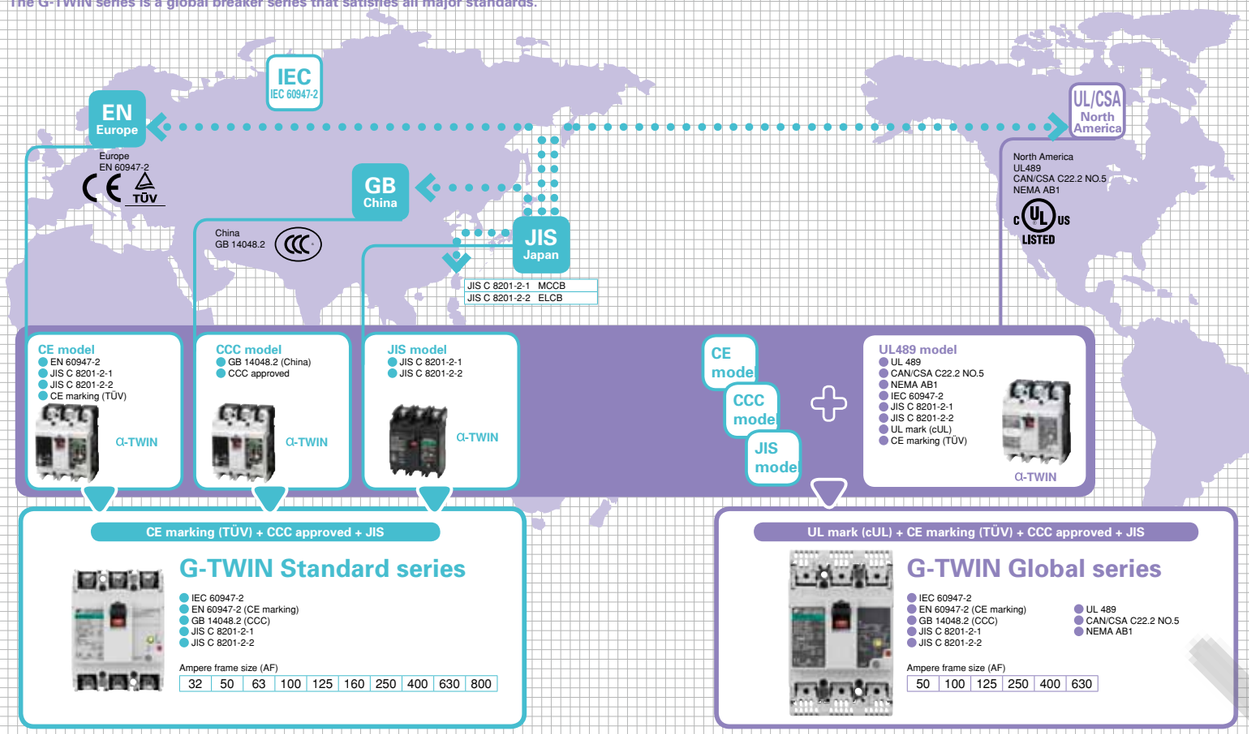
GLOBAL-TWIN

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 MCCB

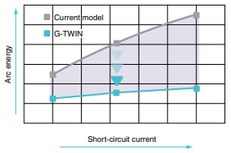
ELCB
Rated voltage 480V
(W105×H181×D68mm)

Same dimentions

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

Technical innovation

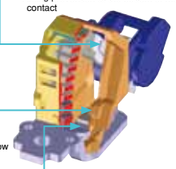
Arc and gas flow control technology
Effect of "ablation breaking technology"



Decrease by 30%!

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

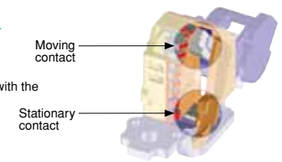
Ecology

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^{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

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

Number of types of internal accessories

AF	α-TWIN	G-TWIN
125	8	8
160/250	8	

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		

e-Front runners

FUJI Earth Leakage Circuit Breakers

ETH132a

Fuji Electric FA Components & Systems Co., Ltd.

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

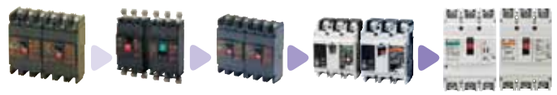
G-TWIN Standard series ELCB

G-TWIN Global series ELCB

Compact & High performance

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

GLOBAL TWIN History



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 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.

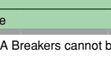
Fuji Electric Taiwan Co.,Ltd.
10F.,No.168,Songjiang Rd.,Taipei City 10459,Taiwan(R.O.C)
Phone: +886-2-2511-1820 Fax: +886-2-2511-1830

2012-3 PDF FOLS ETH132a

FUJI Earth Leakage Circuit Breakers

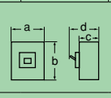
G-TWIN series

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	2	3	3	3	3	3	3	3	3	2	3	3	4*2	3	4	3
Rated current			In [A]	5, 10, 15, 20, 30, (32)*2			3, 5, 10, 15, 20, 30, (32)*2	5, 10, 15, 20, 30, (32)*2, 40, 50				10, 15, 20, 30, (32)*2, 40, 50	60, (63)*2			60, (63)*2, 75, 100	50, 60, (63)*2, 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	6			4	4	6	6				
Isolation compliant				Approved				Approved					Approved			Approved			Approved				
Rated voltage			Ue [V AC]	100-230		100-230-440	100-230-440	100-230		100-230-440	100-230-440	100-230-440	100-230-440			100-230	100-230	100-230-440	100-230-440				
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				
Instanteneous/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]	50-60				50-60					50-60			50-60			50-60				
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	–		–	–	–		–	–	–	–	–	–	–	–	–	50/25		100/50		125/63
			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					
			100V	2.5/2	5/3	5/3		2.5/2	5/3														
	GB14048.2	AC	400V	–		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
			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	50/25		100/50		125/63
Dimensions [mm]			a	50	75	75	75	50	75	75	75	75	75	75	75	75	75		90	120	90	120	90
			b	100		100	100	100		100	100	100	100	100	100	100	100		155		155		155
			c	60		60	60	60		60	60	60	60	60	60	60	60		68		68		68
			d	84		84	84	84		84	84	84	84	84	84	84	84		95		95		95
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		1.3	1.7	1.3	1.7	1.3
Tripping device				Hydraulic-magnetic															Thermal-magnetic				

G-TWIN series

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*2	3	4	3	3	3	3	4	3	4	3	3	3	3	3	3
Rated current			In [A]	125, 150, 160, 175, 200, 225, 250*1						250, 300, 350, 400						500, 600, 630			700, 800		
Rated impulse withstand voltage			Uimp [kV]	6						6						6			6		
Isolation compliant				Approved						Approved						Approved			Approved		
Rated voltage			Ue [V AC]	100-230-440						100-230-440						100-230-440			100-230-440		
Instantaneous trip type	Rated sensitive current		[mA]	30						30						–			–		
	Tripping time		[s]	0.1						0.1						–			–		
Instanteneous/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		
	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		
	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		
Rated frequency			[Hz]	50-60						50-60						50-60			50-60		
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	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	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		36/18	50/25	70/35	36/18	50/25	70/35
			230V	36/18	50/25		100/50		125/63	50/25	85/43	100/50		125/63		50/25	100/50	125/63	50/25	100/50	125/63
Dimensions [mm]			a	105	105	140	105	140	105	140	140	140	185	140	185	210	210	210	210	210	210
			b	165	165		165		165	257	257	257		257		275	275	275	275	275	275
			c	68	68		68		68	103	103	103		103		103	103	103	103	103	103
			d	95	95		95		95	146	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	9.6	9.6
Tripping device				Thermal-magnetic																	

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

DV series

JISC8221 Ann 2)

		30AF	
Type		DV32	DV33
Pole		2	3
Rated current	In [A]	30	
Rated voltage	Ue [V AC]	100-200	
Rated sensitive current	[mA]	15, 30	
Tripping time	[s]	0.1	
Rated frequency	[Hz]	50-60	
Rated short-time withstand current Icw [kA]	AC200V	1.5	1.5
	AC100V		
Dimensions [mm]	a	68	90
	b	70	80
	c	40	40
	d	63	63
Mass	[kg]	0.17	0.24
Tripping device		Ground fault protection only	