



α-TWIN SERIES UL 489 LISTED MOLDED CASE CIRCUIT BREAKERS, EARTH LEAKAGE CIRCUIT BREAKERS

50A Frame ~ 800A Frame
Max Voltage 480V



TÜV Rheinland



The new FUJI UL489 Molded Case Circuit Breaker and Earth Leakage Circuit Breaker (α -TWIN series) provides the ultimate in compact design, unprecedented value, and use anywhere in the world.



50A Frame



100A Frame



225A Frame



400A Frame



600/800A Frame



- ☐ **MORE COMPACT** (especially 50A Frame, 100A Frame, 225A Frame) than any breaker on the market, so control panels take up less space than ever before.
- ☐ **Competitive pricing.**
- ☐ **Conformity to all WORLDWIDE STANDARDS**, including UL / cUL / IEC / CE Marking / JIS.



Fuji's α -TWIN series gives you the features and flexibility you need:

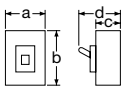
- 1) Suitable for branch circuit protection.
- 2) Rated current of 3-800A, Max 480V.
- 3) Standard type and High interrupting capacities available in identically sized breakers.
- 4) Shunt trip (F), Under voltage release (R) and other accessories available.
- 5) Field installable in Screw, Flat, or Lug terminal constructions.
- 6) Auxiliary switch, Alarm switch, and Shunt trip can be installed in the field.
- 7) Choose Breaker-Mounted (N type) or Panel Door-Mounted (V type), Frange-Mounted (UF type), operating handles.

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Molded Case Circuit Breakers - NEW alpha-Twin, UL489 Listed SA/EA-UL Series

■ Specifications

Frame size (A)			50		100	
Type			SA52RCUL		SA53RCUL	
EA102CUL			EA103CUL			
Appearance (with Screw Terminals, 3 pole)						
Rated insulation voltage (V) (IEC60947-2)			AC 690		690	
Rated voltage (V) (UL489)			AC 240		240	
Rated current (A)			3,5,10,15,20,30,40,50		60,70,75,80,90,100	
Poles			2 3		2 3	
Rated frequency (Hz)			50/60		50/60	
Rated interrupting capacity sym (kA)	UL489 CSA22-2	AC	480Y	-		-
			480Y/277V	-		-
			240V	14		14
	IEC60947-2 [Icu/Ics] JIS C 8201-2	AC	690V	-		-
			600V	5/3		5/3
			500V	7.5/4		7.5/4
			440V	10/5		10/5
			400V	10/5		10/5
			230V	25/13		25/13
		DC	250V	5/3		5/3
Dimensions (mm)			a	50 75	50 75	
b	120		120			
c	60		60			
d	84		84			
Terminal construction	Screw Terminals	NONE				
	Flat Terminals	L1				
	Lug Terminals	L	-		-	
Internal accessories *4	Auxiliary switch	W	BZ6WR10CU	BZ6W□10CU	BZ6WR10CU	BZ6W□10CU
	Auxiliary switch for low current	WD	BZ6WDR10CU	BZ6WD□10CU	BZ6WDR10CU	BZ6WD□10CU
	Alarm switch	K	BZ6KR10CU	BZ6K□10CU	BZ6KR10CU	BZ6K□10CU
	Alarm switch for low current	KD	BZ6KDR10CU	BZ6KD□10CU	BZ6KDR10CU	BZ6KD□10CU
	Auxiliary & Alarm switch	WK	BZ6WKR10CU	BZ6WK□10CU	BZ6WKR10CU	BZ6WK□10CU
	Auxiliary & Alarm switch	WDKD	BZ6WDKDR10CU	BZ6WDKD□10CU	BZ6WDKDR10CU	BZ6WDKD□10CU
	Shunt trip	F	BZ6F□10CU	BZ6F□10CU	BZ6F□10CU	BZ6F□10CU
	Under voltage trip	R	BZ6R□10CAU	BZ6R□10CAU	BZ6R□10CAU	BZ6R□10CAU
	Accessories with terminal block	A	*1	*1	*1	*1
External accessories	Handle locking key, Cap type		Q1	BZ6L10C	BZ6L10C	BZ6L10C
	External Operating Handle		V	BZ6V10C	BZ6V10C	BZ6V10C
			N	BZ6N10CP	BZ6N10CP	BZ6N10CP
	Field Installable	Flat Terminal Kit	BZ-SU20B	BZ-SU20B	BZ-SU25B	BZ-SU25B
	Terminal Kit	Lug Terminal Kit	-	-	-	-
	Terminal Covers *3	for screw, short type	Provided	Provided	Provided	Provided
		for screw, long type	BZ6TB10C2U	BZ6TB10C3U	BZ6TB10C2U	BZ6TB10C3U
		for Flat terminal	-	-	-	-
		for Lug terminal	-	-	-	-
	Insulation Barrier *2			BZ6B10C	BZ6B10C	BZ6B10C
	Mass (kg) (Screw Terminals)		0.4	0.5	0.4	0.5

Notes: *1 For internal accessories with terminal block, specify "A" in the accessory P/N. When 50A Frame & 100A Frame are ordered w/UVT, the UVT is supplied with terminal block as standard. (see page 18, 19)

*2 Insulation barriers are only required with flat terminal.

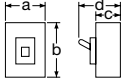
*3 Short terminal covers are supplied as standard. If long terminal covers are required, please order BZ6TB10C2U or BZ6TB10C3U.

*4 These internal accessories can be installed in the field. (see page 18, 19 for part number)

●: Available. -: Not available.

Molded Case Circuit Breakers - NEW alpha-Twin, UL489 Listed SA-UL Series

■ Specifications

Frame size (A)				100				225			
Type				SA102CUL	SA103CUL	SA102RCUL	SA103RCUL	SA202CUL	SA203CUL	SA202RCUL	SA203RCUL
Appearance (with Screw Terminals, 3 pole)											
Rated insulation voltage (V) (IEC60947-2)				AC 690	690		690		690		
Rated voltage (V) (UL489)				AC 240	480Y/277		480Y/277		240		480Y/277V
Rated current (A)				15,20,30,40,50,60,70,75,80,90,100		15,20,30,40,50,60,70,75,80,90,100		125,150,175,200,225		125,150,175,20,225	
Poles				2	3	2	3	2	3	2	3
Rated frequency (Hz)				50/60		50/60		50/60		50/60	
Rated interrupting capacity sym (kA)	UL489 CSA22-2	AC	480Y	-		-		-		-	
			480Y/277V	-		25		-		25	
			240V	35		85		35		85	
	IEC60947-2 [Icu/Ics] JIS C 8201-2	AC	690V	-		-		-		-	
			600V	-		-		-		-	
			500V	15/4		30/8		15/4		15/4	
			440V	25/7		50/13		25/7		25/7	
			400V	30/8		50/13		30/8		30/8	
			230V	50/25		100/50		50/25		50/25	
		DC	250V	15/8		40/20		15/8		15/8	
Dimensions (mm)					a	90	90	105	105		
					b	155	155	165	165		
					c	60	60	60	60		
					d	82	82	84	84		
Terminal construction	Screw Terminals		NONE	●	●	●	●	●	●		
	Flat Terminals		L1	●	●	●	●	●	●		
	Lug Terminals		L	●	●	●	●	●	●		
Internal accessories *3	Auxiliary switch		W	BZ6WR30CU	BZ6W□30CU	BZ6W□30CU	BZ6W□30CU	BZ6W□40CU	BZ6W□40CU	BZ6W□40CU	BZ6W□40CU
	Auxiliary switch for small current		WD	BZ6WDR30CU	BZ6WD□30CU	BZ6WD□30CU	BZ6WD□30CU	BZ6WD□40CU	BZ6WD□40CU	BZ6WD□40CU	BZ6WD□40CU
	Alarm switch		K	BZ6KR30CU	BZ6K□30CU	BZ6K□30CU	BZ6K□30CU	BZ6K□40CU	BZ6K□40CU	BZ6K□40CU	BZ6K□40CU
	Alarm switch for small current		KD	BZ6KDR30CU	BZ6KD□30CU	BZ6KD□30CU	BZ6KD□30CU	BZ6KD□40CU	BZ6KD□40CU	BZ6KD□40CU	BZ6KD□40CU
	Auxiliary & Alarm switch		WK	BZ6WKR30CU	BZ6WK□30CU	BZ6WK□30CU	BZ6WK□30CU	BZ6WK□40CU	BZ6WK□40CU	BZ6WK□40CU	BZ6WK□40CU
	Auxiliary & Alarm switch		WDKD	BZ6WDKDR30CU	BZ6WDKD□30CU	BZ6WDKD□30CU	BZ6WDKD□30CU	BZ6WDKD□40CU	BZ6WDKD□40CU	BZ6WDKD□40CU	BZ6WDKD□40CU
	Shunt trip		F	BZ6F□30CU	BZ6F□30CU	BZ6F□30CU	BZ6F□30CU	BZ6F□40CU	BZ6F□40CU	BZ6F□40CU	BZ6F□40CU
	Under voltage trip		R	▲	▲	▲	▲	▲	▲	▲	▲
	Accessories with terminal block		A	*1	*1	*1	*1	*1	*1	*1	*1
External accessories	Handle locking key, Cap type		Q1	BZ6L30C	BZ6L30C	BZ6L30C	BZ6L30C	BZ6L40C	BZ6L40C	BZ6L40C	BZ6L40C
	External Operating Handle		V	BZ6V30C	BZ6V30C	BZ6V30C	BZ6V30C	BZ6V40C	BZ6V40C	BZ6V40C	BZ6V40C
			N	BZ6N30CP	BZ6N30CP	BZ6N30CP	BZ6N30CP	BZ6N40CP	BZ6N40CP	BZ6N40CP	BZ6N40CP
	Field Installable	Flat Terminal Kit		BZ6SU35B	BZ6SU35B	BZ6SU35B	BZ6SU35B	BZ6SU50B	BZ6SU50B	BZ6SU50B	BZ6SU50B
	Terminal Kit	Lug Terminal Kit		BZ6TA100	BZ6TA100	BZ6TA100	BZ6TA100	BZ6TA225	BZ6TA225	BZ6TA225	BZ6TA225
	Covers	for screw, short type		BZ-TS30B-3	BZ-TS30B-3	BZ-TS30B-3	BZ-TS30B-3	BZ-TS40B	BZ-TS40B	BZ-TS40B	BZ-TS40B
		for screw, long type		BZ-TB30B-3	BZ-TB30B-3	BZ-TB30B-3	BZ-TB30B-3	BZ-TB40B	BZ-TB40B	BZ-TB40B	BZ-TB40B
		for Flat terminal		BZ-TL30B-3	BZ-TL30B-3	BZ-TL30B-3	BZ-TL30B-3	BZ-TL40B	BZ-TL40B	BZ-TL40B	BZ-TL40B
		for Lug terminal		BZ-TB30B-3	BZ-TB30B-3	BZ-TB30B-3	BZ-TB30B-3	BZ-TB40B	BZ-TB40B	BZ-TB40B	BZ-TB40B
Insulation Barrier *2			BZ6B30CU	BZ6B30CU	BZ6B30CU	BZ6B30CU	BZ6B40CU	BZ6B40CU	BZ6B40CU	BZ6B40CU	
Mass (kg) (Screw Terminals)				1.1	1.2	1.1	1.2	1.1	1.3	1.1	1.3

Notes: *1 For internal accessories with terminal block, specify "A" in the accessory P/N. (see page 18, 19)

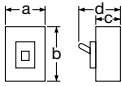
*2 Insulation barriers are only required with flat terminal.

*3 These internal accessories can be installed in the field. (see page 18, 19 for part number)

●: Available. -: Not available. ▲: Factory-mounted accessory.

Molded Case Circuit Breakers - NEW alpha-Twin, UL489 Listed SA-UL Series

■ Specifications

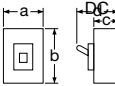
Frame size (A)				400				600				800			
Type				SA402CUL		SA403CUL		SA402RCUL		SA403RCUL		SA603RCUL		SA803RCUL	
Appearance (with Screw Terminals, 3 pole)															
Rated insulation voltage (V) (IEC60947-2)				AC 690				690				690			
Rated voltage (V) (UL489)				AC 240				480				480			
Rated current (A)				250,300,350,400				250,300,350,400				500,600		700,800	
Poles				2		3		2		3		3		3	
Rated frequency (Hz)				50/60				50/60				50/60		50/60	
Rated interrupting capacity sym (kA)	UL489 CSA22-2	AC	480Y	25				50				50		50	
			480Y/277V	25				50				50		50	
			240V	42				85				85		85	
	IEC60947-2 [Icu/Ics] JIS C 8201-2	AC	690V	—				—				—		—	
			600V	—				30/15				30/15		30/15	
			500V	22/11				35/18				35/18		35/18	
			440V	35/18				50/25				50/25		50/25	
			400V	35/18				50/25				50/25		50/25	
			230V	50/25				85/43				85/43		85/43	
		DC	250V	20				40/20				40/20		40/20	
Dimensions (mm) 			a	140				140				210		210	
			b	257				257				275		275	
			c	103				103				103		103	
			d	146				146				146		146	
Terminal construction	Screw Terminals		NONE	—				—				—		—	
	Flat Terminals		L1	●				●				●		●	
	Lug Terminals		L	●				●				●		●	
Internal accessories	Auxiliary switch		W	▲		▲		▲		▲		▲		▲	
	Auxiliary switch for small current		WD	▲		▲		▲		▲		▲		▲	
	Alarm switch		K	▲		▲		▲		▲		▲		▲	
	Alarm switch for small current		KD	▲		▲		▲		▲		▲		▲	
	Auxiliary & Alarm switch		WK	▲		▲		▲		▲		▲		▲	
	Auxiliary & Alarm switch		WDKD	▲		▲		▲		▲		▲		▲	
	Shunt trip		F	▲		▲		▲		▲		▲		▲	
	Under voltage trip		R	▲		▲		▲		▲		▲		▲	
	Accessories with terminal block		A	*1		*1		*1		*1		*1		*1	
External accessories	Handle locking key, Cap type		Q1	▲		▲		▲		▲		▲		▲	
	External Operating Handle		V	BZ6V60C		BZ6V60C		BZ6V60C		BZ6V60C		BZ6V70C		BZ6V70C	
			N	BZ6N60CP		BZ6N60CP		BZ6N60CP		BZ6N60CP		BZ6N70CP		BZ6V70CP	
			Field Installable Terminal Kit	Flat Terminal Kit	BZ-SU60B		BZ-SU60B		BZ-SU60B		BZ-SU60B		BU-SU70B-600		BZ-SU70B-800
	Lug Terminal Kit	BZ6TA350 (up to 350A) BZ6TA400 (400A)		BZ6TA350 (up to 350A) BZ6TA400 (400A)		BZ6TA350 (up to 350A) BZ6TA400 (400A)		BZ6TA350 (up to 350A) BZ6TA400 (400A)		BZ-TA600		BZ-TA700 (700A) BZ-TA800 (800A)			
	Terminal Covers		BZ-TB60B		BZ-TB60B		BZ-TB60B		BZ-TB60B		BZ-TB70B		BZ-TB70B		
	Insulation Barrier		B-43A		B-43A		B-43A		B-43A		B-43A		B-43A		
	Mass (kg) (Screw Terminals)			4.5		5		4.5		5		9		10	

Notes: *1 For internal accessories with terminal block, specify "A" in the accessory P/N. (see page 18, 19)

●: Available. -: Not available. ▲: Factory-mounted accessory.

Earth Leakage Circuit Breakers - NEW alpha-Twin, UL489 Listed SG/EG-UL Series

■ Specifications

Frame size (A)			50	100				
Type			SG53RCUL	EG102CUL	EG103CUL	SG103CUL		
Appearance (with Screw Terminals, 3 pole)								
Rated insulation voltage (V) (IEC60947-2)			AC 440	440	440	440		
Rated voltage (V) (UL489)			AC 240	240	240	240		
Rated current (A)			3, 5, 10, 15, 20, 30,40,50	60,70,75,80,90,100	60,70,75,80,90,100	32,40, 50, 65, 75, 100		
Rated Sensitive Current (mA)			30, 100/200/500	30, 100/200	30, 100/200/500	30, 100/200/500		
Poles			3	2	3	3		
Rated frequency (Hz)			50/60	50/60	50/60	50/60		
Rated interrupting capacity sym (kA)	UL489 CSA22-2	AC	480Y	—	—	—		
			480Y/277V	—	—	—		
			240V	14	14	14		
	IEC60947-2 [Icu/Ics]	AC	500V	—	—	—		
			440V	10/5	—	10/5		
			415V	10/5	—	10/5		
			380V	10/5	—	10/5		
			230V	25/13	10/5	25/13		
			100V	25/13	10/5	25/13		
Dimensions (mm)				a	75	75	75	90
				b	120	120	120	155
				c	60	60	60	60
				d	84	84	84	82
Terminal construction	Screw Terminals		NONE	●	●	●	●	
	Flat Terminals		L1	●	●	●	—	
	Lug Terminals		L	—	—	—	—	
Internal accessories *4	Auxiliary switch		W	BZ6W□10CU	BZ6W□10CU	BZ6W□10CU	BZ6W□30CU	
	Alarm switch		K	BZ6K□10CU	BZ6K□10CU	BZ6K□10CU	BZ6K□30CU	
	Shunt trip		F	BZ6F□10CAU	BZ6F□10CAU	BZ6F□10CAU	▲	
	Under voltage trip		R	BZ6R□10CAU	BZ6R□10CAU	BZ6R□10CAU	▲	
	Accessories with terminal block		A	*1	*1	*1	*1	
External accessories	Handle locking key, Cap type		Q1	BZ6L10C	BZ6L10C	BZ6L10C	BZ6L30C	
	External Operating Handle		V	BZ6V10C	BZ6V10C	BZ6V10C	BZ6V30C	
			N	BZ6N10CP	BZ6N10CP	BZ6N10CP	BZ6N30CP	
	Field Installable			BU-SU20B	BU-SU20B	BU-SU20B	BZ6SU35B	
	Terminal Kit	Flat Terminal Kit	—	—	—	—	BZ6TA100	
	Covers *3	for screw, short type	Provided	Provided	Provided	—	BZ-TS30B-3	
		for screw, long type	BZ6TB10C3U	BZ6TB10C3U	BZ6TB10C3U	—	BZ-TB30B-3	
		for Flat terminal	—	—	—	—	BZ-TL30B-3	
		for Lug terminal	—	—	—	—	—	
	Insulation Barrier *2			BZ6TB10C	BZ6TB10C	BZ6TB10C	BZ6B30CU	
	Mass (kg) (Screw Terminals)			0.6	0.6	0.6	1.5	

Notes: *1 For internal accessories with terminal block, specify "A" in the accessory P/N. When 50A Frame & 100A Frame are ordered w/UVT, the UVT is supplied with terminal block as standard. (see page 18, 19)

*2 Insulation barriers are only required with flat terminal.

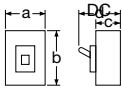
*3 Short terminal covers are supplied as standard. If long terminal covers are required, Please order BZ6TB10C2U or BZ6TB10C3U.

*4 These internal accessories can be installed in the field. (see page 18, 19 for part number)

●: Available. —: Not available. ▲: Factory-mounted accessory.

Earth Leakage Circuit Breakers - NEW alpha-Twin, UL489 Listed SG-UL Series

■ Specifications

Frame size (A)			225	400	
Type			SG203CUL	SG403CUL	
Appearance (with Screw Terminals, 3 pole)					
Rated insulation voltage (V) (IEC60947-2)			AC 440	440	
Rated voltage (V) (UL489)			AC 240	240	
Rated current (A)			125, 150, 175, 200, 225	250, 300, 350, 400	
Rated Sensitive Current (mA)			30, 100/200/500	30, 100/200/500	
Poles			3	3	
Rated frequency (Hz)			50/60	50/60	
Rated interrupting capacity sym (kA)	UL489 CSA22-2	AC	480Y	—	
			480Y/277V	—	
			240V	35	
	IEC60947-2 [Icu/Ics]	AC	500V	—	
			440V	25/7	
			415V	25/7	
			380V	25/7	
			230V	50/13	
			100V	50/13	
	Dimensions (mm)				a 105 b 165 c 60 d 84
Terminal construction	Screw Terminals		NONE	●	—
	Flat Terminals		L1	—	●
	Lug Terminals		L	—	—
Internal accessories	Auxiliary switch		W	BZ6W□40CU	▲
	Alarm switch		K	BZ6K□40CU	▲
	Shunt trip		F	▲	▲
	Under voltage trip		R	▲	▲
	Accessories with terminal block		A	*1	*1
External accessories	Handle locking key, Cap type		Q1	BZ6L40C	▲
	External Operating Handle		V	BZ6V40C	BZ6V60C
			N	BZ6N40CP	BZ6N60CP
	Field Installable	Flat Terminal Kit	BZ6SU50B		—
	Terminal Kit	Lug Terminal Kit	BZ6TA225		—
	Terminal Covers	for screw, short type	BZ-TS40B		—
		for screw, long type	BZ-TB40B		BZ-TB60B
		for Flat terminal	BZ-TL40B		—
		for Lug terminal	—		—
Insulation Barrier			BZ6B40CU	B-43A	
Mass (kg) (Screw Terminals)			1.5	5.6	

Notes: *1 For internal accessories with terminal block, specify "A" in the accessory P/N. (see page 18, 19)

●: Available. —: Not available. ▲: Factory-mounted accessory.

Molded Case Circuit Breakers - NEW alpha-Twin, UL489 Listed SA-UL Series Earth Leakage Circuit Breakers - NEW alpha-Twin, UL489 Listed SG-UL Series

■ Part Number

SA-UL; MCCB

SA103CUL / 100 L1 Q1

Product category _____

Rated current (A) _____

Terminal structure _____

Handle locking cover for lockout
(Cap type)

Cap type (Q1) is applicable for 400-800A Frame. For 225A Frame or smaller, order the Handle Lock cover separately

Terminal construction for SA-UL series

Code	Line side	Load side	SA52RCUL, SA53RCUL EA102CUL, EA103CUL	SA102CUL, SA103CUL SA102RCUL, SA103RCUL	SA202CUL, SA203CUL SA203RCUL, SA203RCUL	SA402CUL, SA403CUL SA402RCUL, SA403RCUL	SA603RUL SA803RUL/700	SA803RUL/800
None	-	-	●	●	-	-	-	-
L	Lug	Lug	-	●	●	●	●	●
L1	Flat	Flat	●	●	●	●	●	-

SA-UL; ELCB

SG103CUL / 100-30MA L1 Q1

Product category _____

Rated current (A) _____

Rated sensitive current (mA) _____

Handle locking cover for lockout
(Cap type)

Cap type (Q1) is applicable for 400-800A Frame. For 225A Frame or smaller, order the Handle Lock cover separately

Code	Line side	2 poles	3 poles
30MA	30mA	●	●
CO	100/200mA changeable	●	-
CO	100/200/500mA changeable	-	●

Terminal structure _____

Code	Line side	Load side	SG53RCUL, EG103CUL	SG103CUL	SG203CUL	SG403CUL
None	-	-	●	●	●	-
L1	Flat	Flat	●	●	●	●

ACCESSORIES

For up to 225AF

- Auxiliary switches & Alarm switches

BZ6 WK L 30C A U

Product category _____

Type of accessory _____

W; Auxiliary switch

WD; Auxiliary switch
(for Small current)

K; Alarm switch

KD; Alarm switch
(for Small current)

Installation, _____

L; Left side of the breaker

R; Right side of the breaker

UL listed

Method of connection.

None; Lead wire

A; with terminal block

Applicable frame size

10C; 50AF, 100AF(EA&EG10_CUL)

30C; 100AF

40C; 225AF

- Shunt trip & Undervoltage trip devices

BZ6 F S 30C A U

Product category _____

Type of accessory _____

F; Shunt trip device

R; Undervoltage trip device

Operating voltage, _____

For details, see page 18, 19.

UL listed

Method of connection.

None; Lead wire

A; with terminal block

Applied frame size

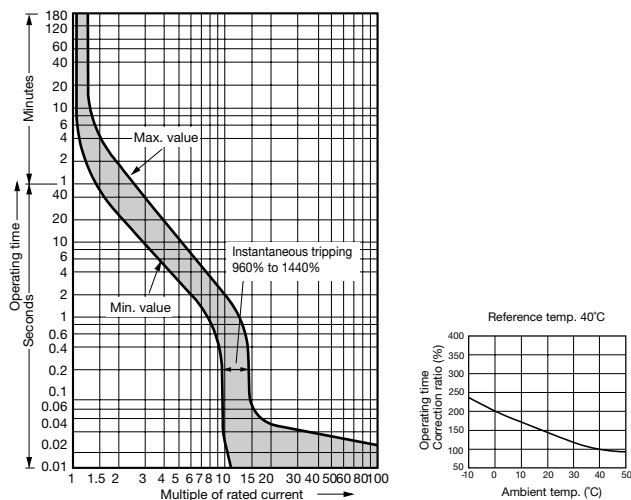
10C; 50AF, 100AF(EA&EG10_CUL)

30C; 100AF

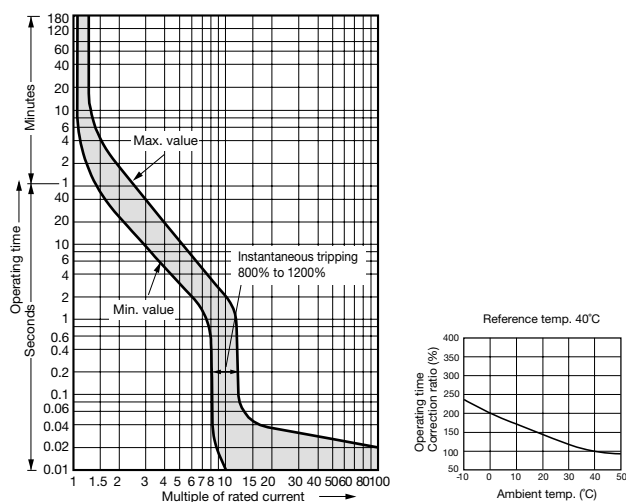
40C; 225AF

■ Characteristic Curves

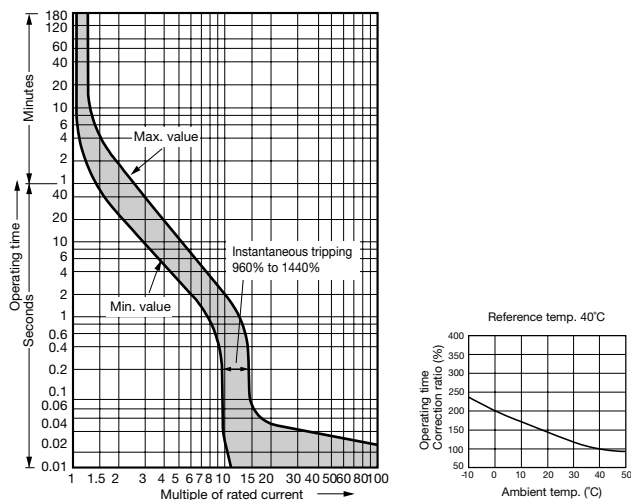
● SA52RCUL, SA53RCUL, SG53RCUL (Rated current: 5A, 10A, 40A)



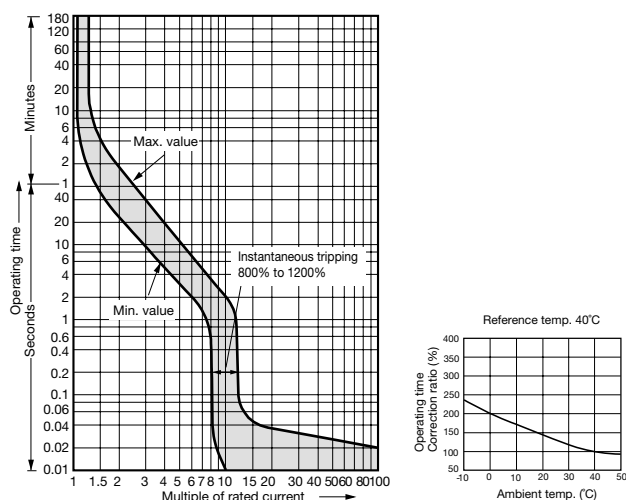
● SA52RCUL, SA53RCUL, SG53RCUL (Rated current: 3A, 15A, 20A, 30A, 50A)



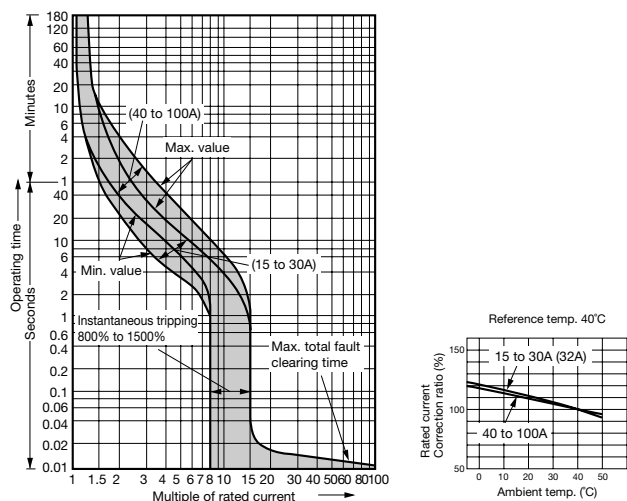
● EA102CUL, EA103CUL, EG102CUL, EG103CUL (Rated current: 60A, 75A)



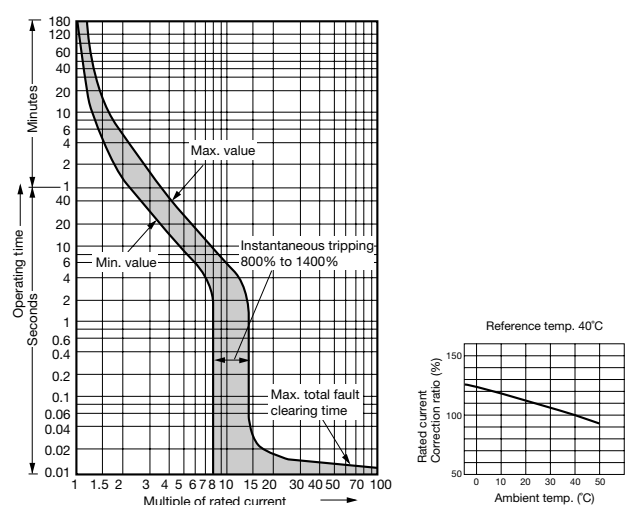
● EA102CUL, EA103CUL, EG102CUL, EG103CUL (Rated current: 100A)



● SA102CUL, SA103CUL, SA102RCUL, SA103RCUL

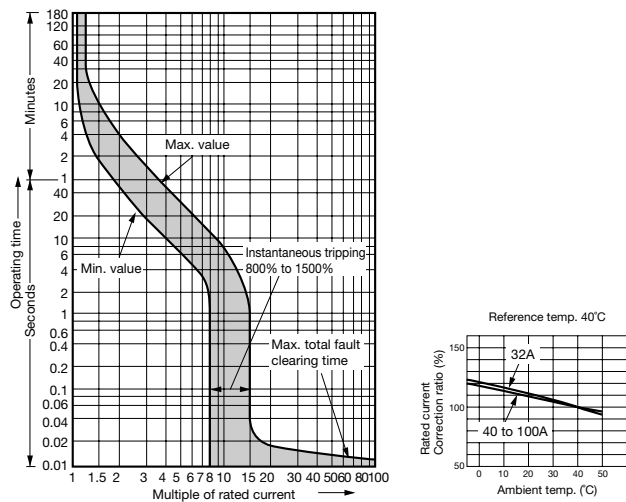


● SA202CUL, SA203CUL, SA202RCUL, SA203RCUL

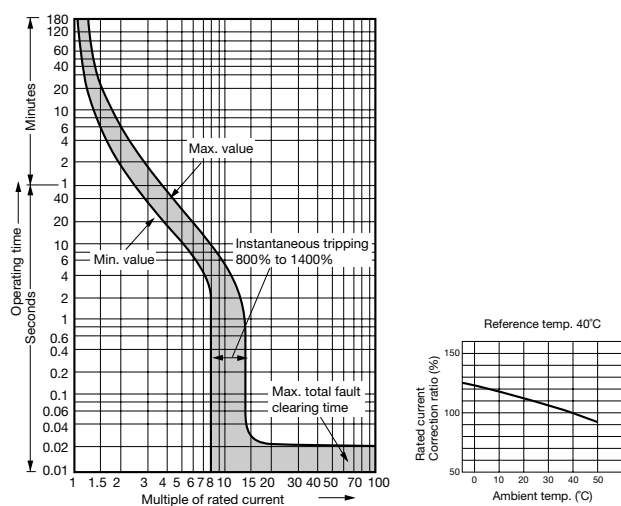


■ Characteristic Curves

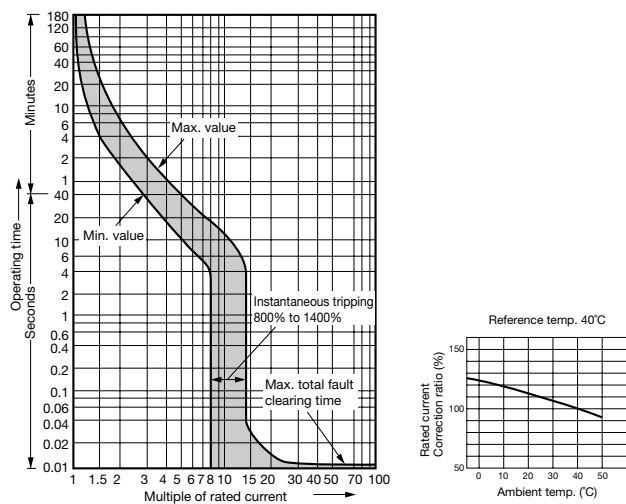
● SG103CUL



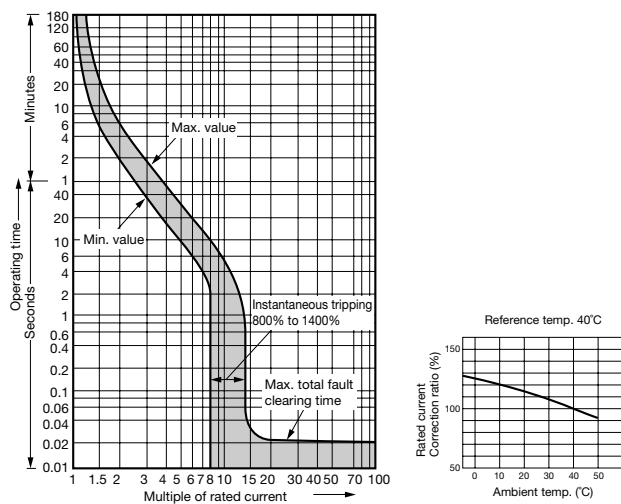
● SG203CUL



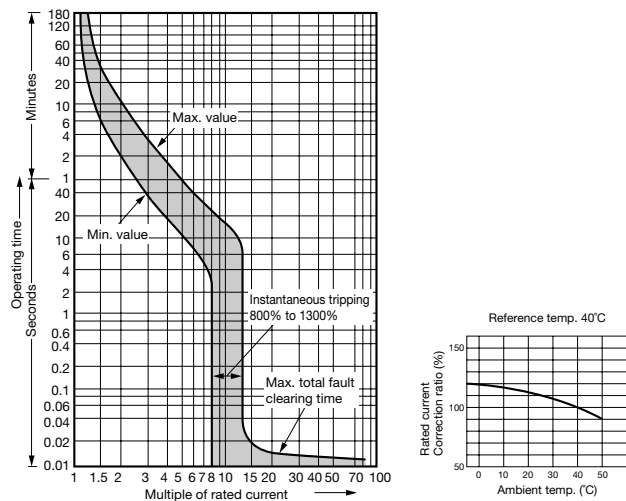
● SA402CUL, SA403CUL, SA402RCUL, SA403RCUL



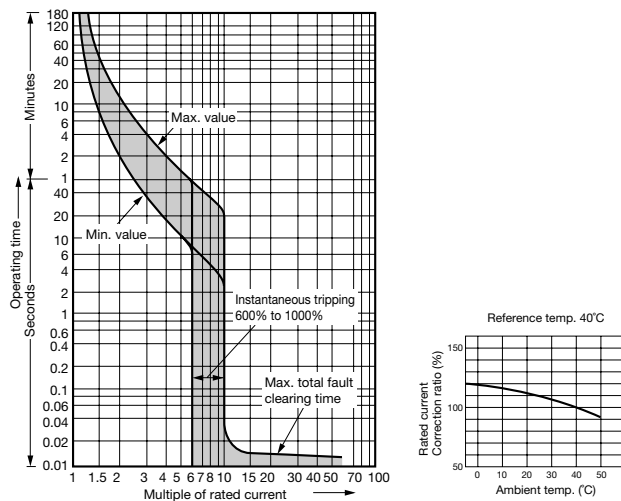
● SG403CUL



● SA603RCUL

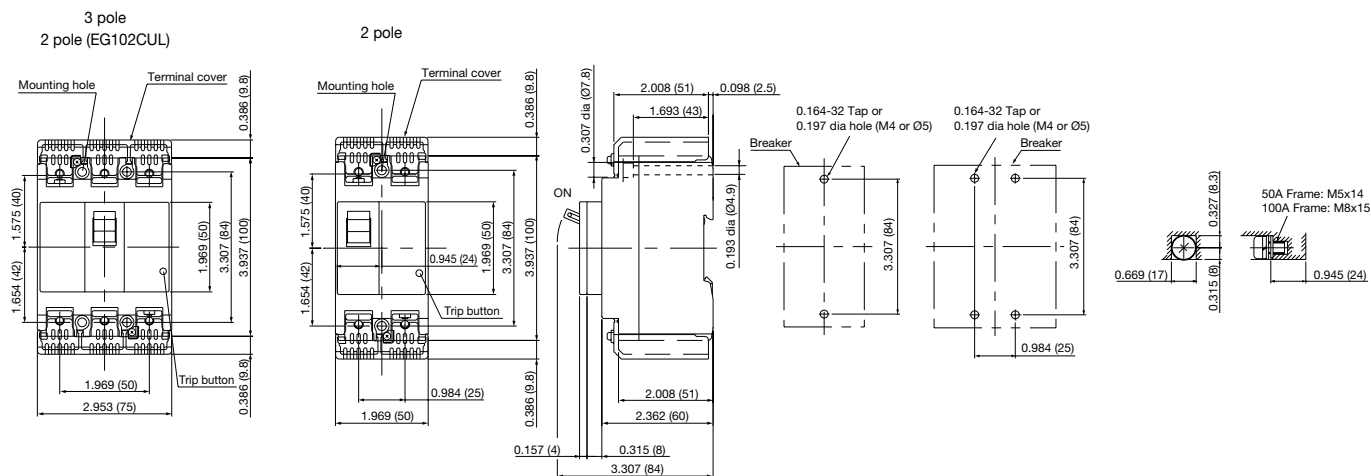


● SA803RCUL

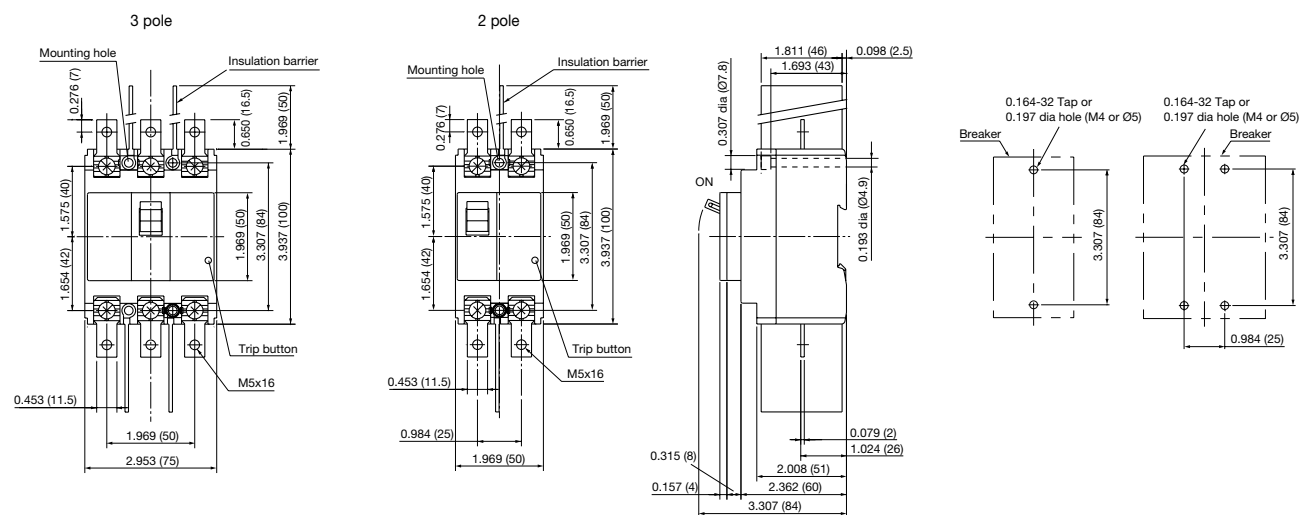


■ Dimensions unit: inch (mm)

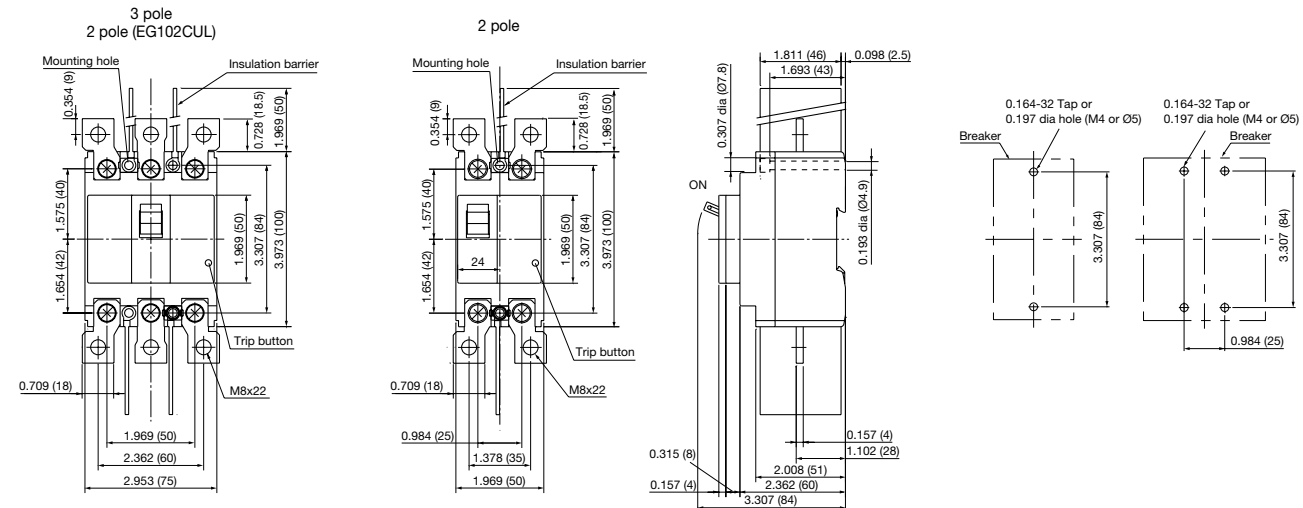
● SA52RCUL/□, SA53RCUL/□, SG53RCUL/□, EA102CUL/□, EA103CUL/□, EG102CUL/□, EG103CUL/□



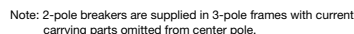
● SA52RCUL/□L1, SA53RCUL/□L1, SG53RCUL/□L1



● EA102CUL/□L1, EA103CUL/□L1, EG102CUL/□L1, EG103CUL/□L1



● SA102CUL/□, SA103CUL/□, SA102RCUL/□, SA103RCUL/□



Technical drawings of the 2-pole breaker assembly, including side, front, and detail views with dimensions in inches and millimeters.

Side View Dimensions:

- Top width: 2.205(56)
- Top width: 2.283(58)
- Top width: 0.059(1.5)
- Top width: 0.177 dia(Ø4.5)
- Top width: 0.335 dia(Ø8.5)
- Bottom width: 0.039(1)
- Bottom width: 2.008(51)
- Bottom width: 0.236(6)
- Bottom width: 2.362(60)
- Bottom width: 0.079(2)
- Bottom width: 3.228(82)

Front View Dimensions:

- Top width: 3.346(85)
- Top width: 1.358(34.5)
- Top width: 1.969(50)
- Top width: 1.969(50)
- Top width: 4.016(102)
- Top width: 5.315(135)
- Top width: 6.102(155)
- Top width: 3.701(94)
- Top width: 0.492(12.5)
- Top width: 0.866(22)
- Top width: 2.362(60)
- Top width: 3.543(90)
- Top width: 0.531(13.5)

Detail View Dimensions:

- Top width: 0.164-32 Tap or 0.197 Diameter (M4 or Ø5)
- Top width: 5.197(132)
- Top width: 1.181(30)
- Top width: 3.425(87) or more
- Top width: 2.047(52) or more

Labels:

- Interphase barrier
- Mounting hole
- P.C.B box (Power)
- Residual breaking indicator
- Sensitive current selective switch (Change over type)
- Breaker
- Panel drilling
- Front panel cutting
- ON
- Trip button
- Test button

Note: 2-pole breakers are supplied in 3-pole frames with current carrying parts omitted from center pole.

Technical drawings of a 2-pole circuit breaker assembly, showing dimensions in inches (in) and millimeters (mm).

Front View (Left):

- Mounting hole: 3.346 (85)
- Insulation barrier: 3.362 (80)
- RC: 2.283 (58)
- C: 1.969 (50)
- 0.866 (22)
- 1.969 (50)
- 0.65 (16.5)
- 4.016 (102)
- 5.315 (135)
- 6.102 (155)
- 0.669 (17)
- 3.543 (90)
- M8x22
- Trip button
- 0.807 (20.5)
- 0.335 (8.5)

Side View (Middle):

- 2.205 (56)
- 2.283 (58)
- 0.059 (1.5)
- 1.102 (28)
- 0.157 (4)
- 0.335 dia (Ø8.5)
- 1.850 (47)
- 0.177 dia (Ø4.5)
- 0.157 (4)
- 1.102 (28)
- 0.236 (6)
- 3.228 (82)
- 0.079 (2)

Panel View (Right):

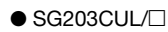
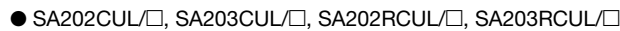
- 0.164-32 tap or 0.197 dia hole (M4 or Ø5)
- Breaker
- R0.078 (R2) or less
- 5.197 (132)
- 1.181 (30)
- 3.425 (87) or more
- 2.047 (52) or more

Panel drilling

Front panel cutting

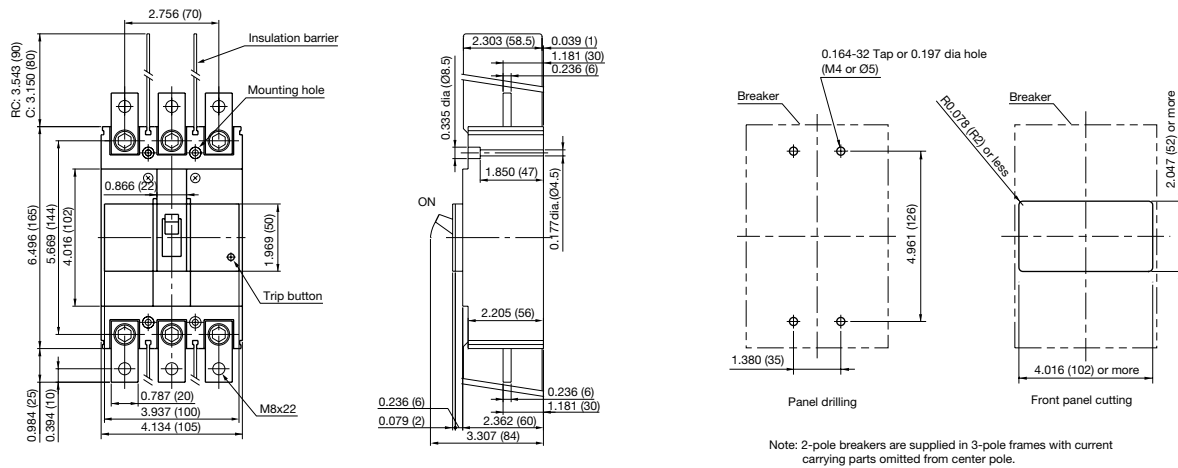
Note: 2-pole breakers are supplied in 3-pole frames with current carrying parts omitted from center pole.

● SA102CUL/□L, SA103CUL/□L, SA102RCUL/□L, SA103RCUL/□L

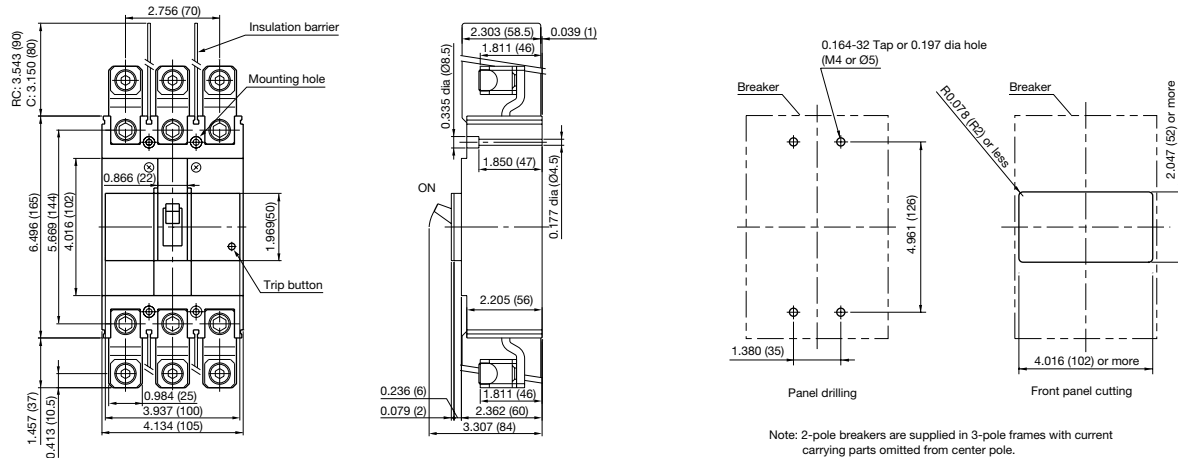


■ Dimensions unit: inch (mm)

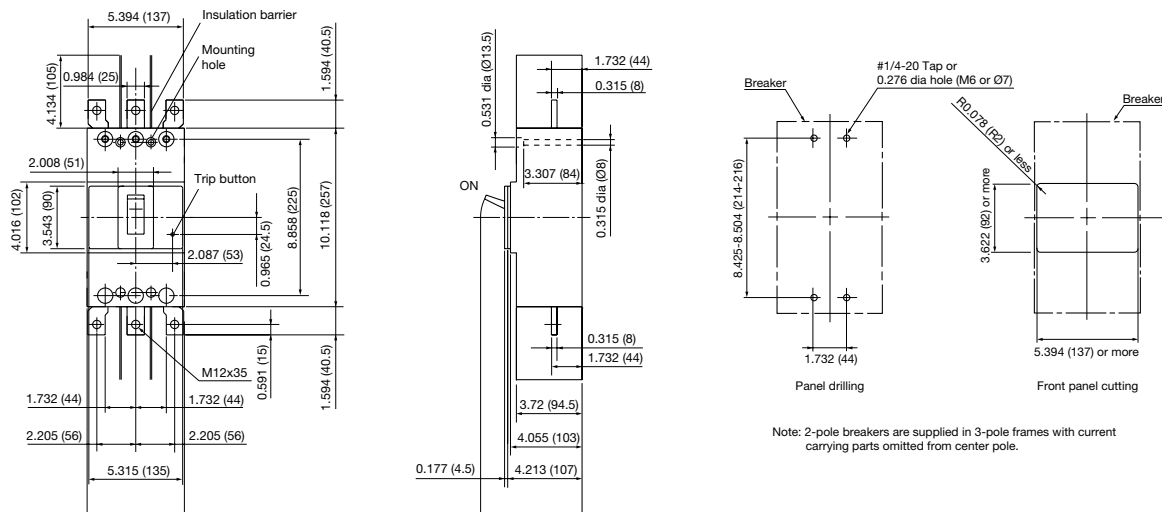
● SA202CUL/□L1, SA203CUL/□L1, SA202RCUL/□L1, SA203RCUL/□L1



● SA202CUL/□L, SA203CUL/□L, SA202RCUL/□L, SA203RCUL/□L

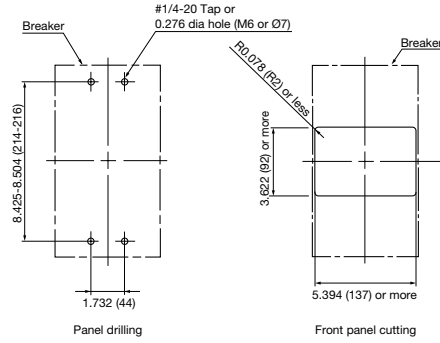
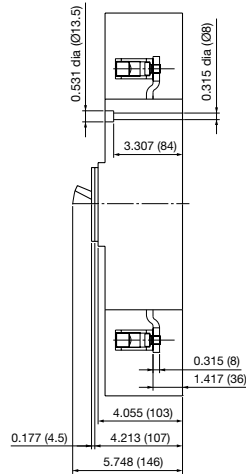
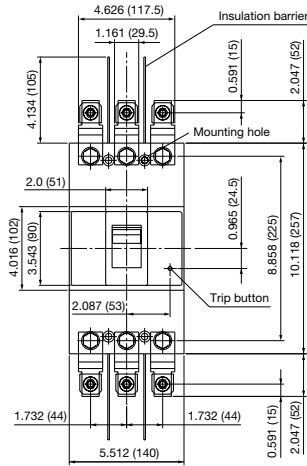


● SA402CUL/□L1, SA403CUL/□L1, SA402RCUL/□L1, SA403RCUL/□L1, SG403CUL/□L1



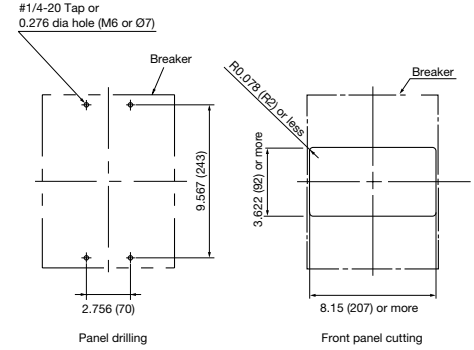
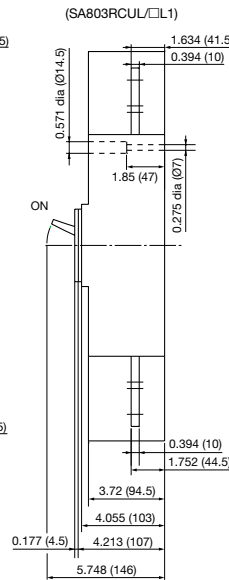
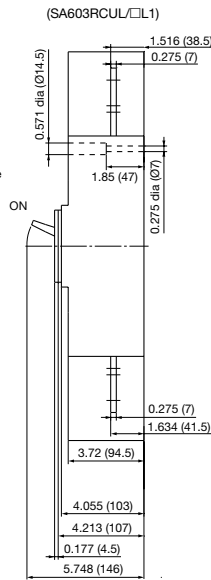
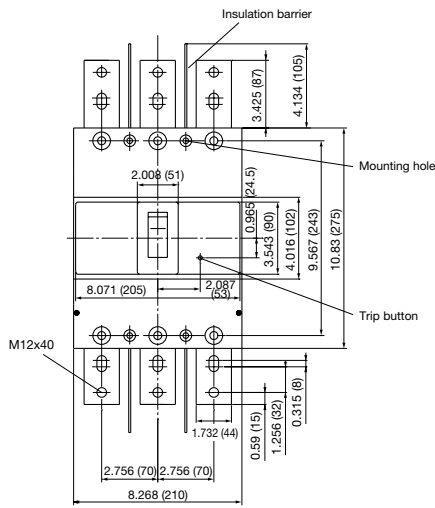
■ Dimensions unit: inch (mm)

● SA402CUL/□L, SA403CUL/□L, SA402RCUL/□L, SA403RCUL/□L



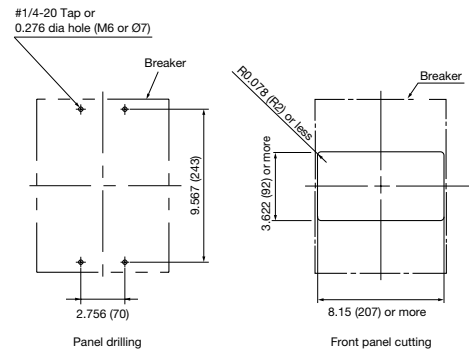
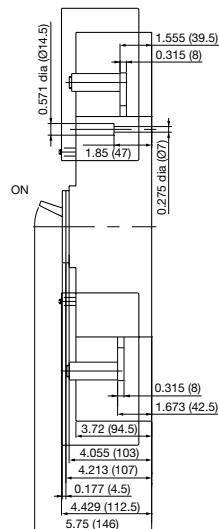
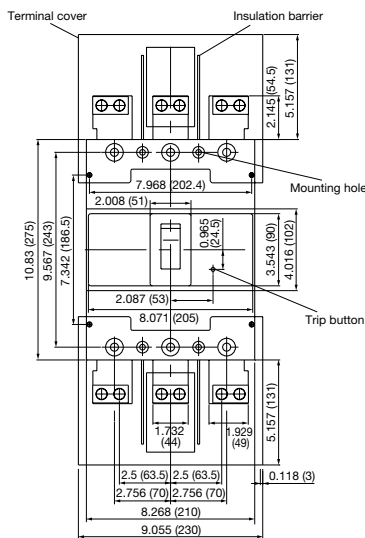
Note: 2-pole breakers are supplied in 3-pole frames with current carrying parts omitted from center pole.

● SA603RCUL/□L1, SA803RCUL/□L1

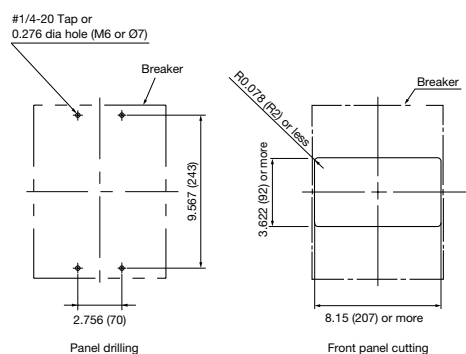
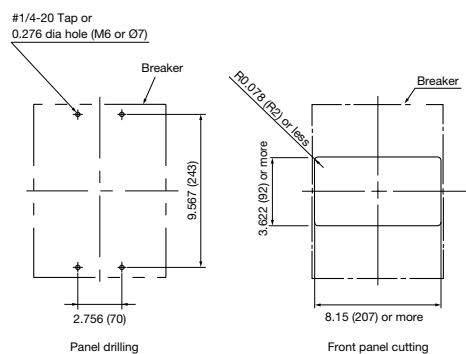


Note: 2-pole breakers are supplied in 3-pole frames with current carrying parts omitted from center pole.

● SA603RCUL/□L

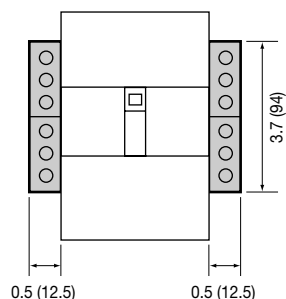


● SA803RCUL/700L

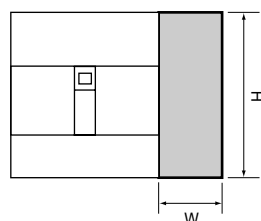
[illegible]

■ Dimensions of terminal blocks for internal accessories: inch (mm)

50 to 225A Frame

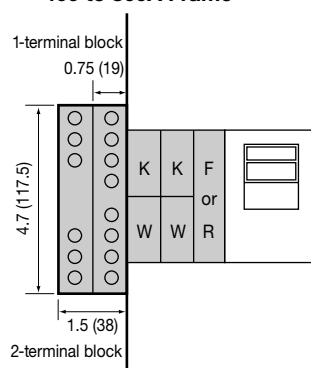


Dimensions of Undervoltage/Shunt trip device

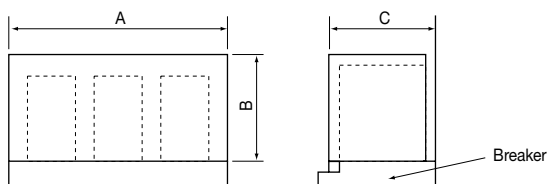


Breakers	W x H
SA52RCUL, EA102CUL	1.0 (25) x 3.94 (100)
SA53RCUL, EA103CUL SG53RCUL, EG102CUL, EG103CUL	1.0 (25) x 3.94 (100)
SA102CUL, SA103CUL, SG103CUL SA102RCUL, SA103RCUL	1.0 (25) x 5.04 (128)
SA202CUL, SA203CUL, SG203CUL SA202RCUL, SA203RCUL	1.0 (25) x 5.04 (128)

400 to 800A Frame



■ Dimensions of terminal covers: inch (mm)



For Screw Terminals				For Lug Terminals				For Flat Terminals				Applicable Breakers
Type	A	B	C	Type	A	B	C	Type	A	B	C	
BZ6TS10C2U (Short)	1.969 (50)	0.386 (9.8)	2.106 (53.5)	-	-	-	-	-	-	-	-	SA52RCUL, EA102CUL
BZ6TB10C2U (Long)	1.969 (50)	1.575 (40)	2.106 (53.5)									
BZ6TS10C3U (Short)	2.953 (75)	0.386 (9.8)	2.106 (53.5)	-	-	-	-	-	-	-	-	SA53RCUL, EA103CUL SG53RCUL, EG102CUL, EG103CUL
BZ6TB10C3U (Long)	2.953 (75)	1.575 (40)	2.106 (53.5)									
BZ-TS30B-3	3.55 (90)	0.4 (10)	2.3 (58.5)	BZ-TB30B-3	3.55 (90)	1.58 (40)	2.3 (58.5)	BZ-TL30B-3	3.54 (90)	2.36 (60)	2.3 (58.5)	SA102CUL, SA103CUL, SG103CUL SA102RCUL, SA103RCUL
BZ-TS40B	4.13 (105)	0.4 (10)	2.3 (58.5)	BZ-TB40B	4.13 (105)	1.97 (50)	2.3 (58.5)	BZ-TL40B	4.13 (105)	2.95 (75)	2.3 (58.5)	SA202CUL, SA203CUL, SG203CUL SA202RCUL, SA203RCUL
-	-	-	-	BZ-TB60B	7.48 (190)	4.57 (116)	3.84 (97.5)	BZ-TB60B	7.48 (190)	4.57 (116)	3.84 (97.5)	SA402CUL, SA403CUL SA402RCUL, SA403RCUL
-	-	-	-	comes with breaker	9.06 (230)	5.157 (131)	3.84 (97.5)	BZ-TB70B	9.06 (230)	5.32 (135)	3.84 (97.5)	SA603RCUL SA803RCUL

■ Internal Accessories

● Auxiliary Switches and Alarm Switches

Part number

Lead wire type		SA52RCUL, SA53RCUL, SG52RCUL, SG53RCUL EA102CUL, EA103CUL EG103CUL		SA102CUL, SA103CUL SA102RCUL, SA103RCUL SG103CUL		SA202CUL, SA203CUL SA202RCUL, SA203RCUL SG203CUL	
		Left side	Right side	Left side	Right side	Left side	Right side
Aux	W	BZ6WL10CU* ¹	BZ6WR10CU	BZ6WL30CU	BZ6WR30CU* ²	BZ6WL40CU	BZ6WR40CU* ²
	WD	BZ6WDL10CU* ¹	BZ6WDR10CU	BZ6WDL30CU	BZ6WDR30CU* ²	BZ6WDL40CU	BZ6WDR40CU* ²
Alarm	K	BZ6KL10CU* ¹	BZ6KR10CU	BZ6KL30CU	BZ6KR30CU* ²	BZ6KL40CU	BZ6KR40CU* ²
	KD	BZ6KDL10CU* ¹	BZ6KDR10CU	BZ6KDL30CU	BZ6KDR30CU* ²	BZ6KDL40CU	BZ6KDR40CU* ²
Aux, Alarm	WK	BZ6WKL10CU* ¹	BZ6WKR10CU	BZ6WKL30CU	BZ6WKR30CU* ²	BZ6WKL40CU	BZ6WKR40CU* ²
	WDKD	BZ6WDKDL10CU* ¹	BZ6WDKDR10CU	BZ6WDKDL30CU	BZ6WDKDR30CU* ²	BZ6WDKDL40CU	BZ6WDKDR40CU* ²
		*1: For 3 pole type only.		*2: For MCCB's only		*2: For MCCB's only	
With terminal block type		SA52RCUL, SA53RCUL, SG52RCUL, SG53RCUL EA102CUL, EA103CUL EG103CUL		SA102CUL, SA103CUL SA102RCUL, SA103RCUL SG102CUL, SG103CUL		SA202CUL, SA203CUL SA202RCUL, SA203RCUL	
		Left side	Right side	Left side	Right side	Left side	Right side
Aux	W	BZ6WL10CAU* ¹	BZ6WR10CAU	BZ6WL30CAU	BZ6WR30CAU* ²	BZ6WL40CAU	BZ6WR40CAU* ²
	WD	BZ6WDL10CAU* ¹	BZ6WDR10CAU	BZ6WDL30CAU	BZ6WDR30CAU* ²	BZ6WDL40CAU	BZ6WDR40CAU* ²
Alarm	K	BZ6KL10CAU* ¹	BZ6KR10CAU	BZ6KL30CAU	BZ6KR30CAU* ²	BZ6KL40CAU	BZ6KR40CAU* ²
	KD	BZ6KDL10CAU* ¹	BZ6KDR10CAU	BZ6KDL30CAU	BZ6KDR30CAU* ²	BZ6KDL40CAU	BZ6KDR40CAU* ²
Aux, Alarm	WK	BZ6WKL10CAU* ¹	BZ6WKR10CAU	BZ6WKL30CAU	BZ6WKR30CAU* ²	BZ6WKL40CAU	BZ6WKR40CAU* ²
	WDKD	BZ6WDKDL10CAU* ¹	BZ6WDKDR10CAU	BZ6WDKDL30CAU	BZ6WDKDR30CAU* ²	BZ6WDKDL40CAU	BZ6WDKDR40CAU* ²
		*1: For 3 pole type only.		*2: For MCCB's only		*2: For MCCB's only	

Rating

Standard: W, K

Breaker type	SA52RCUL, SA53RCUL, EA102CUL, EA103CUL SG53RCUL, EG102CUL, EG103CUL	SA102CUL, SA103CUL, SA102RCUL, SA103RCUL SA202CUL, SA203CUL, SA202RCUL, SA203RCUL SG103CUL, SG203CUL	SA402CUL, SA403CUL, SA402RCUL, SA403RCUL SA603RCUL, SA803RCUL SG403CUL	Minimum load
Operating voltage	Rated current (A)	Rated current (A)	Rated current (A)	
120V AC	3.6	5	5	W, K: 5V DC 160mA 30V DC 30mA
240V AC	1.8	3	5	
125V DC	0.55	0.2 *	0.2 *	
250V DC	0.27	0.2 *	0.2 *	

Note: * Manufacturer's self certification

For low current: WD, KD

Breaker type	SA52RCUL, SA53RCUL, EA102CUL, EA103CUL SG53RCUL, EG102CUL, EG103CUL	SA102CUL, SA103CUL, SA102RCUL, SA103RCUL SA202CUL, SA203CUL, SA202RCUL, SA203RCUL SG103CUL, SG203CUL	SA402CUL, SA403CUL, SA402RCUL, SA403RCUL SA603RCUL, SA803RCUL	Minimum load
	Rated current (A)	Rated current (A)	Rated current (A)	
Operating voltage	0.1	0.1	0.1	WD, KD: 5V DC 1mA 30V DC 1mA
30V DC				

Operation

Type of switch	Condition of MCCB	
	ON	OFF
Auxiliary switch (W)		
Alarm switch (K)		

● Shunt trip devices

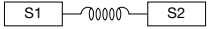
For MCCB

Breaker part number	Operating voltage	Code	Part number		Spec			Terminal No. and Internal circuit
			Lead wire type	With terminal block type	Input (VA)	Internal Circuit	Time rating (ms)	
SA52RCUL, SA53RCUL EA102CUL, EA103CUL	100 to 120VAC 100 to 110VDC	FA	BZ6FA10CU	BZ6FA10CAU	150	Continuous with burnout prevention contact	7-13	Continuous with burnout Prevention contact
	200 to 240VAC	FK	BZ6FK10CU	BZ6FK10CAU	150			
	380 to 450VAC	FP	BZ6FP10CU	BZ6FP10CAU	200			
SA102CUL, SA103CUL SA102RCUL, SA103RCUL	24VAC/DC	FR	BZ6FR30CU	BZ6FR30CAU	30(AC) 35(DC)	Continuous	7-16	Continuous
	48VAC/DC	FS	BZ6FS30CU	BZ6FS30CAU	30(AC) 35(DC)			
	100-125VAC 100-110VDC	FT	BZ6FT30CU	BZ6FT30CAU	30(AC) 35(DC)			
	200-240VAC 200-220VDC	FU	BZ6FU30CU	BZ6FU30CAU	30(AC) 35(DC)			
SA202CUL, SA203CUL SA202RCUL, SA203RCUL	24VAC/DC	FR	BZ6FR40CU	BZ6FR40CAU	30(AC) 35(DC)	Continuous	13-21	
	48VAC/DC	FS	BZ6FS40CU	BZ6FS40CAU	30(AC) 35(DC)			
	100-125VAC 100-110VDC	FT	BZ6FT40CU	BZ6FT40CAU	30(AC) 35(DC)			
	200-240VAC 200-220VDC	FU	BZ6FU40CU	BZ6FU40CAU	30(AC) 35(DC)			

■ Internal Accessories

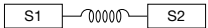
● Shunt trip devices

For MCCB

Breaker part number	Operating voltage	Code	Part number		Spec			Terminal No. and Internal circuit
			Lead wire type	With terminal block type	Input (VA)	Internal Circuit	Time rating (ms)	
SA402CUL, SA403CUL SA402RCUL, SA403RCUL	24-48VAC 24-48VDC	FV	△	△	2	Continuous	7-21	Continuous 
	100-240VAC 100-220VDC	FW	△	△	3			
SA603RCUL SA803RCUL	24-48VAC 24-48VDC	FV	△	△	2	Continuous	7-21	
	100-240VAC 100-220VDC	FW	△	△	3			

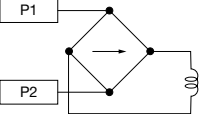
△; Factory installed accessories

For ELCB

Breaker part number	Operating voltage	Code	Part number		Spec			Terminal No. and Internal circuit
			Lead wire type	With terminal block type	Input (VA)	Internal Circuit	Time rating (ms)	
SG53RCUL EG102CUL, EG103CUL	100VAC 50Hz	F2	—	BZ6F210CAU	16	Continuous	7-13	Continuous 
	100 to 110VAC 60Hz							
	200VAC 50Hz	F7	—	BZ6F710CAU	16			
	200 to 220VAC 60Hz							
SG103CUL	400VAC 50Hz	F8	—	BZ6F810CAU	22	Continuous	7-13	
	400 to 440VAC 60Hz							
	100VAC 50Hz	F2	—	BZ6F230CAU	200			
	100 to 110VAC 60Hz							
SG203CUL	200VAC 50Hz	F7	—	BZ6F730CAU	150	Continuous	7-13	
	200 to 220VAC 60Hz							
	400VAC 50Hz	F8	—	BZ6F830CAU	200			
	400 to 440VAC 60Hz							
SG403CUL	100VAC 50Hz	F2	—	BZ6F240CAU	200	Continuous	7-13	
	100 to 110VAC 60Hz							
	200VAC 50Hz	F7	—	BZ6F740CAU	150			
	200 to 220VAC 60Hz							
SG403CUL	400VAC 50Hz	F8	—	BZ6F840CAU	200	Continuous	7-21	
	400 to 440VAC 60Hz							
	24-48VAC	FV	△	△	2			
	24-48VDC							
	100-240VAC	FW	△	△	3			
	100-220VDC							

△; Factory installed accessories

● Undervoltage trip devices

Breaker part number	Operating voltage	Code	Part number		Spec			Terminal No. and Internal circuit
			Lead wire type	With terminal block type	Input (VA)	Internal Circuit	Time rating (ms)	
SA52RCUL, SA53RCUL EA102CUL, EA103CUL SG53RCUL EG102CUL, EG103CUL	100VAC 50Hz	R2	—	BZ6R210CAU	3	70% to 20% of rated voltage	85% or more of rated voltage	
	100 to 110VAC 60Hz							
	200VAC 50Hz	RW	—	BZ6RW10CAU	3			
	200 to 220VAC 60Hz							
SA102CUL, SA103CUL SA102RCUL, SA103RCUL SG103CUL	400VAC 50Hz	R9	—	BZ6R910CAU	4			
	400 to 440VAC 60Hz							
	100-110VDC	RT	—	△	200			
	100VAC 50Hz	R2	—	△	200			
SG103CUL	100 to 110VAC 60Hz							
	200VAC 50Hz	RW	—	△	150			
	200 to 220VAC 60Hz							
	400VAC 50Hz	R9	—	△	200			
SA202CUL, SA203CUL SA202RCUL, SA203RCUL SG203CUL	400 to 440VAC 60Hz							
	100-110VDC	RT	—	△	200			
	100VAC 50Hz	R2	—	△	200			
	100 to 110VAC 60Hz							
SG203CUL	200VAC 50Hz	RW	—	△	150			
	200 to 220VAC 60Hz							
	400VAC 50Hz	R9	—	△	200			
	400 to 440VAC 60Hz							
SA402CUL, SA403CUL SA402RCUL, SA403RCUL SG403CUL	24VAC/DC	RR	△	△	2			
	48VAC/DC	RS	△	△	2			
	100-110VAC/DC	RX	△	△	3			
	200-240VAC 200-220VDC	RU	△	△	3			
SA603RCUL SA803RCUL	24VAC/DC	RR	△	△	2			
	48VAC/DC	RS	△	△	2			
	100-110VAC/DC	RX	△	△	3			
	200-240VAC 200-220VDC	RU	△	△	3			

△; Factory installed accessories

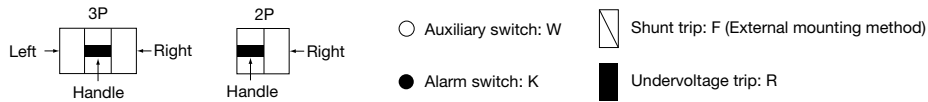
■ Internal Accessory Combinations for MCCB



MCCB	S series	SA52RCUL *	SA53RCUL *	SA102CUL SA103CUL SA102RCUL SA103RCUL SA202CUL SA203CUL SA202RCUL SA203RCUL	SA402CUL SA403CUL SA402RCUL SA403RCUL SA603RCUL SA803RCUL
	E series	EA102CUL *	EA103CUL *	—	—
Pole		2	3	2, 3	2, 3
Auxiliary switch SPDT W					
Alarm switch SPDT K					
Shunt trip F					
Undervoltage trip R					
W2		N/A			
W+K					
W2+K		N/A			
K2		N/A			
W+K2		N/A			
W2+K2		N/A			
W+F		N/A			
W2+F		N/A	N/A	N/A	
W+R					
W2+R		N/A		N/A	
K+F		N/A			
K+R					
W+K+F		N/A			
W+K+R					
K2+F		N/A	N/A	N/A	
K2+R		N/A		N/A	
W2+K+F		N/A	N/A	N/A	
W2+K+R		N/A		N/A	
W+K2+F		N/A	N/A	N/A	
W+K2+R		N/A		N/A	
W2+K2+F		N/A	N/A	N/A	
W2+K2+R		N/A		N/A	

Notes: • The lead wires are pulled out and terminal blocks are attached on the same side of the accessory attached.
* Terminal block connection is standard method

■ Internal Accessory Combinations for ELCB



ELCB	SG series	SG53RCUL *	SG103CUL SG203CUL	SG403CUL
	EG series	EG102CUL * EG103CUL *	—	—
Pole		2, 3	3	3
Auxiliary switch SPDT W				
Alarm switch SPDT K				
Shunt trip F				
Undervoltage trip R				
W2			N/A	
W+K				
W2+K			N/A	
K2			N/A	
W+K2			N/A	
W2+K2			N/A	
W+F				
W+R				
W2+R			N/A	
K+F				
K+R				
K2+R			N/A	
W+K+F				
W+K+R				
W2+K+R			N/A	
W+K2+R			N/A	
W2+K2+R			N/A	

Notes: • The lead wires are pulled out and terminal blocks are attached on the same side of the accessory attached.

* Terminal block connection is standard method

■ External Accessories

● Operating Handles

Part number		Applicable Breakers
V type (Door mount)	N type (Breaker mount)	
BZ6V10C	BZ6N10CP	SA52RCUL, SA53RCUL, EA102CUL, EA103CUL, SG53RCUL, EG102CUL, EG103CUL
BZ6V30C	BZ6N30CP	SA102CUL, SA103CUL, SA102RCUL, SA103RCUL, SG103CUL
BZ6V40C	BZ6N40CP	SA202CUL, SA203CUL, SA202RCUL, SA203RCUL, SG203CUL
BZ6V60C	BZ6N60CP	SA402CUL, SA403CUL, SA402RCUL, SA403RCUL, SG403CUL
BZ6V70C	BZ6N70CP	SA603RCUL, SA803RCUL

● Terminal Covers

For Screw Terminals		For Lug Terminals *1		For Flat Terminals *1		Applicable Breakers
Type	Packing quantity	Type	Packing quantity	Type	Packing quantity	
BZ6TS10C2U (Short) *2	2	—	—	—	—	SA52RCUL, EA102CUL
BZ6TB10C2C (Long) *2	2					
BZ6TS10C3C (Short) *2	2	—	—	—	—	SA53RCUL, EA103CUL, SG53RCUL, EG102CUL, EG103CUL
BZ6TB10C3U (Long) *2	2					
BZ-TS30B-3 (Short)	2	BZ-TB30B-3	2	BZ-TL30B-3	2	SA102CUL, SA103CUL, SG103CUL *1
BZ-TB30B-3 (Long)	2					SA102RCUL, SA103RCUL
BZ-TS40B (Short)	2	BZ-TB40B	2	BZ-TL40B	2	SA202CUL, SA203CUL, SG203CUL *1
BZ-TB40B (Long)	2					SA202RCUL, SA203RCUL
—	—	BZ-TB60B	2	BZ-TB60B	2	SA402RCUL, SA403RCUL , SG403CUL
						SA402RCUL, SA403RCUL
—	—	comes with a breaker		BZ-TB70B	2	SA603RUL
						SA803RUL

Note: *1 Lug Terminals and Flat Terminals are not available for SG103CUL and SG203CUL.

*2 Terminal covers are supplied with breaker as standard. If long terminal cover is required, please specify TB in the part number.

● Insulation Barriers

Insulation barriers		Applicable Breakers
Type	Packing quantity	
BZ6B10C	4	SA52RCUL, SA53RCUL, EA102CUL, EA103CUL, SG53RCUL, EG102CUL, EG103CUL *2
BZ6B30CU	4	SA102CUL, SA103CUL, SG103CUL, SA102RCUL, SA103RCUL *1
BZ6B40CU	4	SA202CUL, SA203CUL, SG203CUL, SA202RCUL, SA203RCUL *1
B-43	4	SA402CUL, SA403CUL, SG403CUL, SA402RCUL, SA403RCUL, SA603CUL, SA803CUL *1

Note: *1 Insulation Barriers for line side and load side are provided with the Breaker (2-pole Breaker; 2 pcs, 3-pole Breaker; 4 pcs) as standard.

*2 Insulation Barriers are required only for flat terminal type.

● Terminal Kits (Field Installable)

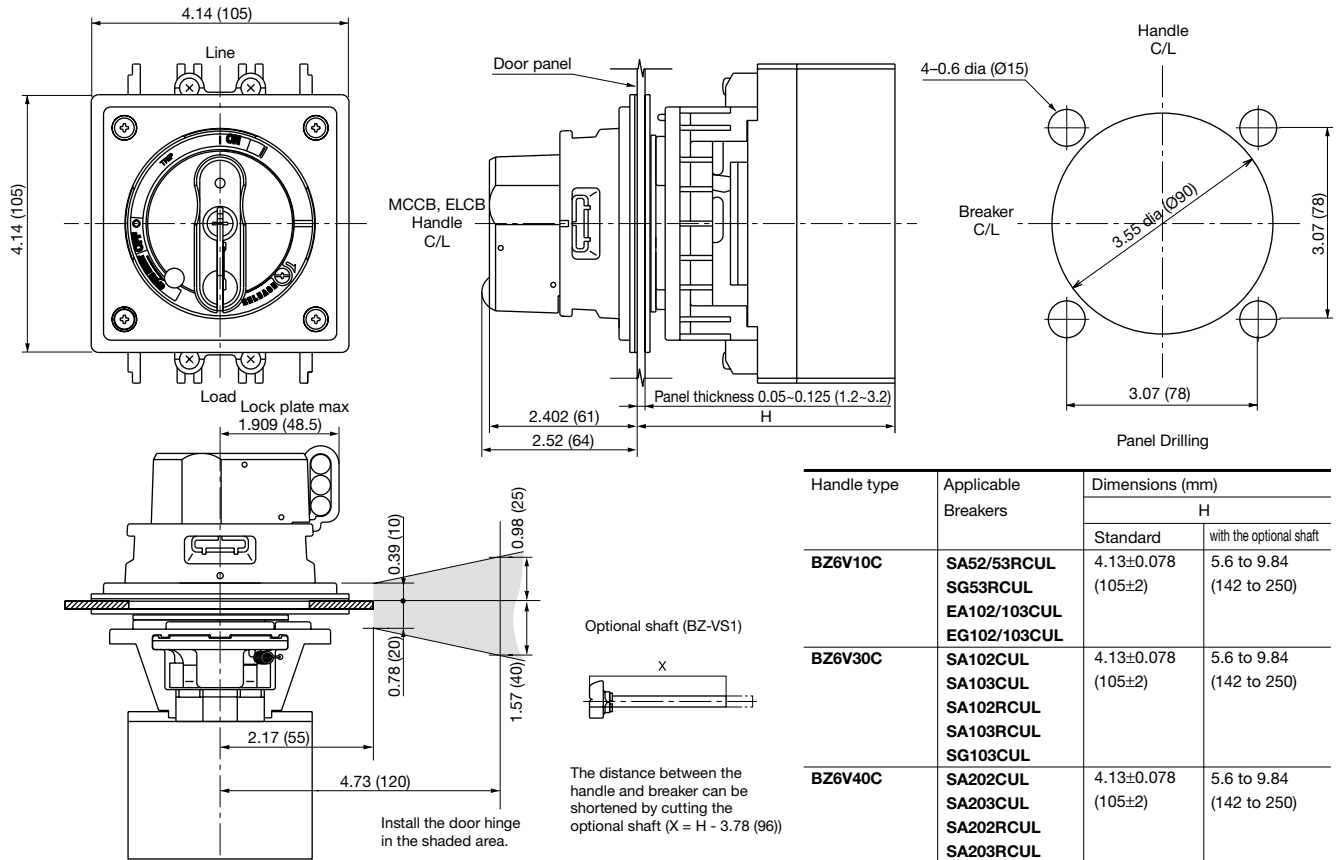
Flat Terminal Kits		Lug Terminal Kit		Applicable Breakers
Type	Packing quantity	Type	Packing quantity	
BU-SU20B	3	—	—	SA52RCUL, SA53RCUL, SG53RCUL
BU-SU25B	3	—	—	EA102CUL, EA103CUL, EG102CUL, EG103CUL
BZ6SU35B	3	BZ6TA100	3	SA102CUL, SA103CUL, SA102RCUL, SA103RCUL
BZ6SU50B	3	BZ6TA225	3	SA202CUL, SA203CUL, SA202RCUL, SA203RCUL
BZ-SU60B	3	BZ6TA350	3	SA402CUL, SA403CUL, SA402RCUL, SA403RCUL (250-300A)
		BZ6TA400	3	SA402CUL, SA403CUL, SA402RCUL, SA403RCUL (400A)
BU-SU70B-600	3	BZ-TA600	3	SA603CUL
BU-SU70B-800	3	BZ-TA700	3	SA803CUL (700A)
		BZ-TA800	3	SA803CUL (800A)

● Handle Locking Covers for Lockout

Part number	Applicable Breakers
BZ6L10C	SA52RCUL, SA53RCUL, EA102CUL, EA103CUL, SG53RCUL, EG102CUL, EG103CUL
BZ6L30C	SA102CUL, SA103CUL, SA102RCUL, SA103RCUL, SG103CUL
BZ6L40C	SA202CUL, SA203CUL, SA202RCUL, SA203RCUL, SG203CUL
BZ-L70B	SA402CUL, SA403CUL, SA402RCUL, SA403RCUL, SA603RCUL, SA803RCUL

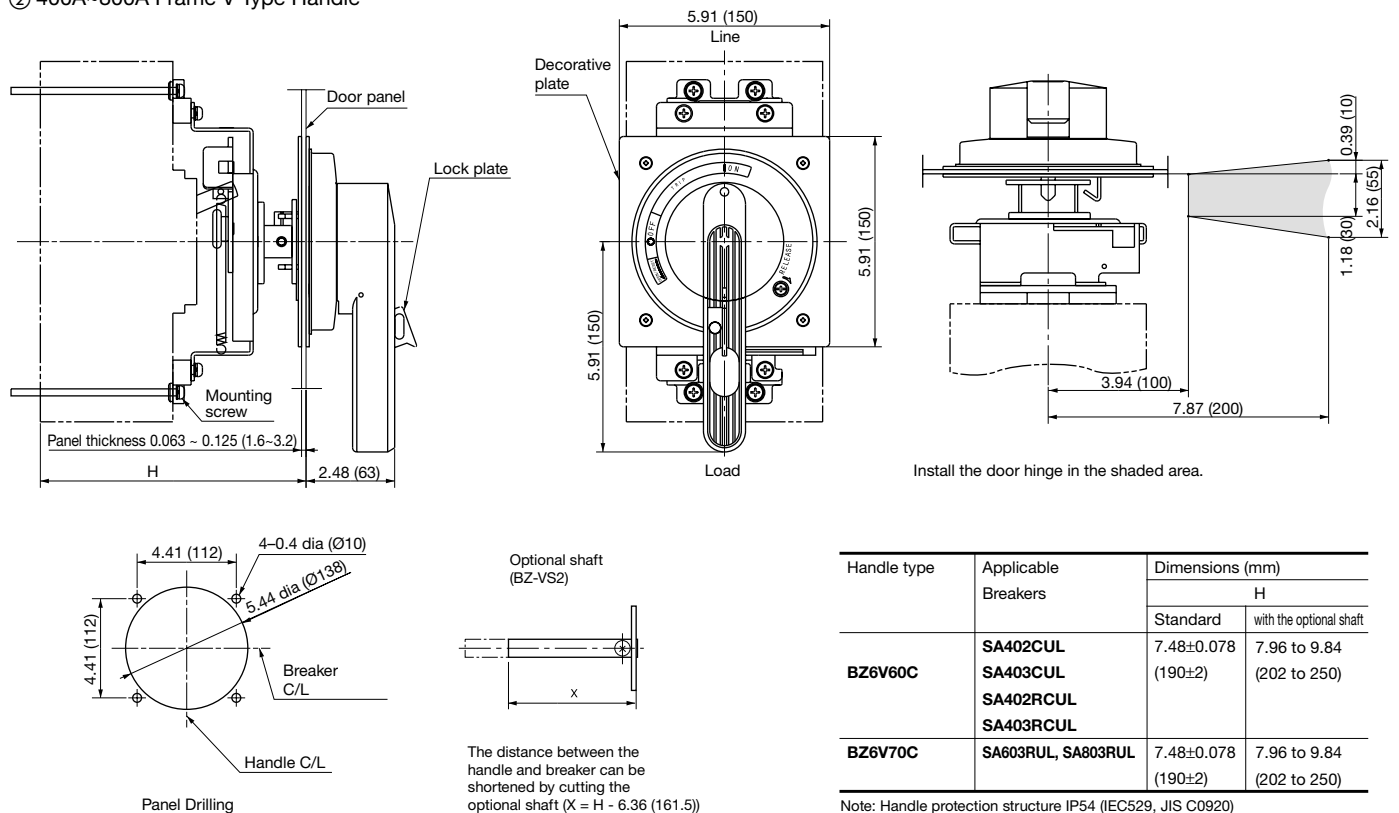
■ Operating Handles Dimensions Unit: inch (mm)

① 50A~225A Frame V Type Handle



Note: Handle protection structure IP54 (IEC529, JIS C0920)

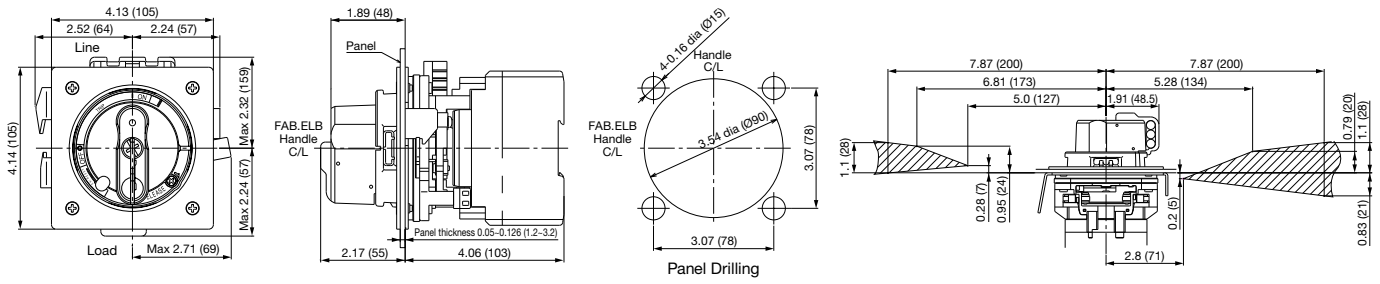
② 400A~800A Frame V Type Handle



Note: Handle protection structure IP54 (IEC529, JIS C0920)

■ Operating Handles Dimensions Unit: inch (mm)

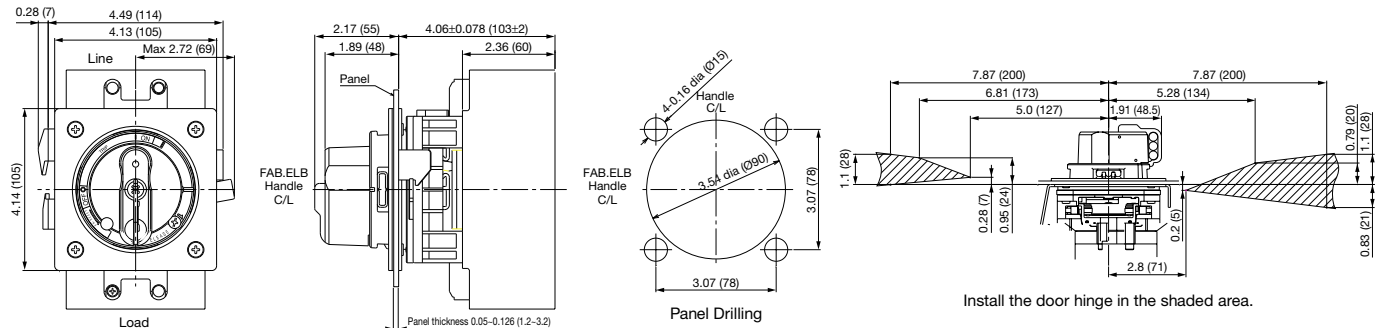
① 50A~100A Frame N Type Handle



Handle type	Applicable Breakers	Mounting screw
BZ6N10CP	SA52RCUL EA102CUL SA53RCUL EA103CUL SG53RCUL EG102CUL EG103CUL	#8-32X3 ¹ / ₂ (M4X85)

Note: When using a Dust-proof packing, handle protection structure is IP 50 (IEC 529, JIS C0920)

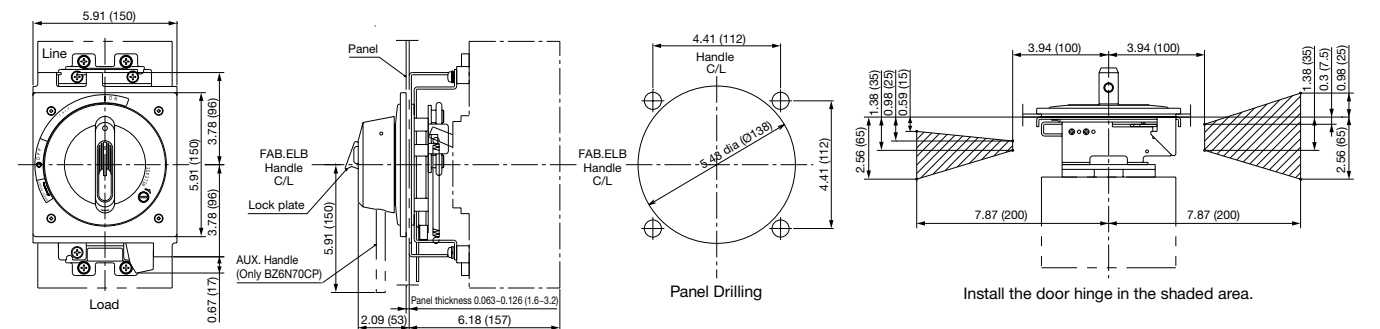
② 100A~225A Frame N Type Handle



Handle type	Applicable Breakers	Mounting screw
BZ6N30CP	SA102CUL SG103CUL SA103CUL SA102RCUL SA103RCUL	#8-32X3 ¹ / ₂ (M4X85)
BZ6N40CP	SA202CUL SG203CUL SA203CUL SA202RCUL SA203RCUL	#8-32X3 ¹ / ₂ (M4X85)

Note: When using a Dust-proof packing, handle protection structure is IP 50 (IEC 529, JIS C0920)

③ 400A ~ 800A Frame N Type Handle



Handle type	Applicable Breakers	Mounting screw
BZ6N60CP	SA402CUL SA403CUL SA402RCUL SA403RCUL	1/4-20X4 ¹ / ₂ (M6X110)
BZ6N70CP	SA603RCUL , SA803RCUL	

Note: When using a Dust-proof packing, handle protection structure is IP 50 (IEC 529, JIS C0920)

■ Wiring

① Connecting Precautions

- When connecting the wires, follow the instruction of NEC (National Electric Code, USA) or CEC (Canadian Electrical code Part 1, Canada).
- For connecting, use copper wire rated for 75°C. It is recommended to use UL or CSA approved wires.
- Keep the connection of the wire sufficiently tight, because a very large electromagnetic force will be generated, when the short circuit current is applied.
- Perform additional tightening of the terminal screws periodically.

② Terminal Construction

	Screw Terminals	Flat Terminals	Lug Terminals
50A, EA/EG 100A Frame	○	○	—
SA100~225A Frame	○	○	○
SG100~225A Frame	○	—	—
400~800A Frame	—	○	○

○ : Available — : Not available

③ Allowable wire spec for Lug Terminals

Number of strands connecting wires

Wire size AWG or MCM (mm ²)	Number of strands
14 - 2 (2.1 - 33.6)	7
1 - 4/0 (42.4 - 107.2)	19
250 - 500 (127 - 250)	37

(mm²) Values are those converted from AWG or MCM size

⚠ Caution

- Two wires can not be connected to the lug terminal at once.
- Follow the number of strands of wire indicated in the table.
- Multiconductor wire can not be connected.
- Do not solder the end of the wire.

■ Max Wire Sizes and Tightening Torque

Type	Rated Current (A)	Wire size AWG or MCM (mm ²)	Tightening torque		Applicable ring (crimp) terminal			
			Screw / Flat terminal	Lug terminal	JST (UL file No.E442024)	NICHIFU (UL file No.E44245)	AIKOKU (UL file No.E74103)	DST (UL file No.E74917)
SA53RCUL SG53RCUL	3	14 AWG (2.1mm ²)	Screw / Flat terminal Screw: 20-25 lb.-in. (2.3-2.8N-m) Flat: 30-40 lb.-in. (3.5-4.5N-m)	50 lb. - In. (5.8N-m)	R2-5		R2-5	
	5	14 AWG (2.1mm ²)						
	10	14 AWG (2.1mm ²)						
	15	14 AWG (2.1mm ²)						
	20	12 AWG (3.3mm ²)			R5.5-5		R5.5-5	
	30	10 AWG (5.3mm ²)						
	40	8 AWG (8.4mm ²)			R8-5		R8-5	
EA102CUL, EA103CUL EG102CUL, EG103CUL	50	6 AWG (13.3mm ²)						
	60	6 AWG (13.3mm ²)			R14-8		R14-8	
	75	4 AWG (21.1mm ²)			22-S8		22-S8	
SA102CUL SA102RCUL SA103CUL SA103RCUL SG103CUL	100	3 AWG (26.7mm ²)			38-S8		38-S8	
	15	14 AWG (2.1mm ²)	50 lb. - In. (5.8N-m)	50 lb. - In. (5.8N-m)	R2-8	R2-8	2-8	2-8, 2-B8
	20	12 AWG (3.3mm ²)			R5.5-8, 5.5-S8	R3.5-8, R5.5-8	5.5-8	3.5-8, 5.5-8
	30	10 AWG (5.3mm ²)			R5.5-8, 5.5-S8	R5.5-8		5.5-8
	32	8 AWG (8.4mm ²)			R8-8, 8-8NS	R8-8	8-8	8-8
	40	8 AWG (8.4mm ²)						
	50	8 AWG (8.4mm ²)						
	60	6 AWG (13.3mm ²)			R14-8, 14-8NS, 14-S8	R14-8, R14-8S	14-8	14-S8, 14-8
	70	4 AWG (21.1mm ²)			R22-8, 22-S8, CB22-S8	R22-8, R22-8S, CB22-8S	22-8	22-S8, 22-8, CB22-8
	75	4 AWG (21.1mm ²)						
	80	4 AWG (21.1mm ²)						
	90	3 AWG (26.7mm ²)			38-S8	R38-8S, CB22-8S	38-8S	38-S8
SA202CUL SA202RCUL SA203CUL SA203RCUL SG203CUL	100	3 AWG (26.7mm ²)						
	125	1 AWG (42.4mm ²)	93 lb. - In. (10.5N-m)	200 lb. - In. (23N-m)	R38-8, 38-S8	R38-8S, R38-8	38-8S	38-S8
	150	1/0 AWG (53.5mm ²)			R60-8, 60S8	R60-8, CB60-8, CB60-8S	60-8	60-8, CB60-8
	175	2/0 AWG (67.4mm ²)			70-8	R70-8	-	70-8
	200	3/0 AWG (85.0mm ²)			CB80-S8	-	-	CB80-8
	225	4/0 AWG (107.2mm ²)			CB100-S8	-	-	CB100-8
SA402CUL SA402RCUL SA403CUL SA403RCUL SG403CUL	250	250 MCM (127mm ²)	375 lb. - In. (43.5N-m)	375 lb. - In. (43.5N-m)	150-12	R150-12	-	-
	300	350 MCM (177mm ²)			180-12	R180-12		
	350	500 MCM (253mm ²)			325-12	R325-12S		
	400	3/0 AWG x 2 (85.0mm ² x 2)			R80-12	R80-12		
SA603RCUL	500	250 MCM x 2 (126.7mm ² x 2)	416 lb. - In. (47N-m)	275 lb. - In. (31.9N-m)	150-12	R150-12		
	600	350 MCM x 2 (177.4mm ² x 2)			180-12	R180-12		
SA803RCUL	700	500 MCM x 2 (253.4mm ² x 2)			325-12	R325-12S		
	800	300 MCM x 3 (152mm ² x 3)			-	-		

Notes: *1 Ring (Crimp) Terminal Manufacturer : JST=Japan Solderless Terminal MFG Co., Ltd.
DST=Daido Solderless Terminal MFG Co., Ltd.
AIKOKU=Aikoku Kogyo KK.
NICHIFU=Nichifu Terminal Co., Ltd.

*2 167°F (75°C) Copper wire

Flange Disconnect Handle <UF Type Handle>

■ Features

- Flexible cable operation.
- Covering up to 400-amp frame size
- Easy installation on circuit breakers
- Complies with IP 54, NEMA type 12 protection degree.
- Accepts ANSI standard American padlock devices.
- Off lockable: Φ10 padlock device, Max 3 pieces.
- UL listed product. [UL489, File No. E93289]

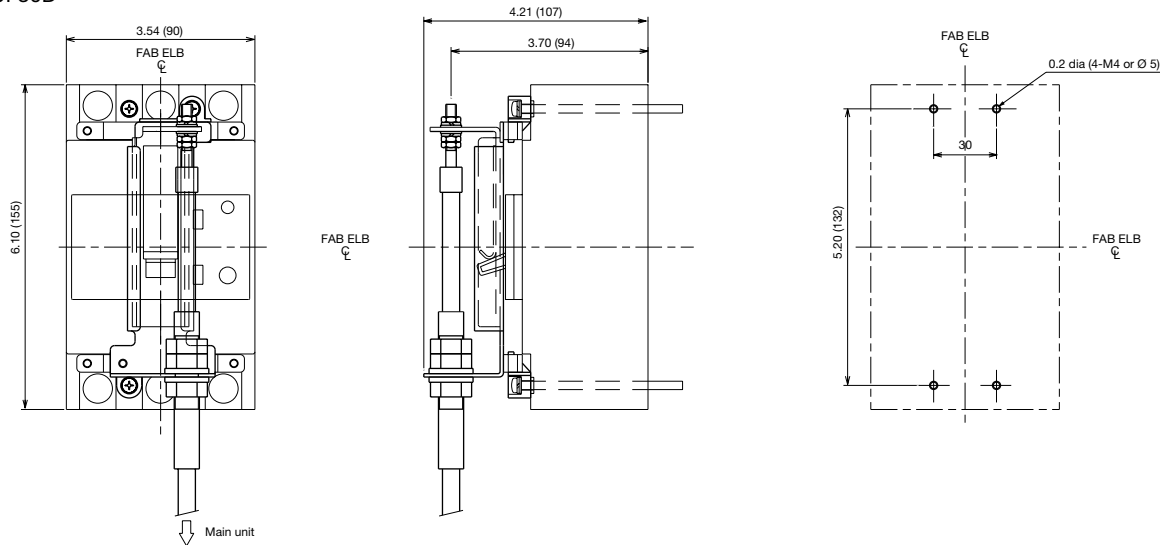


■ Specifications

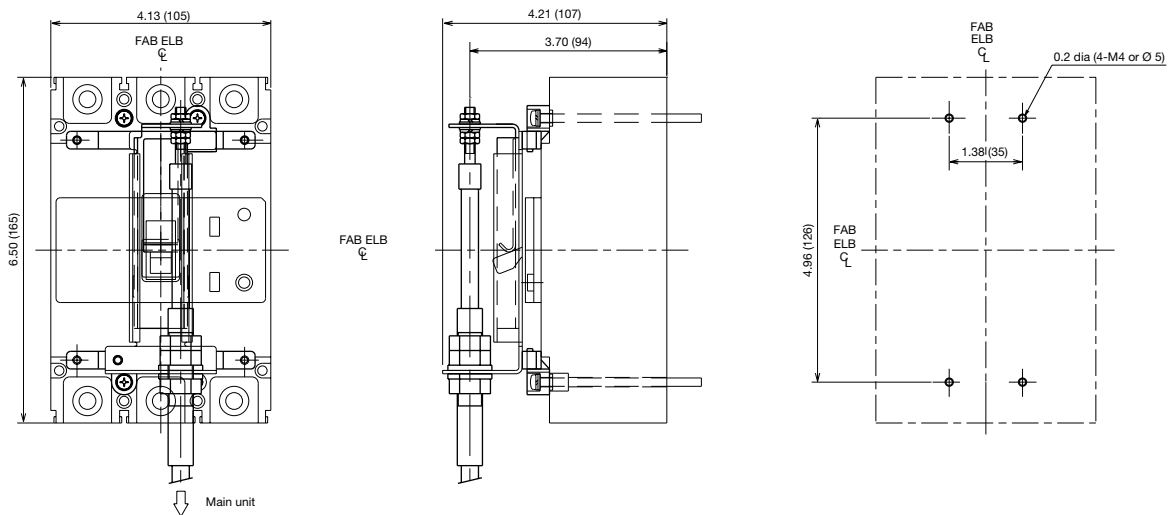
Breaker frame size		100 amp frame	225 amp frame	400 amp frame
Part numbers		BZ6UF30D	BZ6UF40D	BZ6UF60D
Applicable products	MCCB's	SA103BAUL, SA103RAUL, SA103CUL, SA103RCUL,	SA203BAUL, SA203RAUL, SA203CUL, SA203RCUL,	SA403BUL, SA403RUL, SA403CUL
	ELCB's	SG203BAUL, SG103CUL	SG203BAUL, SG203BAUL,	SG403CUL
Operating instructions		- Operating handle facing up, Breaker is in ON position - Operating handle facing down, Breaker is in OFF position or is reset. - Panel door cannot be opened when in ON, OFF or Trip position. In order to open the door, the handle must be turned toward reset position. - Release screw is standard. If you want to open a panel door in ON position, please turn on the release screw using flat head screwdriver.		
Mechanical endurance (cycles)		10,000	8,000	6,000
Ambient temperature		- 10 to 40°C		
Relative humidity		95% RH		
Atmosphere		No excessive dust, smoke, corrosive gases, flammable gases, steam or salt.		
Accessories	Terminal cover	BZ6UTB30	BZ6UTB40	BZ6UTB60
	Cable 1.5m	BZ6UW30-15A	BZ6UW40-15A	BZ6UW60-15A
	Cable 2.0m	BZ6UW30-20A	BZ6UW40-20A	BZ6UW60-20A
	Cable 3.0m	BZ6UW30-30A	BZ6UW40-30A	BZ6UW60-30A

■ Dimensions of actuator parts: inch (mm)

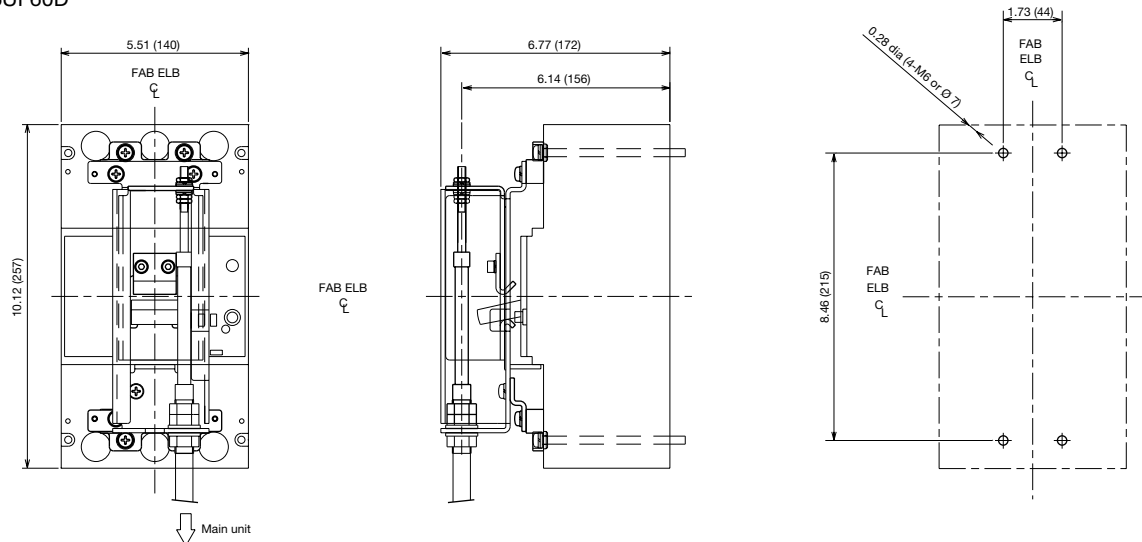
● BZ6UF30D



● BZ6UF40D



● BZ6UF60D

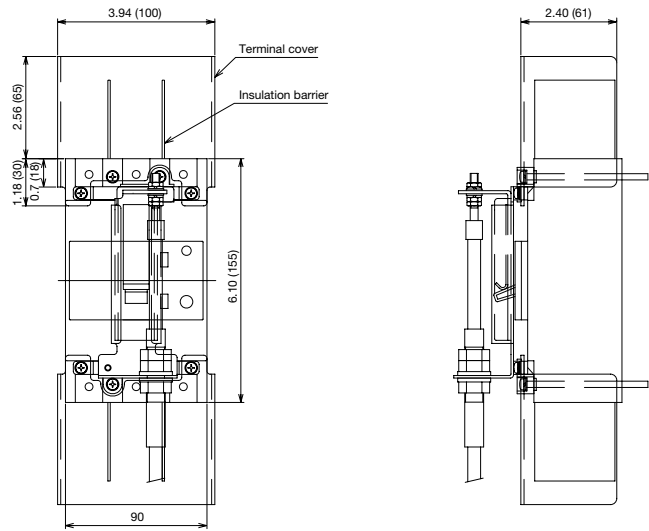


(Note 1) The flange handle consists of handle operating parts and actuators parts.
 (Note 2) Operating parts can be installed on either right-or-left side of the panel.
 (Note 3) Available in 2 heights: 20mm or 30mm.
 (Note 4) CABLES MUST BE ORDERED SEPARATELY.

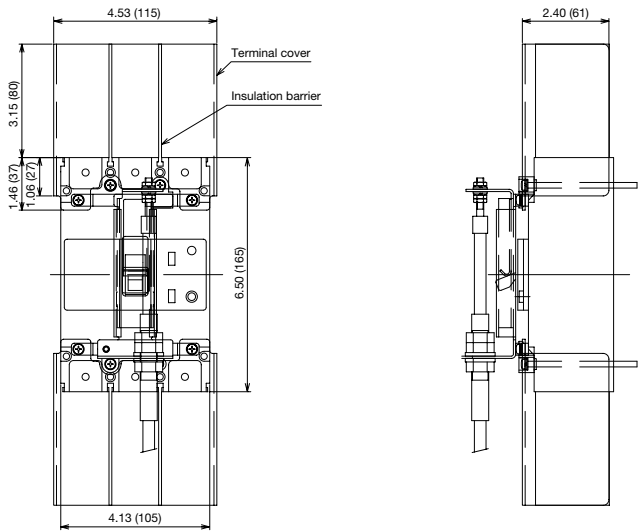
Flange Disconnect Handle <UF Type Handle>

■ Dimensions of terminal covers: inch (mm)

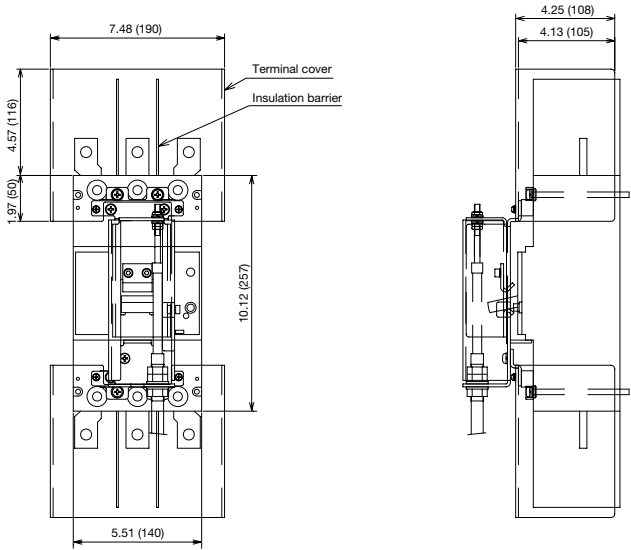
● BZ6UTB30



● BZ6UTB40



● BZ6UTB60



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