

Molded Case Circuit Breakers — Overview

Overview

Designed to provide branch and feeder circuit protection in industrial control panels, Cutler-Hammer Molded Case Circuit Breakers supply protection against overload in conductors and short circuit in connected equipment such as motors. They are UL listed for installation in UL 508 control panels. Their small size, in relation to standard circuit breakers or other comparable devices, saves panel space. Four frame sizes and all standard accessories are available.

Features

- UL489 listed performance for branch circuit overcurrent protection and disconnecting means
- Patented contact conductor designs featuring high-speed "blow-open" action, providing superior performance when high level fault currents produce extraordinary electromechanical forces
- Advanced arc extinguishing technology
- Toggle handle provides three positions (on/off/tripped) along with visual indicators
- Manufactured in ISO 9000 certified facilities
- HACR rated
- G-Frame and F-Frame size units are suitable for reverse feed
- K-Frame and L-Frame Breakers include
 3-pole adjustable magnetic trip.

NEW!



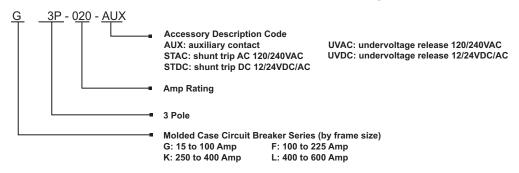
Listings

- UL 489 MCCB
- CSA 22.2 No.5
- IEC 157-1
- NEMA Standards Publication No. AB1-1993

Molded Case Circuit Breakers Technical Specifications										
Circuit Breaker	Ampere	No.	Va	lts	Type Federal			UL Listed Interrupting Rati (rms Symmetrical Ampere		js)
Туре	Rating at 40°C	Poles	AC	DC	ot Trip*	Specification W-C-375B	AC (kA) DC		DC (kA)	
	-10 0		AU	БС	шр	W-0-373D	240	480	600	<i>250</i>
G-Frame	15 -100	3	480	250	N.I.T.U	13b	65	22	-	10
F-Frame	100 - 225	3	600	250	N.I.T.U	22a	65	35	18	10
K-Frame	250 - 400	3	600	250	I.T.U	23a	65	35	25	10
L-Frame	400 - 600	3	600	250	I.T.U	23a	65	35	25	22

*Note: N.I.T.U denotes non-interchangeable trip unit. I.T.U denotes interchangeable trip unit.

Molded Case Circuit Breakers Part Numbering System



A-122



Molded Case Circuit Breakers 15-100 Amp G-Frame



Cutler-Hammer



G3P-40 shown



GHMVD12B



F0S03C



3TA100G6K

G-Frame circuit breakers are available as a single unit, or with accessories pre-installed only. Accessories are not field installable on this frame size. G-Frame breakers are suit-

able for reverse feed use. All breakers include base mounting hardware for panel mount applications.

	G-Frame Series Three Pole Molded Case Circuit Breakers								
Par	rt Number	Description	Pre-Installed Accessories*	Ampere Rating	Voltage	Interrupt Capacity			
G3P	P-015	Molded case circuit breaker with thermal mag-	None	15					
G3P	P-015-AUX	netic trip; line and load lug terminals included.	With auxiliary contact installed	10					
G3P	P-020	Molded case circuit breaker with thermal mag-	None	20					
G3P	P-020-AUX	netic trip; line and load lug terminals included.	With auxiliary contact installed	20					
G3P	P-025	Molded case circuit breaker with thermal magnetic trip; line and load lug terminals included.	None	25					
G3P	P-030		None						
G3P	P-030-AUX		With auxiliary contact installed						
G3P	P-030-STAC	Molded case circuit breaker with thermal magnetic trip; line and load lug terminals included.	With 120/240VAC shunt trip installed	30					
G3P	P-030-STDC		With 12/24VDC/AC shunt trip installed						
0.00	P-030-UVAC		With 120/240VAC undervoltage release installed						
G3P	P-030-UVDC		With 12/24VDC/AC undervoltage release installed						
G3P	P-040	Molded case circuit breaker with thermal magnetic trip; line and load lug terminals included.	None	40	240VAC	65kA			
G3P	P-050	Molded case circuit breaker with thermal magnetic trip; line and load lug terminals included.	None	50	480VAC 250VDC**	22kA 10kA			
G3P	P-060	Tions arp, fine and load tag terminals included.	None						
G3P	P-060-AUX		With auxiliary contact installed						
G3P	P-060-STAC	Molded case circuit breaker with thermal mag-	With 120/240VAC shunt trip installed	60					
G3P	P-060-STDC	netic trip; line and load lug terminals included.	With 12/24VDC/AC shunt trip installed	00					
G3P	P-060-UVAC		With 120/240VAC undervoltage release installed						
G3P	P-060-UVDC		With 12/24VDC/AC undervoltage release installed						
G3P	P-100		None						
G3P	P-100-AUX		With auxiliary contact installed						
G3P	P-100-STAC	Molded case circuit breaker with thermal mag-	With 120/240VAC shunt trip installed	100					
G3P	P-100-STDC	1	With 12/24VDC/AC shunt trip installed	100					
G3P	P-100-UVAC		With 120/240VAC undervoltage release installed						
G3P	P-100-UVDC		With 12/24VDC/AC undervoltage release installed						

*Note: Available accessories are pre-installed on G-Frame and F-Frame Molded Case Circuit Breakers. They are not field installable or interchangeable.

^{**}Note: Two poles of three-pole circuit breaker.

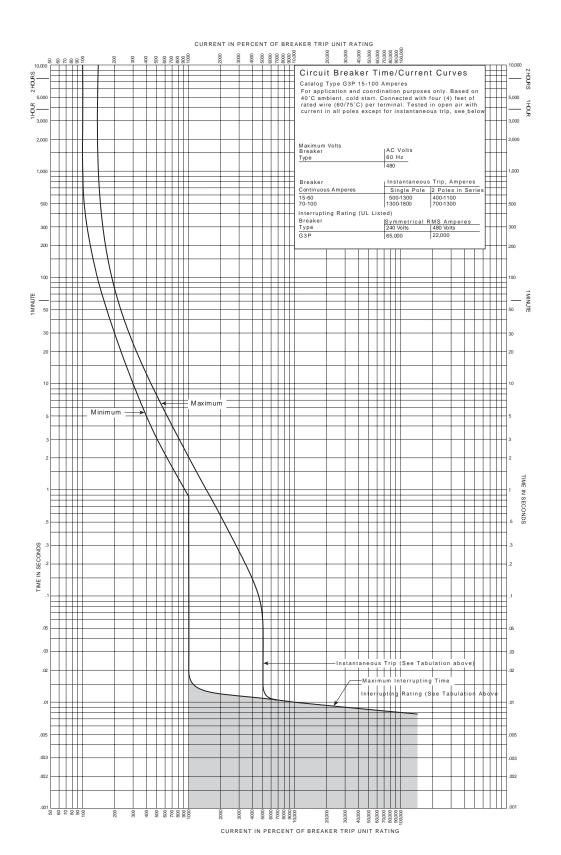
	G-Frame Accessory Selection Guide					
Part Number	Description					
GHMVD12B	NEMA 1/12 rotary handle for G-Frame. Position indicating; lock-off feature. Shaft length: 12"					
FOSO3C	NEMA 1/12 flexible shaft handle for G-Frame. Flange mounted. Lockable. Shaft length: 3'					
3TA100G6K	TA100G6K Multi-wire connector to allow 6 wires to be connected to the G-frame. UL for copper only. 14-6AWG. Package of 3					
GDIN	DIN rail clip adapter to allow mounting of G-Frame unit on 35mm DIN rail. Pkg of 1 includes mounting hardware.					



GDIN

AWG Wire Range Specifications								
Circuit Breaker	Ampere Rating	Wire Type	AWG Wire Range	Metric Wire Range mm²				
G-Frame	15 - 20	Cu/Al	14 - 10	2.5 - 4				
	25 - 100	Gu/Ai	10 - 1/0	4 - 50				

Molded Case Circuit Breakers 15-100 Amp G-Frame



Ampere

Rating

100

125

150

175

200

225

Voltage

240VAC

480VAC

600VAC

250VDC*



Interrupt

Capacity

65kA

35kA

18kA

10kA

Molded Case Circuit Breakers 100-225 Amp F-Frame



Cutler-Hammer



F-Frame circuit breakers are available as a single unit, or with accessories preinstalled only. Accessories are not field installable on this frame size. This frame size is suitable for reverse feed use.

All breakers include base mounting hardware for panel mount applications.

Description

Molded case circuit breaker with thermal mag-

netic trip; line and load lug terminals included. Molded case circuit breaker with thermal mag-

netic trip; line and load lug terminals included.

Molded case circuit breaker with thermal mag-

netic trip; line and load lug terminals included.

Molded case circuit breaker with thermal mag-

netic trip; line and load lug terminals included.

Molded case circuit breaker with thermal mag-

netic trip; line and load lug terminals included.

Molded case circuit breaker with thermal mag-

netic trip: line and load lug terminals included.

F-Frame Series Three Pole Molded Case Circuit Breakers

None

None

None

Pre-Installed Accessories*

With auxiliary contact installed

With auxiliary contact installed

With 120/240VAC shunt trip installed

With 12/24VDC/AC shunt trip installed

With 120/240VAC undervoltage release installed

With 12/24VDC/AC undervoltage release installed

With 120/240VAC shunt trip installed

With 12/24VDC/AC shunt trip installed

With 120/240VAC undervoltage release installed

With 12/24VDC/AC undervoltage release installed

F3P-200 shown

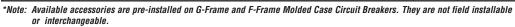


FHMVD12B









^{**}Note: Two poles of three-pole circuit breaker.

3TA150F6K



3TA225FD

AWG Wire Range Specifications							
Circuit Breaker	Ampere Rating	Wire Type	AWG Wire Range	Metric Wire Range mm²			
F-Frame	100	Cu/Al	14 - 1/0	2.5 - 50			
	225	Gu/Ai	14 - 4/0	25 - 95			

Part Number

F3P-100

F3P-125

F3P-150

F3P-175

F3P-200

F3P-200-AUX

F3P-200-STAC

F3P-200-STDC

F3P-200-UVAC

F3P-200-UVDC

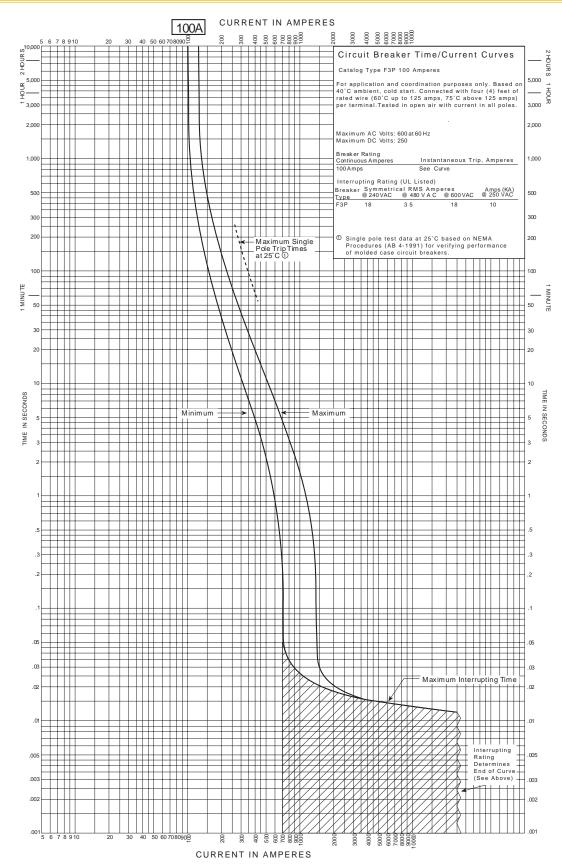
F3P-225

F3P-150-STAC

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Part Number	Description
FHMVD12B	NEMA 1/12 rotary handle for F-frame. Position indicating. Lock-off feature. Shaft length: 12"
F1S03C	NEMA 1/12 flexible shaft handle for F-frame. Flange mountable. Lockable. Shaft length: 3'
3TA150F6K	Multi-wire connector to allow 6 wires to be connected to the F-frame. UL for copper only. 14-6 AWG. Package of 3
3TA225FD	Replacement lug kit for F-frame. Package of 3

MOLDED CASE CIRCUIT BREAKERS 100 AMP F-FRAME



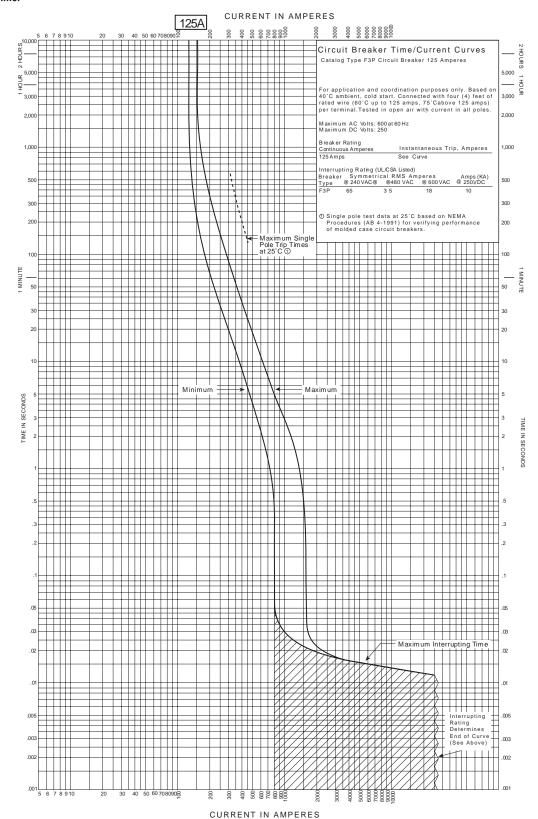




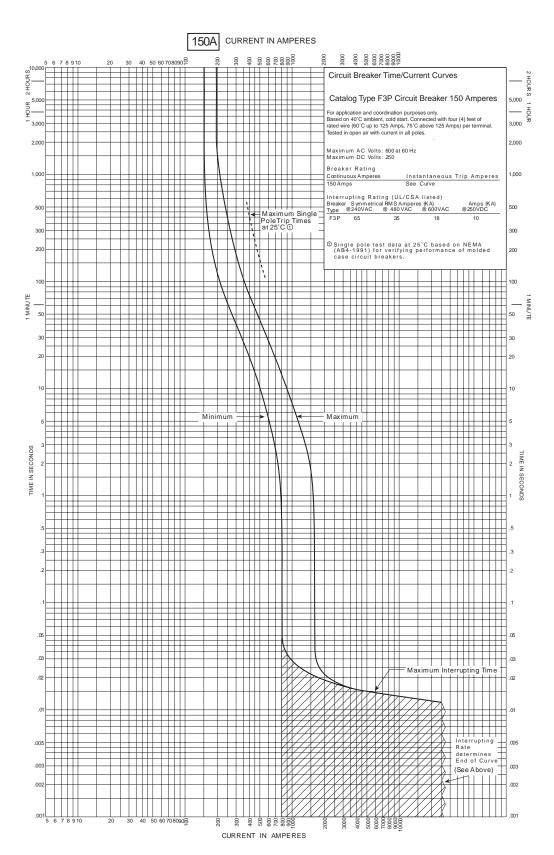
Molded Case Circuit Breakers 125 Amp F-Frame

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Molded Case Circuit Breakers 150 Amp F-Frame



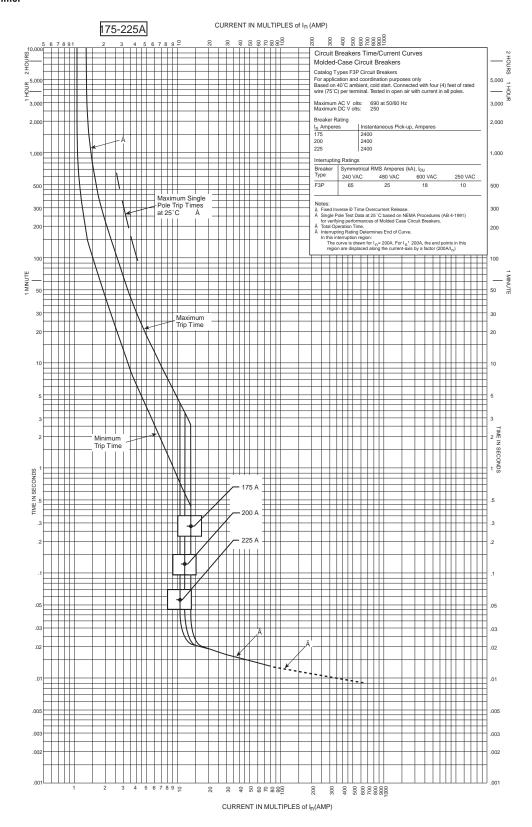




Molded Case Circuit Breakers 175-225 Amp F-Frame

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Molded Case Circuit Breakers 250-400 Amp K-Frame

K-Frame circuit breakers are available as individual components or in a kit. Breaker frame includes 3-pole adjustable magnetic trip. Available accessories are field installable on this frame size.

All breakers include base mounting hardware for panel mount applications.

	K-Frame Series Three Pole Molded Case Circuit Breakers							
Part Number	Description	Kits	Ampere Rating	Voltage	Interrupt Capacity			
K3P-250		Single unit only						
K3P-250-AUX		Kit includes K3P-250 and A1X3PK						
K3P-250-STAC	Molded case circuit breaker with thermal magnetic K prip; line and load lug terminals included.	Kit includes K3P-250 and SNT3P11K	250					
K3P-250-STDC		Kit includes K3P-250 and SNT3P04K	250					
K3P-250-UVAC		Kit includes K3P-250 and UVH3LP08K						
K3P-250-UVDC		Kit includes K3P-250 and UVH3LP21K						
K3P-300		Single unit only						
K3P-300-AUX	Molded case circuit breaker with thermal magnetic trip; line and load lug terminals included.	Kit includes K3P-300 and A1X3PK		240VAC 480VAC - 600VAC 250VDC	65kA 35kA 25kA			
K3P-300-STAC		Kit includes K3P-300 and SNT3P11K	300					
K3P-300-STDC		Kit includes K3P-300 and SNT3P04K						
K3P-300-UVAC		Kit includes K3P-300 and UVH3LP08K						
K3P-300-UVDC		Kit includes K3P-300 and UVH3LP21K						
K3P-350		Single unit only			10kA*			
K3P-350-AUX		Kit includes K3P-350 and A1X3PK						
K3P-350-STAC	Molded case circuit breaker with thermal magnetic	Kit includes K3P-350 and SNT3P11K						
K3P-350-STDC	trip; line and load lug terminals included.	Kit includes K3P-350 and SNT3P04K	330					
K3P-350-UVAC		Kit includes K3P-350 and UVH3LP08K						
K3P-350-UVDC		Kit includes K3P-350 and UVH3LP21K						
K3P-400	Molded case circuit breaker with thermal magnetic	Single unit only						
K3P-400-AUX		Kit includes K3P-400 and A1X3PK						
K3P-400-STAC		Kit includes K3P-400 and SNT3P11K	400					
K3P-400-STDC	trip; line and load lug terminals included.	Kit includes K3P-400 and SNT3P04K	-00					
K3P-400-UVAC		Kit includes K3P-400 and UVH3LP08K						
K3P-400-UVDC		Kit includes K3P-400 and UVH3LP21K						

K-Frame Accessory Selection Guide

NEMA 1/12 rotary handle for K-Frame.. Position indicating. Lock-off feature. Shaft length: 12"

NEMA 1/12 flexible shaft handle for K-Frame. Flange Mounted. Lockable. Shaft length: 4'





K3P-400 shown



KHMVD12B



F3S03C



A1X3PK



SNT3P04K



3TA401K

UVH3LP21K Field installable 12/24VDC/VAC undervoltage r						elease for K-Frame
AWG Wire Range Specifications						
Circuit Breaker	Ampe Ratin				Metric Wire Range mm²	
K-Frame	250 - 3	350	Cu/Al	250 - 500 (1)	120 - 240	
	400		Gu/AI	3/0 - 250 (2)	95 - 120	

*Note: Two outside poles of 3-pole circuit breaker.

Description

Part Number

KHMVD12B

F3S03C

A1X3PK

SNT3P11K

SNT3P04K

UVH3LP08K

3TA401K



Field installable auxiliary contact for K-Frame MCCB

Field installable 120/240VAC shunt trip for K-Frame

Replacement lug kit for K-Frame. Package of 3

Field installable 12/24VDC/VAC shunt trip for K-Frame

Field installable 120/240VAC undervoltage release for K-Frame

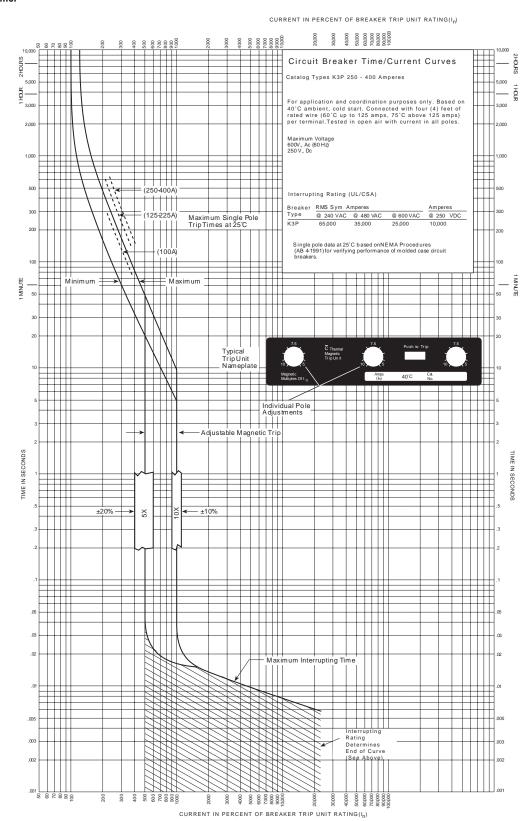




MOLDED CASE CIRCUIT BREAKERS 250-400 AMP K-FRAME

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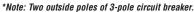


Molded Case Circuit Breakers 400-600 Amp L-Frame

L-Frame circuit breakers are available as individual components or in a kit. Breaker frame includes 3-pole adjustable magnetic trip. Available accessories are

field installable on this frame size. All breakers include base mounting hardware for panel mount applications.

L-Frame Series Three Pole Molded Case Circuit Breakers								
Part Number	Description	Kits	Ampere Rating	Voltage	Interrupt Capacity			
L3P-400		Single unit only						
L3P-400-AUX		Kit includes L3P-400 and A1X4PK						
L3P-400-STAC	Molded case circuit breaker with thermal King	Kit includes L3P-400 and SNT4RP11K	400					
L3P-400-STDC	included.	Kit includes L3P-400 and SNT4RP03K	400					
L3P-400-UVAC	<u> </u>	Kit includes L3P-400 and UVH4LP08K		240VAC 480VAC 600VAC 250VDC	65kA 35kA			
L3P-400-UVDC		Kit includes L3P-400 and UVH4LP21K						
L3P-500		Single unit only						
L3P-500-AUX		Kit includes L3P-500 and A1X4PK	500					
L3P-500-STAC		Kit includes L3P-500 and SNT4RP11K						
L3P-500-STDC	included.	Kit includes L3P-500 and SNT4RP03K			25kA			
L3P-500-UVAC		Kit includes L3P-500 and UVH4LP08K			22kA*			
L3P-500-UVDC		Kit includes L3P-500 and UVH4LP21K						
L3P-600	Molded case circuit breaker with thermal	Single unit only						
L3P-600-AUX		Kit includes L3P-600 and A1X4PK						
L3P-600-STAC		Kit includes L3P-600 and SNT4RP11K	600					
L3P-600-STDC		Kit includes L3P-600 and SNT4RP03K	000					
L3P-600-UVAC		Kit includes L3P-600 and UVH4LP08K						
L3P-600-UVDC		Kit includes L3P-600 and UVH4LP21K						



L-Frame Accessory Selection Guide							
Part Number	Part Number Description						
LHMVD12B	EMA 1/12 rotary handle for L-Frame. Position indicating. Lock-off feature. Shaft length: 12"						
F4S04C	EMA 1/12 flexible shaft handle for L-Frame. Flange mounted. Lockable. Shaft length: 4'						
A1X4PK	Field installable auxiliary contact for L-Frame MCCB						
SNT4RP11K	Field installable 120/240VAC shunt trip for L-Frame						
SNT4RP03K	Field installable 12/24VDC/VAC shunt trip for L-Frame						
3TA603LDK	Replacement lug kit for L-Frame. Rated 600A. Package of 3						
UVH4LP08K	Field installable 120/240VAC undervoltage release for L-Frame						
UVH4LP21K	Field installable 12/24VDC/VAC undervoltage release for L-Frame						

AWG Wire Range Specifications								
Circuit Breaker	Ampere Rating			Metric Wire Range mm²				
L-Frame	400		4/0 - 600 (1)	120 - 300				
	500	Cu/Al	3/0 - 350 (2)	95 - 150				
	600		400 - 500 (2)	185 - 240				



L3P-600 shown



LHMVD12B



F4S04C





SNT4RP03K



3TA603LDK



UVH4LP08K

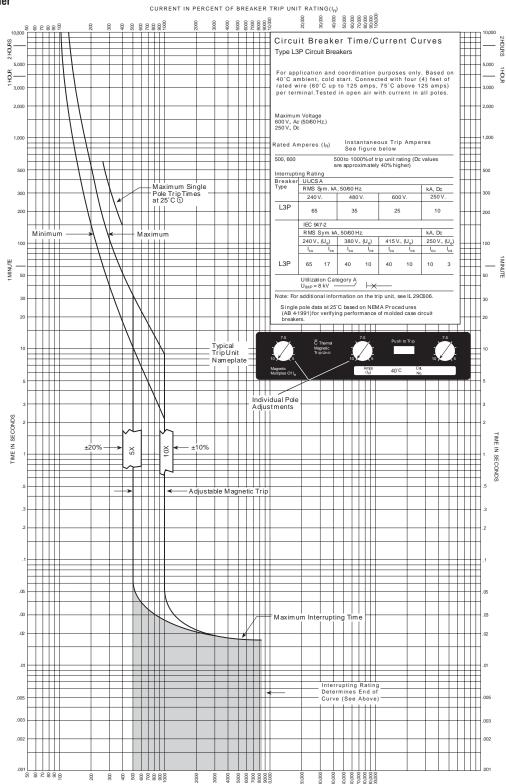




Molded Case Circuit Breakers 400-600 Amp L-Frame



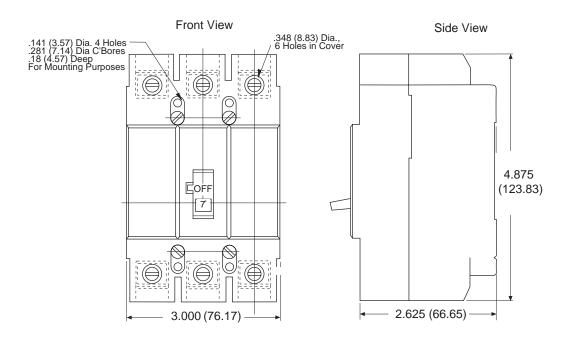
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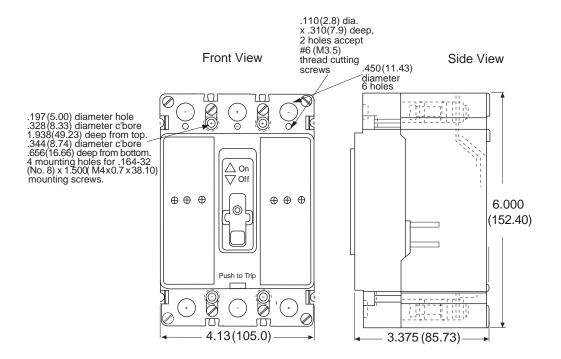
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Molded Case Circuit Breakers — Dimensions

15 - 100Amp G-Frame



100 - 225Amp F-Frame

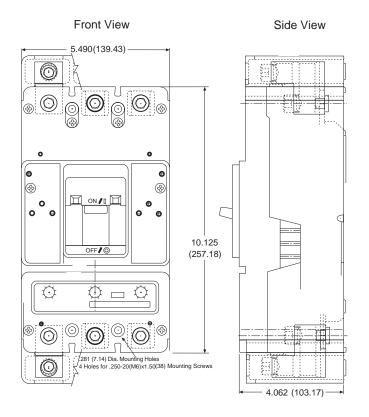




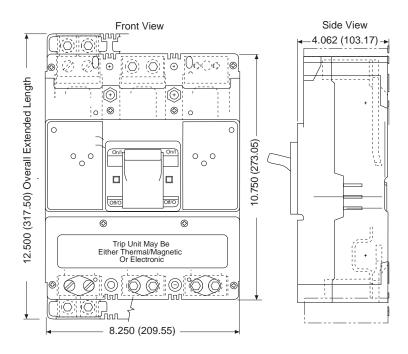
Molded Case Circuit Breakers — dimensions

Cutler-Hammer

250 - 400Amp K-Frame



400 - 600Amp L-Frame



Molded Case Circuit Breakers — Accessories

Field Mountable Accessories



GHMVD12B shown



F0S03C shown



A1X3PK shown

Rotary Handle

There is a universal rotary handle for each frame size of our molded case circuit breakers. This handle is suitable for use with NEMA 1 or NEMA 12 enclosures. Features include:

- · Large handle easily accommodates gloves
- Global ON/OFF markings (I/ON, O/OFF) and TRIP indication on handle
- Access Handle Lock-Off by pressing arrow on handle insert
- Door interlock and defeater
- Metal shaft and base
- Pipe valve operation (ON=Vertical, OFF=Horizontal) with 90 degree rotation
- UL 489, IEC 947-1/-2, CSA

Rotary Handle Accessory Selection Guide	
Part Number	Description
GHMVD12B	NEMA 1/12 black rotary handle for G-Frame MCCB. Shaft length: 12"
FHMVD12B	NEMA 1/12 black rotary handle for F-Frame MCCB. Shaft length: 12"
KHMVD12B	NEMA 1/12 black rotary handle for K-Frame MCCB. Shaft length: 12"
LHMVD12B	NEMA 1/12 black rotary handle for L-Frame MCCB. Shaft length: 12"

Flexible Handle

Meeting crucial time limits for shutdown procedures is easier with an externally mounted handle. The flexible handle makes it possible to operate the circuit breaker externally, and can be used in enclosures of varying depths and heights. It can be used with NEMA 1, NEMA 3R and NEMA 12 enclosures, and accepts up to three padlock shackles.

Note: A minimum bending radius of four inches is necessary for proper operation.

Flexible Handle Accessory Selection Guide	
Part Number	Description
F0S03C	NEMA 1/12 flexible shaft handle for G-Frame MCCB. Shaft length: 3'
F1S03C	NEMA 1/12 flexible shaft handle for F-Frame MCCB. Shaft length: 3'
F3S03C	NEMA 1/12 flexible shaft handle for K-Frame MCCB. Shaft length: 4'
F4S04C	NEMA 1/12 flexible shaft handle for L-Frame MCCB. Shaft length: 4'

Auxiliary Contact

The auxiliary contact provides circuit breaker contact status information by monitoring the position of the molded cross bar which contains the moving contact arms. The auxiliary switch is used for remote indication and interlock system verification, and consists of one or two SPDT switches housed in a plug-in module. Each SPDT switch has one 'a' and one 'b' contact. When the circuit breaker contacts are open, the 'a' contact is open and the 'b' contact is closed.

Auxiliary Contact Accessory Selection Guide	
Part Number	Description
A1X3PK	Field installable auxiliary contact for K-Frame MCCB
A1X4PK	Field installable auxiliary contact for L-Frame MCCB



Cutler-Hammer

Molded Case Circuit Breakers — Accessories

Shunt Trip Accessory

The Shunt Trip provides remote controlled tripping of the circuit breaker. Consisting of an intermittent rated solenoid with a tripping plunger and a cutoff switch assembled to a plug-in module, shunt trip coils are designed to be applied at specific AC or DC voltages.

Shunt Trip Accessory Selection Guide	
Part Number	Description
SNT3P11K	Field installable 120/240/VAC shunt trip for K-Frame MCCB.
SNT4RP11K	Field installable 120/240/VAC shunt trip for L-Frame MCCB
SNT3P04K	Field installable 12/24VDC/AC shunt trip for K-Frame MCCB
SNT4RP03K	Field installable 12/24VDC/AC shunt trip for L-Frame MCCB



Undervoltage Release Accessory

This product monitors a voltage (typically a line voltage) and trips the circuit breaker when the voltage falls to between 70% and 35% of the solenoid coil rating. It consists of a continuous rated solenoid, with a plunger and tripping lever mounted in a plug-in module.

Undervoltage Release Accessory Selection Guide	
Part Number	Description
UVH3LP08K	Field installable 120/240/VAC undervoltage release for K-Frame MCCB
UVH4LP08K	Field installable 120/240/VAC undervoltage release for L-Frame MCCB
UVH3LP21K	Field installable 12/24VDC/AC undervoltage release for K-Frame MCCB
UVH4LP21K	Field installable 12/24VDC/AC undervoltage release for L-Frame MCCB

Six-wire Connector

This is a field installable multi-wire connector which allows six wires to be connected to the load side (OFF) end terminals. It is used to distribute the load from the circuit breaker to multiple devices without the use of separate distribution terminal blocks. UL listed for copper only as used on the load side (OFF) end. Includes mounting hardware, insulators and tinplated aluminum connectors.

Six-wire Connector Accessory Selection Guide	
Part Number	Description
3TA100G6K	For G-Frame MCCBs. Pkg. of 3.
3TA150F6K	For F-Frame MCCBs. Pkg. of 3.

Replacement Lug Kit

Save valuable panel space and wiring time by eliminating terminal blocks. Multi-wire lug kit includes 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.

Replacement Lug Kit Accessory Selection Guide	
Part Number	Description
3TA225FD	Replacement lug kit for F-Frame MCCB. Package of 3
3TA401K	Replacement lug kit for K-Frame MCCB. Package of 3
3TA603LDK	Replacement lug kit for L-Frame MCCB. Package of 3

Din Rail Mounting Clip

Din Rail Mount Clip Accessory Selection Guide	
Part Number	Description
GDIN	Clip for mounting G-Frame to 35mm Din rail. Mounting hardware included. Pkg of 1



SNT3P04K shown



UVH3LP21K shown





