Handle Mechanisms

Contents

Handle Mechanisms—Series C

Product 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.

Through-the-Door

- High-Performance Rotary
- Series C Rotary
- Universal Rotary

Direct (Close-Coupled)

- Universal Direct
- Euro IEC
- G Direct

Flange Mounted

- Flex Shaft
- C371

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

Through-the-Door Handle Mechanisms

Eaton's through-the-door handle mechanisms mount on the front of an enclosure or cabinet door and externally operate the circuit breaker via a variable depth shaft or a linear operator (Type MC). Each rotary type handle mechanism includes a handle, base operating mechanism and shaft that can be cut to various lengths.

Series C Rotary and Universal Rotary handle mechanisms are for use with molded case circuit breakers (G, F, J, K, L, MDL), molded case switches and motor circuit protectors.

Type 4/4X handles are similar to standard handles except they include an internal neoprene gasket. Type 4/4X handle style number is 6648C22G03. Due to gasketing effect between the handle and the housing, the handle may not indicate a tripped position.

Universal Rotary F-Frame

Direct (Close-Coupled) Handle Mechanisms

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 Euro IEC Direct handle mechanism can be used on F- through R-Frames.

The G Direct is available with a black or the yellow handle, and with or without a shroud. It is suitable for use with NEMA 1 enclosures. It is for use only with the G-Frame (GD, GC, GHC, GMCP).

An escutcheon ring and interlock clip are provided as standard. The standard design includes a lock-off feature.

Flange-Mounted Handle Mechanisms

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 (0.9m) through 10 feet (3m) 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 1, 3R and 12 fabricated enclosures. An optional handle is available for Flex Shaft that is suitable for use with NEMA 4 and 4X 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.

The Type C371 circuit breaker operating mechanisms are designed for installation in control enclosures where main or branch circuit protective devices are required. All circuit breaker mechanisms are suitable for right-hand mounting.

Auxiliary contacts are not available for mounting on operating mechanisms. Where required, have them installed in circuit breaker.

Handle Extension

Handle extension is not included with J, K, L, M and N-Frame breakers. It must be purchased separately.

Standards and Certifications

Type C371 is UL Listed under File E62635.

Flex Shaft is UL Listed under File E64983 and meets CSA requirements.

Series C Rotary and Universal Rotary, are UL Listed and meet CSA requirements. Universal Rotary also meets IEC 60947-1 and IEC 60947-2 for international compliance. Rotary UL File Number is E64983.

The Universal Direct handle mechanism is UL 489 Listed, IEC 60947-1 and IEC 60947-2, and meets CSA requirements. The Euro IEC Direct handle mechanism is IEC-240-1. G Direct is UL Listed and meets CSA requirements.

Listed

Handle Mechanisms

High-Performance Rotary Handle Mechanisms

Product Description

The high-performance rotary handle mechanism uses a simple, yet robust design to make installation and operation easy. The external handle's key functional components are all metallic, ensuring reliability. The metal-on-metal interface between the handle and shaft prevents contaminant buildup that could impede operation, while UV and chemical agent resistant materials protect the handle from heat and fading in direct sunlight, as well as chemicals that may be introduced in harsh environments.

In addition to its robust design features, the handle mechanism has stand-off support that allows for easy operation with a gloved hand. With a shallow profile, the handle can easily be used in applications where an internal or double door is required.

The high-performance external handle can accept padlocks or multi-hasp locks. The door is interlocked when padlocked and cannot be bypassed.

Features

- NEMA Type 1/3R/12 (IP54) and NEMA Type 4/4X (IP65) ratings
- Black/Blue or Red/Yellow external handle colors
- Three shaft lengths—6, 12 and 24 inches, which can be cut to size to match enclosure depth
- Conveniently packaged as kit containing handle, shaft and mechanism
- Replacement parts are available separately
- Metallic functional components ensure reliability
- Metal-on-metal interface between handle and shaft
- UV and chemical agent-resistant materials protect the handle
- Shallow profile
- Compatible with both Series C and Series G molded case circuit breakers and molded case switch platforms
- Same handle can be used on multiple frames sizes reducing the number of parts needed
- Red and yellow handles to designate emergency disconnecting means
- All handle mechanisms can accept padlocks or multi-hasp locks for added flexibility
- Fast, easy installation (see video on website for step-by-step instructions)

Standards and Certifications

The mechanisms for EG, JG and LG breakers have an internal handle that can be operated independent of door position, and locked-out to meet one of the key NFPA requirements (NFPA® 79) and UL 508A disconnect requirements.

- NEMA 1/3R/12, IP54
- NEMA 4/4X, IP65

UL Listed

Product Selection

Handle Mechanisms for Series C Frames

Kits Only (Kit Includes Shaft, Mechanism and Handle)—GC/GD- and GMCP-Frame

	Description	Rating Type NEMA	IP	GC/GD-Frame Catalog Number	GMCP-Frame Catalog Number
S01 Blue Handle 	S01 blue handle, 12-inch shaft	1/3R/12	54	**GCHMVD12B / 68C6039G01**	**GMHMVD12B / 68C6039G05**
		4/4X	65	**GCHMVD12BX / 68C6039G03**	**GMHMVD12BX / 68C6039G07**
S01 Red Handle 	S01 red handle, 12-inch shaft	1/3R/12	54	**GCHMVD12R / 68C6039G02**	**GMHMVD12R / 68C6039G06**
		4/4X	65	**GCHMVD12RX / 68C6039G04**	**GMHMVD12RX / 68C6039G08**

Separate Components for Series C Frames

Series C Components—Shaft and Mechanism

Frame	Shaft Width	Shaft Length 6-Inch	10-Inch	12-Inch	Mechanism Only
GC/GD	6 mm	—	—	**66A6013H02**	**GCHMVD / 2A92095G15**
GMCP	6 mm	—	—	**66A6013H02**	**GMHMVD / 2A92095G16**
GD	8 mm	**66A6010G95**	—	**66A6010G96**	**1498D34G90**
FD	8 mm	**66A6010G95**	—	**66A6010G96**	**1498D34G91**
JD	10 mm	**66A6012G15**	—	**66A6012G16**	**1498D34G92**
KD	10 mm	**66A6012G15**	—	**66A6012G16**	**1498D34G93**
LD	10 mm	**66A6012G15**	—	**66A6012G16**	**1498D34G94**
MDL	10 mm	**66A6012G15**	—	**66A6012G16**	**1498D34G95**
ND	12 mm	—	**66A6013H01**	—	**69D9101G30**
RD	12 mm	—	**66A6013H01**	—	**69D9101G31**

Note

Shaft guide (68C6048G49) is optional and can be used with any high-performance handle listed above for greater alignment tolerance.