

# Circuit Breakers & Supplementary Protectors 63 – 250 Amperes

**JG-Frame** 

## **Allowable Accessory Combinations**

Different combinations of accessories can be supplied, depending on the types of accessories and the number of poles in the circuit breaker.

#### Table 45-40. Accessories

Description	Reference	2-, 3-Po	le		4-Pole		·	
	Page	Left	Center	Right	Left	Center	Right	Neu.
nternal Accessories (Only One Internal Accessory Per Pole)								
Alarm Lockout (Make/Break)	45-36							
Auxiliary Switch (1A, 1B)	45-36							
Auxiliary Switch (2A, 2B)	45-36							
Auxiliary Switch and Alarm Switch Combination	45-36							
Shunt Trip — Standard	45-36							
Undervoltage Release Mechanism	45-36							
external Accessories	•		•	•	•		•	
End Cap Kit	45-24		•				•	
Control Wire Terminal Kit	45-24		•				•	
Multiwire Connectors	45-24		•				•	
Base Mounting Hardware	45-24		•				•	
Terminal Shields	45-24		•				•	
Interphase Barriers	45-24		•				•	
Non-Padlockable Handle Block	45-35							
Padlockable Handle Block	45-35							
Padlockable Handle Lock Hasp	45-35							
Key Interlock Kit	45-35							
Sliding Bar Interlock — Requires Two Breakers	45-35		•	•		•	•	•
Electrical Operator	45-35		•				•	
Plug-in Adapters	45-35		•				•	
Rear Connecting Studs	45-35		•				•	
Handle Mechanisms	45-38		•				•	
Earth Leakage/Ground Fault Protector	45-33		•				•	
Drawout Cassette	45-37	•				•		
Modifications (Refer to Eaton)	•	•			•			
Moisture Fungus Treatment	_		•				•	
Freeze-Tested Circuit Breakers	_		•				•	
Marine/Naval Application, UL Supplement SA and SB	1		•				•	

<sup>■</sup> Applicable in indicated pole position

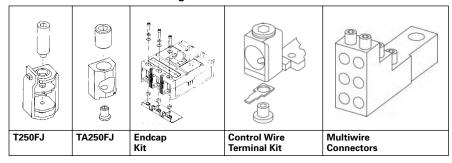
① Contact Eaton

<sup>☐</sup> May be mounted on left or right pole —

Accessory available/Modification available

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#### **Selection Guide and Ordering Information**



#### **Line and Load Terminals**

JG-Frame circuit breakers include Cu/Al terminals T250FJ as standard. When optional copper only terminals are required, order by catalog number.

#### Table 45-34. Line and Load Terminals

Maximum Breaker Amps	Terminal Body Material	Wire Type	Metric Wire Range mm <sup>2</sup>	AWG Wire Range/ Number of Conductors	Catalog Number	Price U.S. \$
Standard Pressur	e Type Terminals					
250	Stainless Steel	Cu	25 – 185	#4 – 350 (1)	T250FJ 12	
250	Aluminum	Cu/AI	25 – 185	#4 – 350 (1)	TA250FJ 1	
Optional Copper and Cu/Al Pressure Type Terminals						
250	Copper	Cu/Al	25 – 185	#4 – 350 (1)	TC250FJ 3	

- 1 Individually packed.
- <sup>2</sup> Standard line and load.
- 3 Contact factory for availability.

#### **Endcap Kits**

Endcap kits are used on J250-Frame breaker line side to connect bus bar or similar electrical connections. Includes hardware.

#### Table 45-35. Kit Catalog Number

Number	Catalog Nur	Price	
of Poles	Metric	U.S. \$	
3 4	FJ3RTWK FJ4RTWK	FJ3RTDK FJ4RTDK	

#### **Control Wire Terminal Kit**

For use with aluminum or copper terminals only.

#### **Table 45-36. Control Wire Terminal Kit**

Control Wire	Catalog	Price
Terminal Kit	Number	U.S. \$
Package of 14 — Priced Individually	FJCWTK	

#### **Multiwire Connectors**

Field-installed multiwire connectors for the load side (OFF) end terminals. They are used to distribute the load from the circuit breaker to multiple devices without the use of separate distribution terminal blocks.

Multiwire lug kits include terminal shield, mounting hardware, insulators and tin-plated aluminum connectors to replace three mechanical load lugs. UL listed for copper only as used on the load side (OFF) end.

#### **Table 45-37. JG-Frame Multiwire Connectors** Ordering Information (Package of 3)

Max. Amps	Wires per Terminal	Wire Size Range AWG Cu	Kit Catalog Number	Price U.S. \$
250	3	14 – 2	3TA250FJ3	
250	6	14 – 6	3TA250FJ6	

#### **Base Mounting Hardware**

Base mounting hardware is included with a circuit breaker or molded case switch. (Included with breaker.)

#### Table 45-38. Terminal Shields IP30

Location	Number of Poles	Catalog Number	Price U.S. \$
Line or	2, 3	FJTS3K	
Load	4	FJTS4K	

#### **Table 45-39. Interphase Barriers**

Package of 2		Price
Number of Poles	Catalog Number	U.S. \$
3	FJIPBK	
4	FJIPBK4	

## **Circuit Breakers & Supplementary Protectors** 15 – 2500 Amperes for UL, CSA & IEC Applications

30 mA Ground Fault (Earth Leakage) Modules

## 30 mA Ground Fault (Earth Leakage) Modules



Clockwise from Left: JG, LG, EG MCCBs Shown with Ground Fault (Earth Leakage) Modules

#### **Product Description**

Eaton offers a 3- and 4-pole 30 mA ground fault (earth leakage) protection module for EG, JG and LG breakers. The module does not restrict the use of other breaker accessories. UL-listed modules are available for JG and LG MCCBs. The IEC-rated EG module is side mounted for circuits up to 125 amperes, while the JG and LG modules are both bottom mounted for circuits up to 160 and 250 amperes (JG), or 400 and 630 amperes for the LG.

The module is completely self-contained since the current sensor, relay and power supply are located inside the product. Current pickup settings are selectable from 0.03 - 10 amperes for all IEC-rated modules and JG UL-listed module, and 0.03 - 30 amperes for the LG UL-listed modules. Time delays are also selectable from Instantaneous - 1.0 seconds for 0.10 ampere settings and above. A current pickup setting of 0.03 amperes defaults to an Instantaneous time setting regardless of the time dial's position. Two alarm contacts come as standard: a 50% pretrip and a 100% after trip, both based only on earth leakage current levels.

## Cutter-Hammer **Ground Fault Protector** (UL) LISTED STATUS **△WARNING** In (A) |0:03| -- |Inst.

Figure 45-4. UL-Rated LG-Frame Earth Leakage Module Faceplate

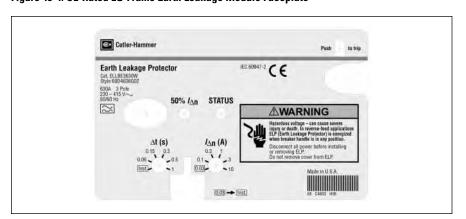


Figure 45-5. IEC-Rated LG-Frame Earth Leakage Module Faceplate

#### **Product Selection**

#### Table 45-60. EG-Frame Earth Leakage Modules, IEC (Side Mounted, 230 – 415 Vac, 50/60 Hz)

Amperes	Poles	Catalog Number	Price U.S. \$
125	3	ELESE3125W	
125	4	ELESE4125W	

#### Table 45-61. JG-Frame Ground Fault Modules, **UL-Rated (Bottom Mounted.** 120 - 480 Vac, 50/60 Hz)

Amperes	Poles	Catalog Number	Price U.S. \$
150 150	3 4	ELJBN3150W ELJBN4150W	
250 250	3 4	ELJBN3250W ELJBN4250W	

#### Table 45-62. JG-Frame Earth Leakage Modules, IEC (Bottom Mounted, 230 – 415 Vac, 50/60 Hz)

Amperes	Poles	Catalog Number	Price U.S. \$
160 160	3 4	ELJBE3160W ELJBE4160W	
250 250	3 4	ELJBE3250W ELJBE4250W	

#### Table 45-63. LG-Frame Ground Fault Modules, **UL-Rated (Bottom Mounted,** 120 - 480 Vac, 50/60 Hz)

Amperes	Poles	Catalog Number	Price U.S. \$
400 400	3 4	ELLBN3400W ELLBN4400W	
600 600	3 4	ELLBN3600W ELLBN4600W	

#### Table 45-64. LG-Frame Earth Leakage Modules, IEC (Bottom Mounted, 230 – 415 Vac, 50/60 Hz)

Amperes	Poles	Catalog Number	Price U.S. \$
400 400	3 4	ELLBE3400W ELLBE4400W	
630 630	3 4	ELLBE3630W ELLBE4630W	

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**Special Features and Accessories** 

#### Special Features and Accessories

#### **Internal Accessories**

#### **Alarm Lockout**

The alarm switches operate when the circuit breaker is tripped by a short circuit or overcurrent, but also when it is tripped by a shunt trip or undervoltage release.

#### **Auxiliary Switches**

Auxiliary switches are used for signaling and control purposes. The various functions of the auxiliary switches (changeover) are shown in **Figure 45-7**.

#### **Shunt Trips**

The shunt trip is used for remote tripping.

The coil of the shunt trip is rated only for short-time operation.

It is not permissible with the circuit breaker open to apply a continuous opening command to the shunt trip in order to prevent the breaker from closing. This means that interlocking circuits with continuous commands may not be set up with shunt trips.

#### **Undervoltage Releases**

The circuit breaker cannot be closed until the undervoltage release is energized. If the release is not energized, the circuit breaker can only perform an idle switching operation.

Frequent idle switching actions should be avoided as they shorten the endurance of the circuit breaker.

#### **Accessory Configurations for EG – LG Circuit Breakers**

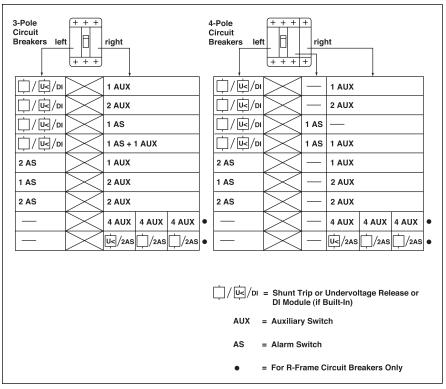


Figure 45-6. Internal Accessory Configurations

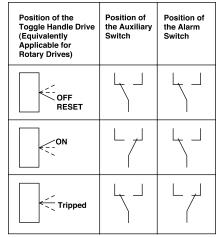


Figure 45-7. Contact Making by the Auxiliary and Alarm Switches as a Function of the Switching Position of the Circuit Breaker



## **Circuit Breakers & Supplementary Protectors** 15 – 2500 Amperes for UL, CSA & IEC Applications

#### **Special Features and Accessories**

#### **Special Calibration**

Special non-UL listed calibrations are available for certain ambient temperatures other than 40°C and for frequencies other than 50/60 Hz or dc. Reduced interrupting ratings will apply for 400 Hz applications.

#### 50°C Calibration

Note: Breakers equipped with electronic trip units can operate reliably in ambient temperatures of 50°C. Add suffix "V3" to NG MCCBs to remove standard 40°C labeling.

Add suffix "V" to catalog number for complete thermal magnetic breaker when ordering listed ampere ratings for breakers to be used in 50°C ambients. 50°C ambient MCCBs are not UL listed.

Contact Eaton for availability.

#### **Moisture-Fungus Treatment**

All Cutler-Hammer Circuit Breaker cases are molded from glass-polyester which does not support the growth of fungus. Any parts which are susceptible to the growth of fungus will require special treatment.

Order by description.

#### Table 45-65. Calibrations and Treatment

Description	Frame	Frame						
	EG	Price U.S. \$	JG	Price U.S. \$	LG	Price U.S. \$		
Special Calibration	1		<b>✓</b>		1			
Moisture-Fungus Treatment	/		1		1			

#### Table 45-66. External Accessories and Test Kit

Description	<u>F</u> it	Frame					
	Туре	EG	Price U.S. \$	JG	Price U.S. \$	LG	Price U.S. \$
External Accessories	•	•	•	•	•	•	
Non-Padlockable Handle Block	Field	EFHB		_		<u> </u>	
Padlockable Handle Block	Field	EFPHB		FJPHB		LBHP	
Padlockable Handle Block Off-Only	Field	EFPHBOFF		FJPHBOFF		LBHPOFF	
Padlockable Handle Lock Hasp	Field	EFPHL		FJPHL		LPHL	
Padlockable Handle Lock Hasp Off-Only	Field	EFPHLOFF		FJPHLOFF		LPHLOFF	
Kirk Key Interlock Kit ①	Field	_		KYKFJ		KYKL	
Castell Key Interlock Kit ②	Field	_		CYKFJ		CYKL	
Slide Bar Interlock ③	Field	EFSBI		FJSBI		LGSB1	
Walking Beam Interlock <sup>③</sup>	3-Pole	EG3WBI		JG3WBI		LG3WBI	
	4-Pole	EG4WBI		JG4WBI		LG4WBI	
Electrical Operator 4	120 Vac	EOPEG240C		EOPFJ240C		EOPLG240C	
	240 Vac	EOPEG240C		EOPFJ240C		EOPLG240C	
	24 Vdc	EOPEG48D		EOPFJ24D		EOPLG24D	
	48 Vdc	EOPEG48D		EOPFJ48D		EOPLG48D	
	125 Vdc	EOPEG240C		EOPFJ240C		EOPLG240C	
Plug-In Adapters	3-Pole	PAD3E		PAD3J		PAD3L	
	4-Pole	PAD4E		PAD4J		PAD4L	
Rear Connecting Studs	Field	(5)		(5)		3P-LRCS3WK 4P-LRCS4WK	
Test Kit	•	-	•	•		•	•
Electronic Portable Test Kit	120 V 230 V	N/A N/A		MTST120V MTST230V		MTST120V MTST230V	

<sup>1</sup> Provision only.

<sup>&</sup>lt;sup>2</sup> Castell bolt mounting hole must be 10 mm.

<sup>3</sup> Requires two breakers.

<sup>4</sup> Contact Eaton for availability of operators for EG- and NG-Frames before December

⑤ Contact Eaton for catalog numbers.



#### **Accessories**

#### Table 45-67 Accessories

Table 45-67. Accessories				
Description		Pole	Frame	
		Location	EG, JG & LG	Price U.S. \$
ield Fit Kit Catalog Numb	ers			
Alarm Lockout	Make/Break	Left	_	
		Right	ALM1M1BEPK ①	
Make	2 Make/2 Break	Left	_	
17		Right	ALM2M2BEPK ②	
□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□				
Bleak /				
Auxiliary Switch	1A, 1B	Left	_	
		Right	AUX1A1BPK	
a <u></u>	2A, 2B	Left	_	
		Right	AUX2A2BPK	
b #	3A, 3B	Left	_	
		Right	_	
	4A, 4B	Left	_	
		Right	1_	
Auxiliary Switch /		Left	<del> </del>	+
Auxiliary Switch / Alarm Lockout		Right	ALIVAL DIMEDIA	
Shunt Trip —	120 Vac		AUXALRMEPK ®	-
Shunt Irip — Standard	120 vaC	Left	SNT120CPK <sup>4</sup>	
- Januara	240.17	Right	ONITACOODIC O	
	240 Vac	Left	SNT120CPK 4	
ST		Right	_	
	24 Vdc	Left	SNT060CPK 5	
a 🛨		Right	_	
	48 Vdc	Left	SNT060CPK ®	
		Right	_	
	380 – 600 Vac	Left	SNT480CPK ®	
		Right	_	
	220 – 250 Vdc or 3	880 – 440 Vac	_	
	480 – 600 Vac		_	
Shunt Trip —	•	Left	_	
Low Energy		Right	<u> </u>	
Undervoltage Release	110 – 127 Vac	Left	UVR120APK	
Mechanism		Right	<b> </b>	
	208 – 240 Vac	Left	UVR240APK	
		Right	_	
l (UV)	24 Vdc, Vac	Left	UVR024CPK	
		Right	_	
	48 – 60 Vdc	Left	UVR048DPK	
	1.5 55 1.55	Right	_	
	12 Vdc, Vac	Left	UVR012CPK	
	12 vac, vac	Right	_	
	48 – 60 Vdc	Left	UVR048APK	
	40 - 60 VUC		U V NU40APIN	
	120 Vdc	Right	LIV/D12EDDI/	-
	120 VUC	Left	UVR125DPK	-
	220 250 \/	Right	- LIV/Dacobby	
	220 – 250 Vdc	Left	UVR250DPK	
	000 -00:	Right	—	-
	380 – 500 Vac	Left	UVR480APK	
		Right	_	
	525 – 600 Vac	Left	UVR600APK	
		Right	-	
	12 Vdc	Left	_	
		Right	_	
	12 Vac	Left	_	
		Right	<b> </b> -	
	LLO: ALBAABAB IDK		105 \	

4 110 - 125 Vdc, 50/60 Hz.

110 125 Vdc, 50/60 Hz.
12 - 60 Vdc, 50/60 Hz.
380 - 600 Vdc, 50/60 Hz.

 $<sup>\</sup>ensuremath{^{\circlearrowleft}}$  Part number for JG and LG is AUXALRMJPK.

#### **Plug-in Blocks and Drawout Cassettes**

Circuit Breakers & Supplementary Protectors 15 – 2500 Amperes for UL, CSA & IEC Applications

## **Plug-in Blocks**

Plug-in adapters simplify installation and front removal of circuit breakers. Plug-ins are available for rear connection applications on 3- and 4-pole circuit breakers. Trip on drawout interlock kits are included. Stabs for EG, JG and LG plug-ins rotate 90° for flexible installation. Use terminal shields for IP30 protection.



LG Breaker with Plug-in Block

#### **Product Selection**

Table 45-68. Plug-in Blocks

1au16 43-00.	iable 43-00. Flug-III Diocks						
Breaker Frame	Poles	Catalog Number	Price U.S. \$				
EG-, JG- and LG-Frame Plug-in Blocks							
EG	3	PAD3E					
EG	4	PAD4E					
JG	3	PAD3J					
JG	4	PAD4J					
LG	3	PAD3L					
LG	4	PAD4L					
Trip-on Drawo	ut Interloc	k Kit ①					
EG	3, 4	PIILEG					
JG	3, 4	PIILJG					
LG	3, 4	PIILLG					
Terminal Shields IP30							
EG	3	EFTS3K					
EG	4	EFTS4K					

Included with plug-in block. Trips the breaker when breaker is removed from plug-in block.

3

FJTS3K FJTS4K

LTS3K

LTS4K

#### **Drawout Cassette**



**Drawout Cassette** 



JG and LG Drawout Cassettes

The Drawout Cassette is available for use with JG, LG and NG, 3- and 4-pole breakers. Also available are drawout cassettes for use with the standard 3-pole 65 and 100 kA/480 Vac, 1600 ampere and 2000 ampere RG circuit breakers. The cassettes consist of two separate components: the movable mechanism, which attaches to the breaker, and the stationary mechanism, which houses in the cassette. The stationary mechanism is shipped separately for the RG frame breakers. For the JG, LG and NG drawout cassettes, all necessary parts for installation are included in the one catalog number.

Features of the drawout cassettes for the JG, LG and NG include:

- Trip on drawout Breaker will trip if it is in the ON position when withdrawn from the cassette.
- Secondary Terminal Block The drawout cassettes include a secondary terminal block for easier access when wiring low voltage accessories, including shunts and undervoltage releases.

The drawout mechanism has three primary positions:

- Connected The breaker is fully connected to the primary stabs and secondary contacts.
- Disconnected Both the primary stabs and the secondary contacts are disconnected.
- Withdraw The breaker can be removed from the cassette.

## Table 45-69. JG, LG and NG Drawout Cassettes

Breaker Frame	Poles	Catalog Number	Price U.S. \$
JG	3	JG3DOM	
	4	JG4DOM	
LG	3	LG3DOM	
	4	LG4DOM	

JG

JG LG

LG

## Circuit Breakers & Supplementary Protectors 15 – 2500 Amperes for UL, CSA & IEC Applications

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**Handle Mechanisms** 

#### Handle Mechanisms Overview

Handle mechanisms are used to operate molded case circuit breakers, molded case switches and motor circuit protectors. They are available in three basic configurations — Flange Mounted, Through-the-Door and Direct (Close-Coupled) — providing safe, dependable operation and ease of installation.

#### Flange Mounted

■ Flex Shaft

#### Through-the-Door

■ Universal Rotary

#### Direct (Close Coupled)

- Universal Direct
- Euro IEC

Handle mechanisms are typically used on enclosed circuit breakers, control panels and motor control centers in many different applications. Eaton Electrical has a handle mechanism for virtually any need.

## Flange Mounted Handle Mechanisms





The Flex Shaft

Flange Mounted handle mechanisms mount on the flange of an enclosure door. The Flex Shaft is an extra heavy-duty mechanism that includes a flexible shaft in various lengths, 3 feet (0.9 m) through 10 feet (3 m) for use with various size enclosures.

The Flex Shaft handle will accept up to three padlock shackles, each with a maximum diameter of 3/8 inch (9.5 mm). Can be used with NEMA 12 fabricated enclosures. An optional handle is available for Flex Shaft that is suitable for use with NEMA 4 environments.

Flex Shaft comes preset from the factory, requiring only minor field adjustments on installation, which takes about 10 minutes — a significant time savings compared to installation of other types of flange handle mechanisms. The Flex Shaft mechanism also takes up less interior enclosure space than competitive designs and the handle fits standard flange cutouts. Flex Shaft handle can be remotely mounted from breaker, where an operator can use it by "funneling" the cable through conduit.

Flex Shaft is UL listed under File E64893 and meets CSA requirements.

**Note:** NEMA 4X handle mechanisms are available. Add Suffix X to the complete Catalog Number.

Original narrow handle design (No **C** Suffix) is available. Remove **C** from Catalog Number.

**Note:** When selecting the length of shaft, ensure minimum bending radius of 4 inches (101.6 mm) is maintained to operate properly.

The standard method of shipment includes the mechanism preset at the factory; however, minor field adjustments may be required.

#### **Flex Shaft Ordering Information**

Table 45-70. Flex Shaft Ordering Information

Breaker	Flexible Shaft Length in Feet (m)								
Frame	Catalog Nu	Catalog Number							
	3 (.9)	3 (.9) 4 (1.2) 5 (1.3) 6 (1.8) 7 (2.1) 8 (2.4) 9 (2.7) 10 (3.1)							
EG JG	EHMFS03 JHMFS03		EHMFS05 JHMFS05	EHMFS06 JHMFS06	EHMFS07 JHMFS07	EHMFS08 JHMFS08	EHMFS09 JHMFS09	EHMFS10 JHMFS10	
LG	_	LHMFS04	_	_	LHMFS07	_		LHMFS10	

Note: Add Suffix L to the complete Catalog Number for 6-inch (152.4 mm) handle.

Note: 3-Pole only for EG, 3 and 4 Pole for JG and LG.

#### Flex Shaft Accessories (E- through R-Frame)

Table 45-71. NEMA 12 Safety Door Hardware for Flex Shaft ①

Handle Length in Inches (mm)	Catalog Number ②	Price U.S. \$
4.00 (101.6) 6.00 (152.4)	C361KJ4 C361KJ6	
Roller Latch 3	C361KR	

- Customer: Consult with box manufacturer for correct door hardware and any adapters required for assembly.
- ② The 1/4-inch x 1/2-inch (6.35 x 12.7 mm) standard mill rectangular locking bar is not supplied with these kits.
- Third roller latch for use with 4- or 6-inch (101.6 or 152.4 mm) handle when 3 point latching is required.

Table 45-72. NEMA — IP Crossover

NEMA Type	IP Type
1	IP20
3R	IP55
12	IP54
4/4X	IP66

Discount Symbol . . . . . . CB-2



# Circuit Breakers & Supplementary Protectors 15 – 2500 Amperes for UL, CSA & IEC Applications

#### **Handle Mechanisms**

#### **Through-the-Door Handle Mechanisms**





**Universal Rotary** 

The Cutler-Hammer Universal Rotary is suitable for use with NEMA 12 enclosure types. An optional NEMA 4/4X handle mechanism is also available. All rotary handle mechanisms include a handle "Lock Off," to prevent turning the breaker ON while in the OFF position. All Rotary handles indicate ON/OFF/Tripped/Reset positions, however, Universal Rotary has the added feature of international markings for ON (I) and OFF (O). The Universal Rotary is made of molded material. Inside handle is lockable.

The Universal Rotary mechanisms for EG, JG and LG MCCBs can be operated by hand with the door open or "locked off" to prevent operation with the door open.

#### 4/4X Handle Mechanism



EG-Frame



Table 45-73. Universal Rotary Ordering Information

Shaft Length in Inches (mm)	Handle	NEMA	Complete	Price
	Color	Rating	Catalog Number ①	U.S. \$
EG-Frame	1	<u>'</u>	•	'
6.00 (152.4)	Black	1, 3R, 12	EHMVD06B	
12.00 (304.8)	Black	1, 3R, 12	EHMVD12B	
24.00 (609.6)	Black	1, 3R, 12	EHMVD24B	
6.00 (152.4)	Red	1, 3R, 12	EHMVD06R	
12.00 (304.8)	Red	1, 3R, 12	EHMVD12R	
24.00 (609.6)	Red	1, 3R, 12	EHMVD24R	
6.00 (152.4)	Black	4, 4X	EHMVD06BX	
12.00 (304.8)	Black	4, 4X	EHMVD12BX	
24.00 (609.6)	Black	4, 4X	EHMVD24BX	
6.00 (152.4)	Red	4, 4X	EHMVD06RX	
12.00 (304.8)	Red	4, 4X	EHMVD12RX	
24.00 (609.6)	Red	4, 4X	EHMVD24RX	
JG-Frame		•		
6.00 (152.4)	Black	1, 3R, 12	FJHMVD06B	
12.00 (304.8)	Black	1, 3R, 12	FJHMVD12B	
24.00 (609.6)	Black	1, 3R, 12	FJHMVD24B	
6.00 (152.4)	Red	1, 3R, 12	FJHMVD06R	
12.00 (304.8)	Red	1, 3R, 12	FJHMVD12R	
24.00 (609.6)	Red	1, 3R, 12	FJHMVD24R	
6.00 (152.4)	Black	4, 4X	FJMVD06BX	
12.00 (304.8)	Black	4, 4X	FJMVD12BX	
24.00 (609.6)	Black	4, 4X	FJMVD24BX	
6.00 (152.4)	Red	4, 4X	FJMVD06RX	
12.00 (304.8)	Red	4, 4X	FJMVD12RX	
24.00 (609.6)	Red	4, 4X	FJMVD24RX	
LG-Frame	•	•	•	•
6.00 (152.4)	Black	1, 3R, 12	KLHMVD06B	
12.00 (304.8)	Black	1, 3R, 12	KLHMVD12B	
24.00 (609.6)	Black	1, 3R, 12	KLHMVD24B	
6.00 (152.4)	Red	1, 3R, 12	KLHMVD06R	
12.00 (304.8)	Red	1, 3R, 12	KLHMVD12R	
24.00 (609.6)	Red	1, 3R, 12	KLHMVD24R	
6.00 (152.4)	Black	4, 4X	KLMVD06BX	
12.00 (304.8)	Black	4, 4X	KLMVD12BX	
24.00 (609.6)	Black	4, 4X	KLMVD24BX	
6.00 (152.4)	Red	4, 4X	KLMVD06RX	
12.00 (304.8)	Red	4, 4X	KLMVD12RX	
24.00 (609.6)	Red	4, 4X	KLMVD24RX	

① Complete catalog number includes handle, mechanism, shaft and mounting hardware.

## Circuit Breakers & Supplementary Protectors 15 – 2500 Amperes for UL, CSA & IEC Applications

FAT-N

August 2006

#### **Handle Mechanisms**

#### Direct (Close-Coupled) Handle Mechanisms



Universal Direct (EG - LG)

Direct (Close-Coupled) Handle Mechanisms mount directly to the circuit breaker. They are used in shallow enclosures where the standard variable depth Through-the-Door type mechanism is not practical or cannot be used. They are typically for applications where high volume, standardized enclosures are being fabricated.

The Universal Direct handle mechanism is designed exclusively for the new Cutler-Hammer EG, JG and LG circuit breakers. It is available as standard with a door interlock to prevent opening the enclosure while the circuit breaker is in the ON position. It is also available without a door interlock.

The Universal Direct handle mechanism is UL 489 listed, IEC 60947-1/2 and meets CSA requirements.

Table 45-74. Universal Direct Ordering Information

Frame	White Handle Color	Red Handle Color				
	with Interlock	Price	without Interlock	Price	without Interlock	Price
	Catalog Number	U.S. \$	Catalog Number	U.S. \$	Catalog Number	U.S. \$
EG JG	EHMCCBI JHMCCBI		EHMCCB JHMCCB		EHMCCR JHMCCR	
LG	LHMCCBI		LHMCCB		LHMCCR	