
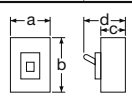


Molded Case Circuit Breakers - New G-Twin, UL489 Listed BW Series

Frame size (A)		630		800			
Type		BW630RAGU	BW630HAGU	BW800RAGU	BW800HAGU		
Appearance (with Flat Terminals, 3 poles)							
SSCR=UL489 interrupting capacity							
Rated insulation voltage (V) (IEC60947-2)		AC 690 DC 250	690 250	690 250	690 250		
Rated voltage (V) (UL489)		AC 480	600	480	600		
Rated current (A)		500, 600, 630		700, 800			
Poles		3	3	3	3		
Rated frequency (Hz)		50/60		50/60			
Rated interrupting capacity sym (kA)	UL489 CAN/CSA C22.2 No.5	AC	600V/Δ	–	25	–	25
			600V/Y	–	25	–	25
			480V/Δ	50	65 (50: with lug terminals)	50	65 (50: with lug terminals)
			480V/Y	50	65 (50: with lug terminals)	50	65 (50: with lug terminals)
			240V	100	100	100	125
	IEC60947-2 JIS C 8201-2-1 Icu/Ics	AC	690V	15/8	15/8	15/8	15/8
			500V	36/18	42/21	36/18	42/21
			440V	50/25	70/35	50/25	70/35
			400V	50/25	70/35	50/25	70/35
			380V	50/25	70/35	50/25	70/35
	GB14048.2 Icu/Ics	AC	240V	100/50	125/63	100/50	125/63
			250V	40/20	40/20	40/20	40/20
			400V	50/25	70/35	50/25	70/35
			230V	100/50	125/63	100/50	125/63
Dimension inch (mm)			a	8.268(210)	8.268(210)	8.268(210)	8.268(210)
			b	10.83(275)	10.83(275)	10.83(275)	10.83(275)
			c	4.055(103)	4.055(103)	4.055(103)	4.055(103)
			d	5.748(146)	5.748(146)	5.748(146)	5.748(146)
Terminal construction	Screw terminals		–	–	–	–	
	Flat terminals		None	●	● *2	● *2	
	Lug terminals		SB	● *1	●	●	
Internal accessories	Auxiliary switch		W	BW9W1SHA	BW9W1SHA	BW9W1SHA	BW9W1SHA
	Auxiliary switch 2 contacts		V	BW9W2SHA	BW9W2SHA	BW9W2SHA	BW9W2SHA
	Aux. low current		1	BW9W1DHA	BW9W1DHA	BW9W1DHA	BW9W1DHA
	Aux. low current 2 contacts		2	BW9W2DHA	BW9W2DHA	BW9W2DHA	BW9W2DHA
	Alarm switch		K	BW9K1SHA	BW9K1SHA	BW9K1SHA	BW9K1SHA
	Alarm switch 2 contacts		J	BW9K2SHA	BW9K2SHA	BW9K2SHA	BW9K2SHA
	Alarm low current		8	BW9K1DHA	BW9K1DHA	BW9K1DHA	BW9K1DHA
	Alarm low current 2 contacts		9	BW9K2DHA	BW9K2DHA	BW9K2DHA	BW9K2DHA
	Shunt trip		F	BW9FHA-*	BW9FHA-*	BW9FHA-*	BW9FHA-*
	Under voltage trip		R	BW9RHA-*	BW9RHA-*	BW9RHA-*	BW9RHA-*
Accessories with terminal block		A	See page 22	See page 22	See page 22	See page 22	
External accessories	Padlocking device		QN	BW9QNHA	BW9QNHA	BW9QNHA	BW9QNHA
			Q2	BW9Q2JA	BW9Q2JA	BW9Q2JA	BW9Q2JA
	External operating handle		V	BW9V0JA	BW9V0JA	BW9V0JA	BW9V0JA
			N	BW9N0JA	BW9N0JA	BW9N0JA	BW9N0JA
			Field Installable terminal	–	–	–	–
	Terminal covers *3		Short type, gray-white		–	–	–
			Short type, transparent		–	–	–
Long type, gray-white			BW9BTJA-L3W	BW9BTJA-L3W	BW9BTJA-L3W	BW9BTJA-L3W	
Long type, transparent			BW9BTJA-L3	BW9BTJA-L3	BW9BTJA-L3	BW9BTJA-L3	
Insulation barrier		B-43A	B-43A	B-43A	B-43A		
Mass: lb. (kg) (screw terminals)		19.62(8.9)		19.62(8.9)		20.72(9.4)	

*1 Lug terminal is NOT available for 630 ampere.

*2 Flat terminal is NOT available for 800 ampere.

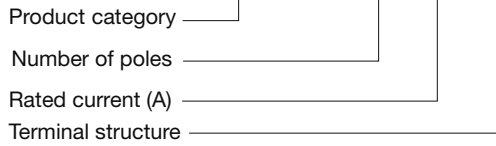
*3 Terminal covers are NOT supplied as standard.

●: Available, –: Not available

Part Number Structure

G-TWIN; MCCB (50 - 800AF)

BW250EAGU - 3P 100 SF



Code	Line side	Load side	BW50RAGU	BW100EAGU, BW125RAGU, BW125RAGU BW250EAGU, BW125JAGU, BW250RAGU	BW400EAGU, BW400SAGU, BW400RAGU, BW400HAGU BW630RAGU, BW630HAGU, BW800RAGU, BW800HAGU
None	Screw	Screw	●	●	-
None	Flat	Flat	-	-	●
SB	Lug	Lug	-	●	●*1
SF	Flat	Flat	●	●	-

*1 Lug terminal is Not available for BW630□AGU-3P630 (Rated current 630 ampere in BW630).

G-TWIN; ELCB (50 - 630AF)

EW50RAGU - 3P 050 K SF



Code	Line side	2 poles	3 poles
B	30mA	●	●
D	50mA*	-	●
K	100/200mA** changeable	●	-
K	100/200/500* or 100/200/500/1000mA changeable	-	●

*Only for EW50RAGU-3P, EW100EAGU-3P

**Only for EW100EAGU-2P

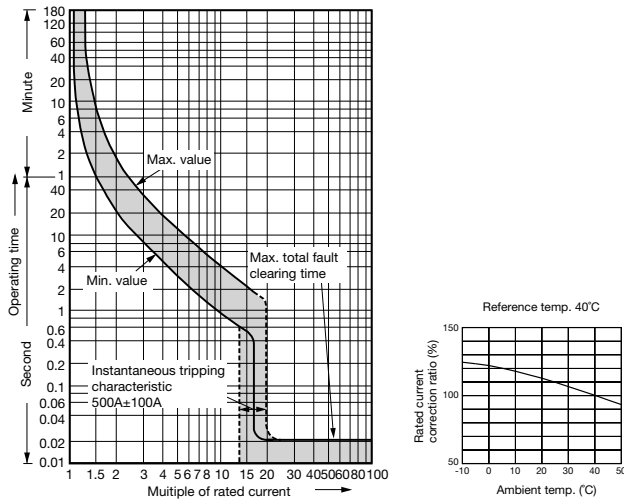
Terminal structure ————

Code	Line side	Load side	EW50RAGU EW100EAGU	EW125JAGU, EW125RAGU EW125JAGU, EW250RAGU	EW400SAGU, EW400RAGU, EW400HAGU EW630RAGU
None	Screw	Screw	●	●	-
None	Flat	Flat	-	-	●
SB	Lug	Lug	-	●	●*1
SF	Flat	Flat	●	●	-

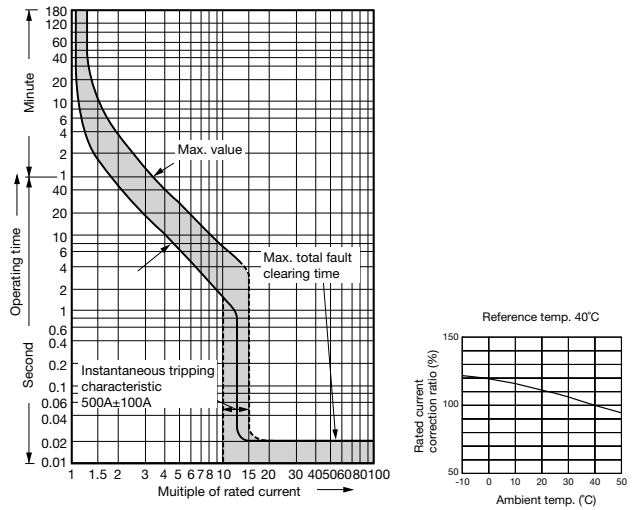
*1 Lug terminal is Not available for EW630RAGU-3P630 (Rated current 630 ampere in EW630).

Characteristic Curves

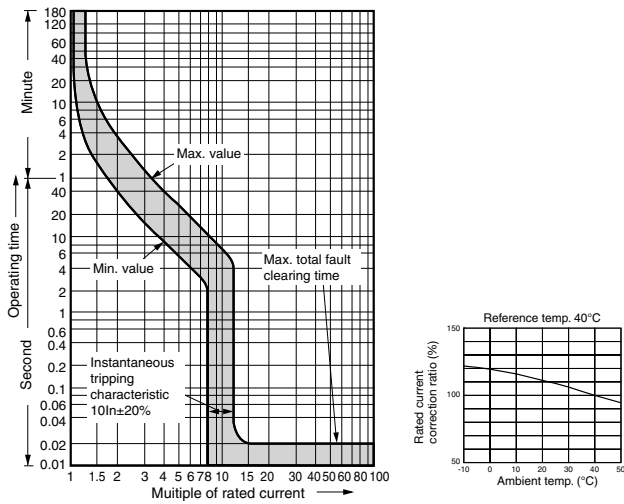
● BW125, EW125 (Rated current: 30A)



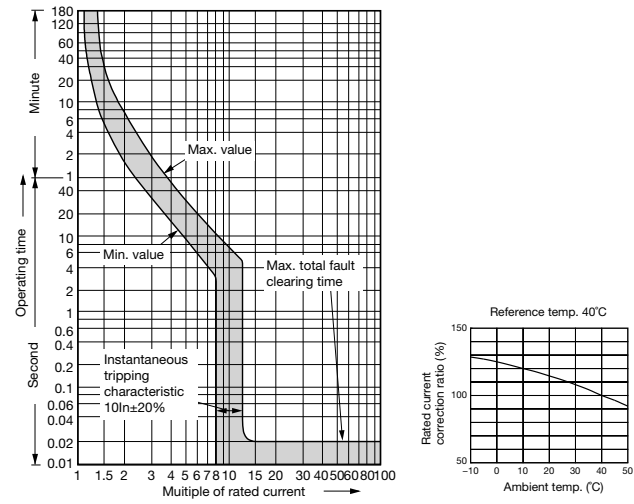
● BW125, EW125 (Rated current: 40A)



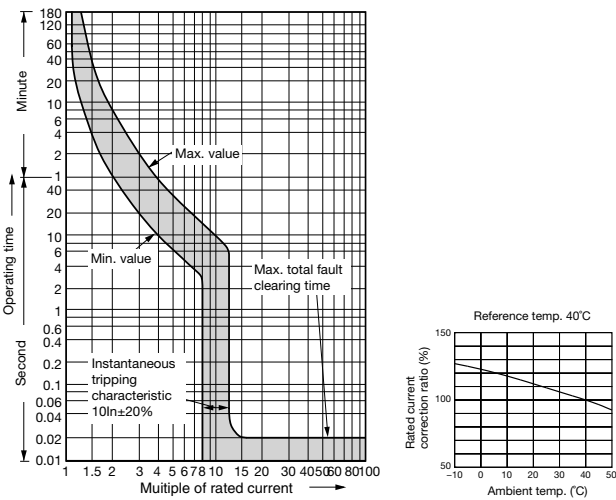
● BW125, EW125 (Rated current: 50 - 125A)



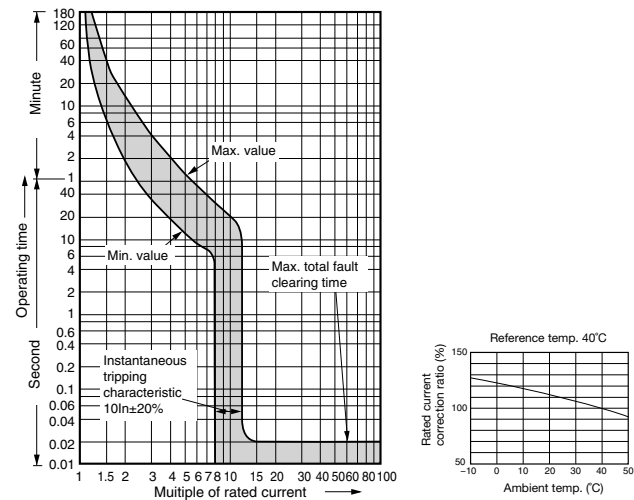
● BW250, EW250



● BW400, EW400

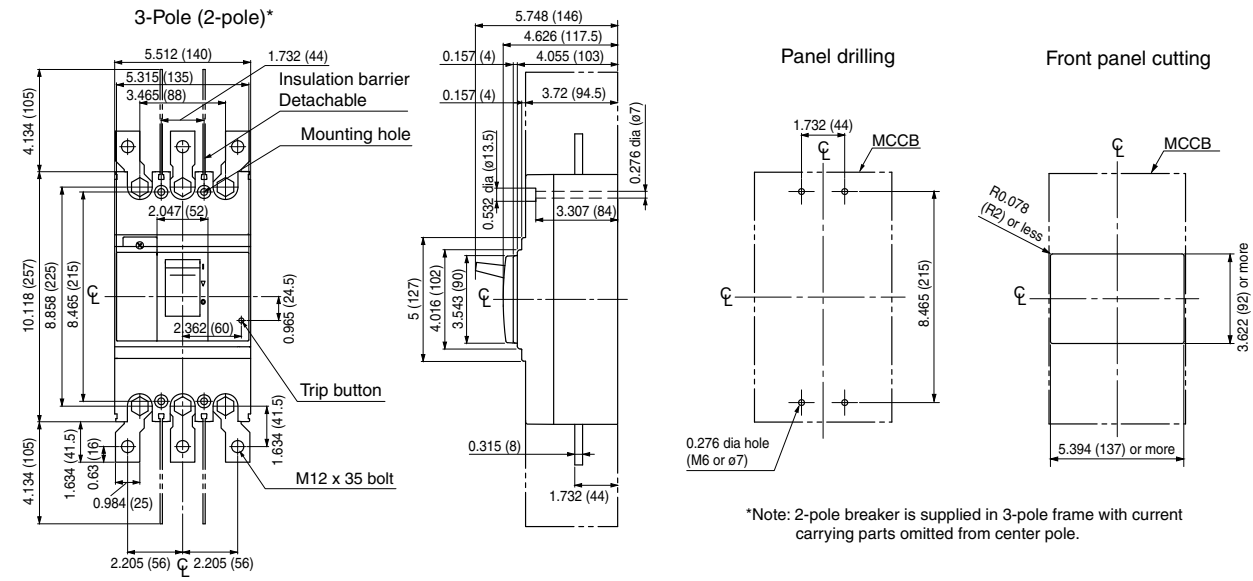


● BW630, EW630

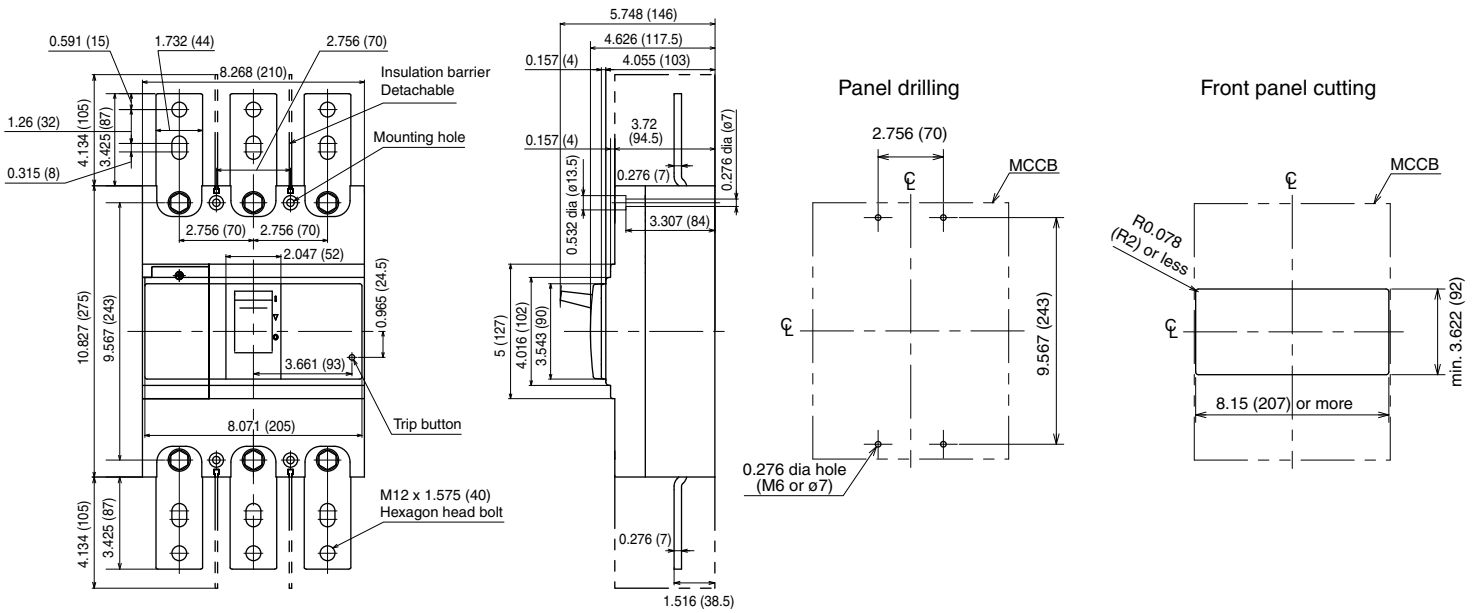


Dimensions: inch (mm)

BW400*U-2P, 3P



BW630*U-3P

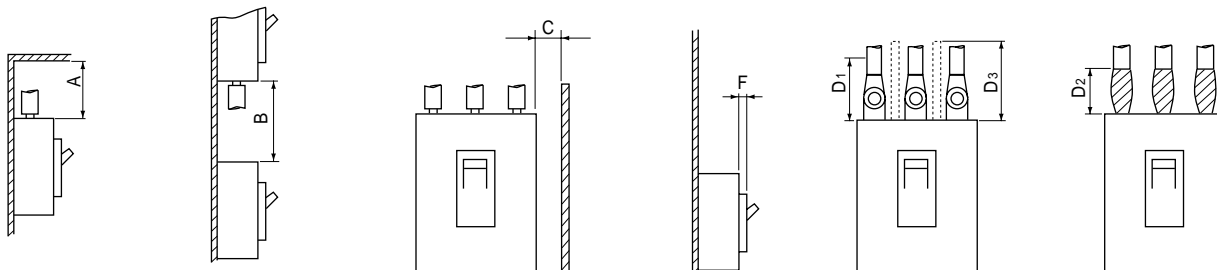


Molded Case Circuit Breakers

G-TWIN series

Arc space

■ Arc space, mm



Frame size	MCCB basic type	Ceiling distance		Vertical distance		Side plate distance		Front plate distance				Taping		Barrier
		A		B		C		Painted		No painted		Crimp type terminal lug D1	Bus-bar D2	
		440V	230V	440V	230V	440V	230V	F	F	440V	230V			
32A	BW32A	–	10	–	10	–	10	–	0	–	0	Exposed live part dimension +20	10	10
	BW32S	10	10	30	30	20	15	0	0	0	0		30	30
50A	BW50A	–	10	–	10	–	10	–	0	–	0		10	10
	BW50E	10	10	30	30	25	15	0	0	0	0		30	30
	BW50S	30	10	40	40	25	15	0	0	0	0		30	30
	BW50R	50	25	50	50	25	15	0	0	10	5		50	50
	BW50H	60	60	80	80	50	20	5	0	10	5		80	80
63A	BW63E	10	10	30	30	25	15	0	0	0	0		30	30
	BW63S	30	10	40	40	25	15	0	0	0	0		30	30
	BW63R	50	25	50	50	25	15	0	0	10	5		50	50
100A	BW100A	–	10	–	20	–	15	–	0	–	0		50	50
	BW100E	50	25	50	50	25	15	0	0	10	5		50	50
125A	BW125J	40	40	50	50	25	20	0	0	10	5		50	50
	BW125S	40	40	60	60	25	20	5	0	10	5		50	50
	BW125R	40	40	60	60	25	20	5	0	10	5		50	50
	BW125H	60	60	80	80	50	20	5	0	10	5		80	80
160A	BW160E	40	40	50	50	50	15	0	0	10	5		80	80
	BW160J	40	40	60	60	50	20	0	0	10	5		80	80
	BW160S	40	40	80	80	50	20	5	0	10	10		80	80
	BW160R	40	40	80	80	50	20	5	0	10	10		80	80
250A	BW250E	40	40	50	50	50	15	0	0	10	5		80	80
	BW250J	40	40	60	60	50	20	0	0	10	5		80	80
	BW250S	40	40	80	80	50	20	5	0	10	10		80	80
	BW250R	40	40	80	80	50	20	5	0	10	10		80	80
	BW250H	60	60	80	80	60	60	5	0	10	10	80	80	
400A	BW400E	100	80	100	80	50	20	0	0	10	5	100	100	
	BW400S	100	80	100	80	50	20	0	0	10	5	100	100	
	BW400R	100	80	100	80	80	40	5	0	20	10	100	100	
	BW400H	100	80	100	80	80	40	5	0	20	10	100	100	
630A	BW630E	100	80	100	80	80	40	0	0	10	5	100	100	
	BW630R	100	80	100	80	80	40	5	0	20	10	100	100	
	BW630H	120	100	120	100	80	40	5	0	20	10	120	120	
800A	BW800E	100	80	100	80	80	40	0	0	10	5	100	100	
	BW800R	100	80	100	80	80	40	5	0	20	10	100	100	
	BW800H	120	100	120	100	80	40	5	0	20	20	120	120	

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, 100A Frame	●	●	—
125A, 250A Frame	●	●	●
400A, 630A, 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 wires 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 cannot be connected together to a single connecting hole of lug terminal except BW400SAGU-3P400SB.
- Follow the number of strands of wire indicated on the table.
(Wire size and number of wire strands not listed on table can not be connected)
- Do not solder the end of the wire.



Rated current 15A to 350A



Rated current 400A
3/0 AWG x 2
19 strands each



Rated current 500A to 700A



Rated current 800A
300 MCM x 3
37 strands each

Max Wire Sizes and Tightening Torque

Type	Rated current (A)	Wire size*2 AWG or MCM (mm ²)	Tightening torque			Applicable ring (crimp) terminal for screw type and flat type terminal breaker*1									
			Screw terminal	Flat terminal	Lug terminal	JST (UL file No.E42024)	NICHIFU (UL file No.E44245)	DST (UL file No.E74917)							
BW50RAGU EW50RAGU	3	14 AWG (2.1mm ²)	20-25 lb.-In. (2.3-2.8 N-m)	31-40 lb.-in. (3.5-4.5 N-m)	-	R2-5	R2-5M R2-5	2-S5, 2-5							
	5	14 AWG (2.1mm ²)				R5.5-5	R3.5-5S, R3.5-5L 5.5-6N, R5.5-5S, R5.5-5	3.5-5, 5.5-S5, 5.5-5, 5.5-L5							
	10	14 AWG (2.1mm ²)													
	15	14 AWG (2.1mm ²)													
	20	12 AWG (3.3mm ²)													
	30	10 AWG (5.3mm ²)													
	40	8 AWG (8.4mm ²)													
BW100EAGU EW100EAGU	50	8 AWG (8.4mm ²)	49-66 lb.-In. (5.5-7.5 N-m)	71-89 lb.-In. (8-10 N-m)	51 lb. - In. (5.8 N-m)	R14-8	R14-8S, R14-8	R14-S8, R14-8							
	60	6 AWG (13.3mm ²)				R22-S8, R22-8 R38-S8	R22-8S, R22-8 R38-8S	R22-S8, 22-8 38-S8							
	75	4 AWG (21.1mm ²)													
	100	3 AWG (26.7mm ²)													
	BW125 EW125	15							14 AWG (2.1mm ²)	51 lb. - In. (5.8 N-m)	51 lb. - In. (5.8 N-m)	51 lb. - In. (5.8 N-m)	R2-8	R2-8	2-8, 2-B8
		20							12 AWG (3.3mm ²)				5.5-S8, R5.5-8	R3.5-8, R5.5-8 R5.5-8 R8-8	3.5-8, 5.5-8 5.5-8 8-8
		30							10 AWG (5.3mm ²)						
40		8 AWG (8.4mm ²)													
50		8 AWG (8.4mm ²)													
60		6 AWG (13.3mm ²)													
70		4 AWG (21.1mm ²)													
75		4 AWG (21.1mm ²)													
80		4 AWG (21.1mm ²)													
90		3 AWG (26.7mm ²)													
100	3 AWG (26.7mm ²)														
BW250 EW250	125	1 AWG (42.4mm ²)	93 lb. - In. (10.5 N-m)	93 lb. - In. (10.5 N-m)	204 lb. - In. (23 N-m)	38-S8, R38-8	R38-S, R38-8	38-S8, 38-8							
	150	1/0 AWG (53.5mm ²)				60-S8, R60-8 70-8 CB80-S8 CB100-S8 CB150-S8	R60-8, CB60-8, CB60-8S R70-8 - - CB150-S8	60-8, CB60-8 70-8 CB80-8 CB100-8 CB150-8							
	175	2/0 AWG (67.4mm ²)													
	200	3/0 AWG (85.0mm ²)													
	225	4/0 AWG (107.2mm ²)													
	250	250 MCM (127mm ²)													
	BW400 EW400	250							250 MCM (127mm ²)	-	385 lb. - In. (43.5 N-m)	385 lb. - In. (43.5 N-m)	150-12	R150-12	-
300		350 MCM (177mm ²)	262 lb. - In. (31.9 N-m)	R180-12 R325-12N R80-12 R325-12N	R180-12 R325-12N R80-12 R325-12N										
350		500 MCM (253mm ²)													
400		3/0 AWG x 2 (85.0mm ² x 2) 500 MCM (253mm ²)													
BW630 EW630	500	250 MCM x 2	-	416 lb. - In. (47.1 N-m)	275 lb. - In. (31.1 N-m)	R150-12	R150-12	-							
	600	350 MCM x 2				180-12 325-12	R180-12 R325-12N	- -							
	630	500 MCM x 2													
BW800	700	500 MCM x 2	-	416 lb. - In. (47.1 N-m)	275 lb. - In. (31.1 N-m)	325-12	R325-12N	-							
	800	300 MCM x 3				-	-	-							

Notes: *1 Ring (Crimp) Terminal Manufacturer : JST=Japan Solderless Terminal MFG Co., Ltd. (<http://www.jst.com>)
NICHIFU=Nichifu Terminal Co., Ltd. (america@nichifu.com)
DST=Daido Solderless Terminal MFG Co., Ltd. (info@daido-tanshi.jp)

*2 167°F (75°C) Copper wire