

UL 489 Listed, BU series FUJI Molded Case Circuit Breakers

■ UL 489 Listed, C22.2 No.5

- UL File No. E90584 Vol.1c Sec. 2
- CSA certificate No. LR701975



Frame		100A		150A	
Type		BU2EHC		BU2FHC	
Pole		2		2	
Rated insulation voltage (V)		480		480	
(UL 489)		250		250	
Rated current (A)		15, 20, 25, 30, 35, 40, 45, 50, 60, 70, 80, 90, 100		15, 20, 25, 30, 35, 40, 50, 60, 70, 80, 90, 100	
Rated interrupting capacity (kA)		14		18	
600V AC		14		25	
480V AC		18		65 (125A–150A:42kA)	
UL489		10		20	
CSA22.2					
Dimensions (mm)		a 70, b 160, c 86, d 104		105, 160, 86, 104	
Tripping device		Thermal-magnetic		Thermal-magnetic	
Tripping button		Provided		Provided	
Auxiliary switch		W ●		●	
Alarm switch		K ●		●	
Shunt trip		F –		●	
Undervoltage trip		R ●		●	
Operating handle *1		V BU0VFH		BU0VFH	
		N BU0NFH		BU0NFH	
Terminal cover *2		BZ-CFHB-2		BZ-CFHB-3	

Notes: ● Factory-mounted optional accessories, specify the type number including optional accessories when ordering.

*1 Customer-mountable optional accessories

*2 For using N type handle: BZ-CFHB-2-N, BZ-CFHB-3-N

For using V type handle: BZ-CFHB-2-V, BZ-CFHB-3-V

• If required insulation barrier, contact FUJI.

UL 489 Listed Molded Case Circuit Breakers

Type number nomenclature

BU3EH C - 050 L W K F2			
Basic type			With shunt trip device
No. of poles			F2: 120–240V AC/125V DC
3: 3-pole			F6: 480–600V AC
2: 2-pole			FQ: 12V DC
Frame size			FM: 24V DC
EH: 100AF			FN: 48V DC
FH: 150AF			FG: 250V DC
Rated current			With undervoltage trip device
15: 15A	40: 40A	80: 80A	R1: 120V AC
20: 20A	45: 45A	90: 90A	R2: 240V AC
25: 25A	50: 50A	100: 100A	R4: 480V AC
30: 30A	60: 60A	125: 125A	R6: 600V AC
35: 35A	70: 70A	150: 150A	RG: 12V DC
Terminal			With alarm switch
Line	Load		K: Alarm switch
L: Lug terminals	Lug terminals (Provided)		With auxiliary switch
L1: Flat terminals	Flat terminals (Optional)		W: 1-auxiliary switch
Y1: Lug terminals	Flat terminals (Optional)		W2: 2-auxiliary switch

Ordering information

Specify the following:

1. Type number of MCCB including factory-mounted optional accessories
2. Type number customer-mountable optional accessories

Dimensions, mm

BU2EHC



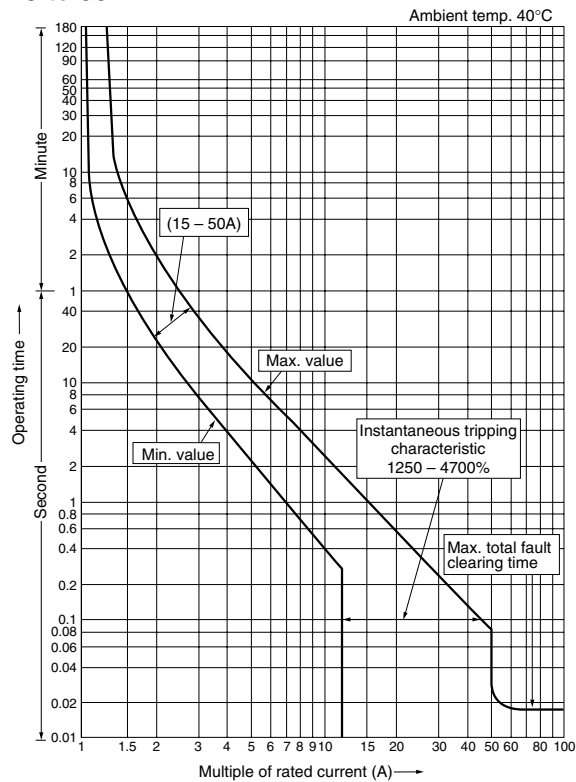
BU2FHC BU3EHC BU3FHC



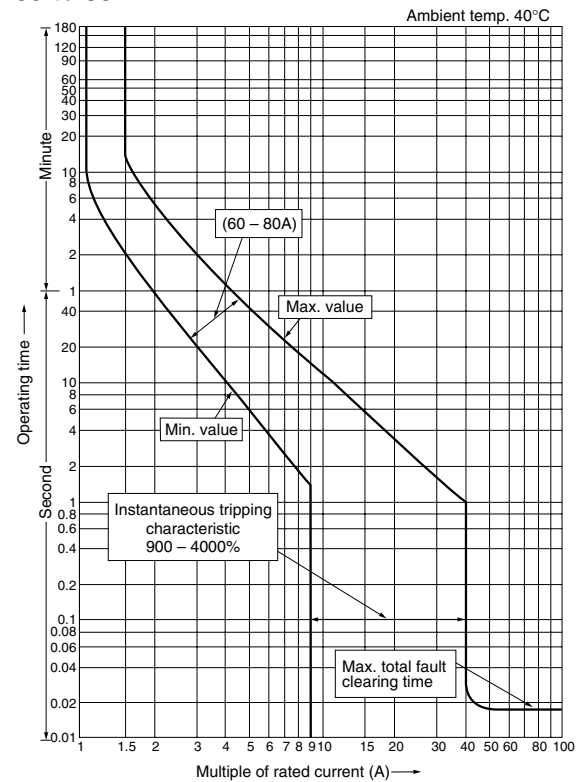
UL 489 Listed Molded Case Circuit Breakers

■ Characteristic curves

15 to 50A



60 to 80A



90 to 150A



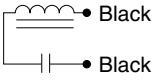
Temperature compensation curve



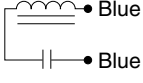
UL 489 Listed Molded Case Circuit Breakers

Optional accessories

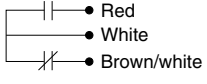
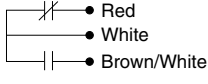
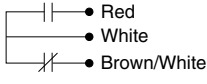
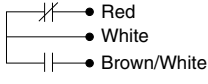
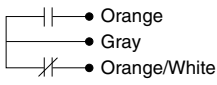
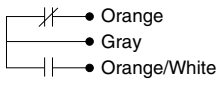
Shunt trip devices (F)

Type	Rated voltage (V)		Inrush current (A)		Wiring
	AC	DC	AC	DC	
F2	120 – 240	125	1.0 – 1.9	1.0	
F6	480 – 600	–	1.5 – 1.9	–	
FQ	–	12	–	7.5	
FM	–	24	–	4.6	
FN	–	48	–	2.4	
FG	–	250	–	0.4	

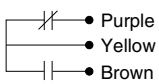
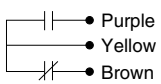
Undervoltage trip devices (R)

Type	Rated voltage (V)		Rated current (mA)	Wiring
	AC	DC		
R1	120	–	18	
R2	240	–	18	
R4	480	–	18	
R6	600	–	18	
RQ	–	12	200	
RM	–	24	100	
RN	–	48	50	
RJ	–	125	18	
RG	–	250	18	

Auxiliary switches (W)

Type		Color of lead wire		Make/break current (A)		
		MCCB/ON	MCCB/OFF, Trip	Voltage	Resistive	Inductive
W	SPDT			120V AC	5	6
				240V AC	–	6
W2	2PDT			125V DC	–	0.5
				250V DC	–	0.25
				120V AC	5	6
				240V AC	–	6
				125V DC	–	0.5
				250V DC	–	0.25

Alarm switches (K)

Type		Color of lead wire		Make/break current (A)		
		MCCB/ON	MCCB/OFF, Trip	Voltage	Resistive	Inductive
K	SPDT			240V AC	5	5
				28V DC	5	2.5

Available configurations

Accessory	Type	BU2EHC, BU2FHC		BU3EHC, BU3FHC	
		T		R	T
W Auxiliary switch		W		W	–
K Alarm switch		K		–	K
F Shunt trip		–		F	–
R Undervoltage trip		R		–	R
W2		W2		W2	–
WK		–		W	K
W2K		–		W2	K
WF		–		F	W
W2F		–		F	W2
WR		–		W	R
W2R		–		W2	R
KF		–		F	K
KR		–		–	–
WKF		–		–	–
WKR		–		–	–

Note: Lead wiring

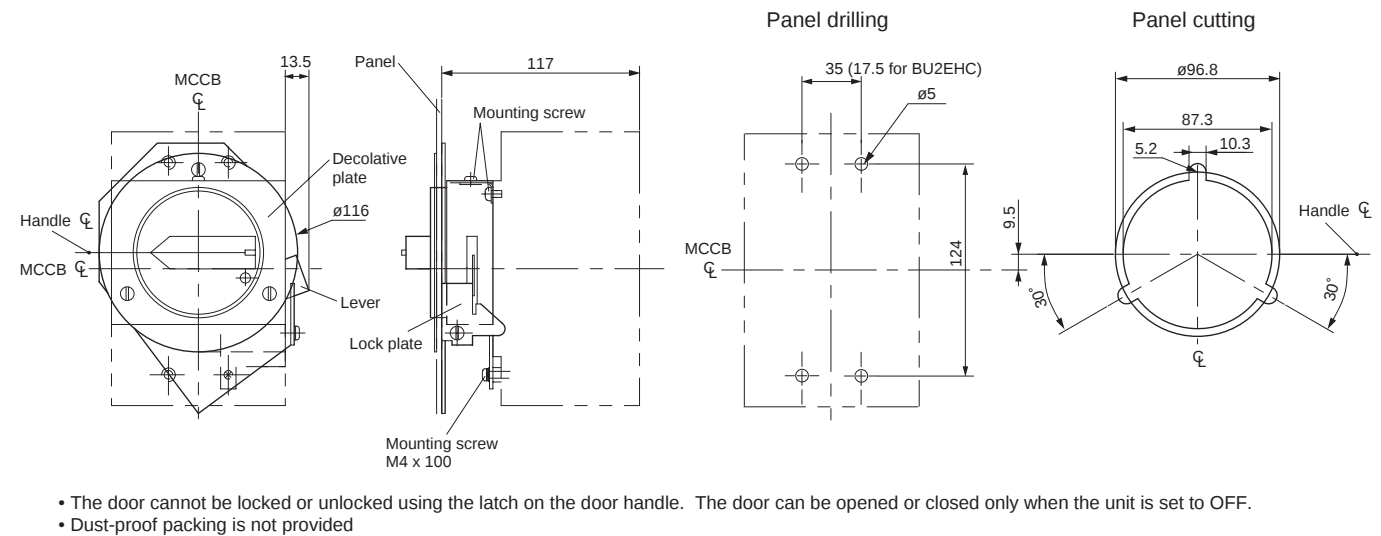
UL 489 Listed Molded Case Circuit Breakers

■ Dimensions, mm

V type operating handle/BU0VFH



N type operating handle/BU0NFH



UL 489 Listed Molded Case Circuit Breakers

■ Wire connection

1. Make sure that no voltage is applied to the breaker.
2. Connect the breaker in the direction shown in Figure 1 so that the ON mark is on the line side and the OFF mark is on the load side.



3. The connections of wires must conform to the U.S. National Electric Code (NEC) or the Canadian Electrical Code Part 1 (CEC).
4. For connection, use 60°C copper wire (15A to 125A) or 75°C copper wire only. The use of UL-certified or CSA-certified wire is recommended.
5. As the occurrence of a short circuit current could result in the generation of a large electromagnetic force between wires, be sure to firmly support the wires.
6. Periodically retighten the terminal screws. Do not block the arc gas exhaust.

Lug terminals

1. Table 1 lists the sizes of connectable wires. Use wires within this range.
2. The twist count for the wire must conform to Table 1. Multicore wires cannot be used.
3. Two different types of wires cannot be connected to the lug terminal together.
4. Do not solder the wire.
5. Use the tightening torque listed in Table 1 when securing the wire.

Flat terminals

1. Order insulating barriers (interphase barriers).
2. Insulate the terminal part.

Table 1 Max. wire sizes and tightening torque

Rated current	Applicable lug terminal	Wire size	Tightening torque	Screw size
15A max.	BU0L12HF	14AWG (2.1mm²)	512N•cm	Slotted head screw
20A		12AWG	45Lb-in	
25A, 30A		10AWG		
35A–50A		8AWG		
60A		6AWG	623N•cm	
70A, 80A	BU0L12AHF	4AWG	55Lb-in	
90A		3AWG		
100A	BU0L15HF	3AWG		
110A		2AWG		
125A		1AWG		
150A		1/0AWG (53.5mm²)		

■ Mounting

Avoid mounting this breaker in an environment exposed to vibration, shock, dust, or excessive humidity. Secure the insulation distance between a board and the line side of the breaker as shown in Figure 2 and Table 2.



Fig. 2 Insulation distance (line side)

Table 2 Insulation distance (line side)

[Unit: mm]

Breaker type	Dimension A Breaker to ceiling board	Dimension B Breaker to side board
BU□EHC	100	25
BU□FHC	100	25

Safety Considerations

- For safe operation, before using the product read the instruction manual or that comes with the product carefully or consult the Fuji sales representative from which you purchased the product.
- Some of the products listed in this catalog may have limits on their use or location or may require periodic inspections. Contact Fuji's sales representative for further information.
- For safe operation, wiring should be conducted only by qualified engineers who have sufficient technical knowledge about electrical work or wiring.

Fuji Electric Co., Ltd.

ED & C • Drive Systems Company

Gate City Ohsaki, East Tower

11-2, Osaki 1-chome, Shinagawa-ku, Tokyo, 141-0032, Japan

Phone: +81-3-5435-7132

Fax: +81-3-5435-7473

URL <http://www.fujielectric.co.jp/eng/index.html>



Printed on 100% recycled paper