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Aftermarket Solutions, Ref. No. [061]

Type MCP Motor Circuit Protector Sizes 0 – 5

Replacement Capabilities  
(Continued)

Motor Circuit Protector

The Motor Circuit Protector (MCP) is designed specifically for the protection of motor circuits. It operates on the magnetic principle with a current sensing coil in each of the 3 poles, with the trip-point adjustable from the front. MCPs are the fastest devices available for clearing low level faults and offer circuit breaker features and convenience, resettable, quick make-quick break, deadfront, and protection against single phasing.

MCPs are rated to correspond to NEMA starter size.

Current Limiter Attachment

The EL current limiter is an attachment that bolts to the load end of the MCP to provide increased interrupting capacity. The combination is UL listed as a recognized component for application at up to 200,000 amperes symmetrical at 600 Vac. It is coordinated with the MCP so that normal short circuits will be cleared automatically by the MCP, opening all 3 poles, and only the rare high fault will cause the limiter to function. Current limiters must be applied as shown in the table below.

Note: Sizes 0 – 4 only.

Terminals

Terminals are included with both the MCP and Current Limiter. Standard terminals are aluminum alloy, with non-aluminum terminals optional for use with only the MCP. Both standard and optional terminals will accommodate aluminum or copper conductors. When using aluminum conductors, use of joint compound is recommended. Wire ranges are listed below.

Except 400 amperes Size 5. Non-aluminum terminal suitable for copper only.

Table 3-124. Terminals

MCP or Limiter (Amperes)	Terminals	
	Standard Aluminum	Optional Non-Aluminum
Size 0, 1, 2	#14 – #4	#14 – 1/0
Size 3	#6 – 3/0	#14 – 1/0
Size 4	#4 – 4/0	#4 – 4/0
Size 5 (250)	#4 – 350 kcmil	#4 – 350 kcmil
Size 5 (400)	—	(2)-3/0-250 kcmil
Limiters to 50	#14 – #2	—
Limiters to 100	#1 – 4/0	—
Limiters to 150	#1 – 4/0	—

UL Listed

The MCP is listed with Underwriters Laboratories as a recognized component and requires additional listing by the control manufacturer in combination with a contactor and overload relay.



Sizes 0 – 4 MCP with Current Limiter



Size 5 MCP 532500

Table 3-125. Motor Circuit Protectors

Shaded gray area denotes obsolete or discontinued products and services.

Starter Size	Trip Range, Amperes	Continuous Ampere Rating	Catalog Number	
			With Standard Aluminum Alloy Terminals	With Optional Non-Aluminum Terminals
0	7 – 22	3	MCP0322R	MCP0322CR
0	18 – 58	7	MCP0358R	MCP0358CR
0	50 – 150	15	MCP03150R	MCP03150CR
1	100 – 300	30	MCP13300R	MCP13300CR
2	160 – 480	50	MCP23480R	MCP23480CR
3	275 – 1000	100	MCP331000R	MCP331000CR
4	450 – 1550	150	MCP431550R	MCP431550CR
4	575 – 1800	150	MCP431800R	MCP431800CR
5	1250 – 2500	250	MCP532500	MCP532500C
5	2000 – 4000	400	—	MCP534000C

These frames are obsolete. For replacement solutions see the cross-reference on Pages 3-97 – 3-118.

Catalog numbers ending in CR were previously listed ending in RC. This is a catalog number change only, not a material change.

Modifications for MCP

These modifications must be factory installed. Consult factory for pricing.

Table 3-126. Modifications for MCP

Description
Auxiliary Switches — 1A and 1B, 2As and 2Bs
Shunt Trip
Undervoltage Release
Moisture-Fungus Treatment

- Not UL listed.
- Mounts only in right pole; only one Modification marked can be used in MCP (Sizes 0 – 4).
- On 400 amperes Size 5, an external resistor is supplied for voltages above 240 Vac and 24 Vdc.
- On Sizes 0 – 4 and 250 amperes Size 5, an external resistor is supplied for customer mounting, except for 120 Vac, 12, 24, 125 Vdc.

Accessories for MCP

For handle mechanisms refer to Pages 3-77 to 3-94.

Note: On 400 amperes Size 5, an external resistor is supplied for voltages above 240 Vac and 24 Vdc.

Table 3-127. Accessories for MCP

For MCP Size	Use Accessories For
Sizes 0 – 4	FB
5 (250 Amperes)	KB
5 (400 Amperes)	LB

Table 3-128. Current Limiters

Limiter Catalog Numbers	For MCP Catalog Numbers
EL3003R	MCP0322R
EL3007R	MCP0358R
EL3015R	MCP03150R
EL3030R	MCP13300R
EL3050R	MCP23480R
EL3100R	MCP331000R
EL3150R	MCP431550R
EL3150R	MCP431800R

Also applicable to MCPs with optional terminals.

Interrupting Ratings

Maximum application current shall be determined by testing the MCP in combination with a contactor and overload relay. Additional capacity can be obtained by using the current limiter attachment.

Base Mounting Hardware

No charge when ordered with MCP. Order separately when required.

Table 3-129. Base Mounting Hardware

Description	Style Number
Sizes 0 – 4	21C6782G18
Size 5 (250 Amperes)	673B125G12
Size 5 (400 Amperes)	21C6782G22