257		257		257		257		275		275		275		275		275			
		c		68		68		68		68		68		103		103		103		103		103		103		103		103		103			
		d		95		95		95		95		95		146		146		146		146		146		146		146		146		146			
Mass	[kg]																																
		1.8		1.8		2.3		1.8		2.3		1.8		5.8		5.8		5.8		7.8		5.8		7.8		9.1		9.1		9.1		9.6	
Tripping device	Thermal-magnetic																																

<b>DV series</b> JISC8221 Ann 2)		30AF	
Type	DV32		DV33
Pole	2		3
Rated current	In [A]		
Rated voltage	Ue [V AC]		
Rated sensitive current	[mA]		
Tripping time	[s]		
Rated frequency	[Hz]		
Rated short-time withstand current Icw [kA]	AC200V		1.5
	AC100V		1.5
Dimensions	[mm]		
		a	68
		b	70
		c	40
		d	63
Mass	[kg]		
		0.17	0.24
Tripping device	Ground fault protection only		

\*1 4-pole, 250A Breakers cannot be made. \*2 Contact FUJI.