

CM52 network protector



Enhanced network solutions and network protector operational safety

Eaton's CM52 network protector leverages proven Eaton power breaker technology to deliver a versatile solution. The CM52 network protector captures all the benefits of robust legacy network protectors but greatly improves on user and operational safety.



800–2000 A CM52 shown

EATON

Powering Business Worldwide

Construction and features

Eaton's CM52 network protector is a fully interlocked, dead-front, four-position, drawout design available with internally or externally mounted fuses. It is the only network protector with a 10 kV BIL impulse withstand voltage rating. It is comprised of an enclosure assembly, a breaker element and a relay module—making it much less complicated to operate and maintain.

Enclosure and assembly

The CM52 network protector is available in two enclosure styles:

- 1/4-inch thick copper bearing steel for submersible environments (also available in 316 stainless steel)
- Weather-resistant NEMA® 4 style steel enclosure for non-submersible applications (also available in 316 stainless steel)

The submersible tank comes with a two-tone epoxy finish, black exterior and white interior for highest visibility. The enclosure has a standard bolted door design or the easy-access quick-latch design.

Breaker element

The CM52 network protector utilizes an Eaton power breaker element rated for 600 V and specifically designed for use on network systems. The breaker is designed for ease of access for inspection and maintenance. It comes with four operable positions: racked-in, racked-out, test and disconnect.

Eaton offers three breaker styles:

- 800–2000 A
- 2250–3000 A
- 3500–4500 A

The breaker is molded from a specially designed 180 °C-rated thermoset material required of the network operating conditions. The CM52 is the only network protector breaker element capable of interrupting fast enough to support Eaton's Arcflash Reduction Maintenance System™ and is a UL® approved design.

Relay module

The relay module is a separate compartment. All components interconnected with the other parts of the network protectors can be disconnected via a quick-connect system.

The relay module contains the Eaton MPCV network relay, test switches, terminal blocks and control power transformers for 480 V or 600 V operation.

VisoBlocks

This secondary disconnecter provides a visible break between the network protector and the secondary collector bus. No handling of energized equipment is required. Analyze with phasing test rods for safely testing the network protector.

Stacklight

The submersible stacklight is a visual indication device. It provides operators with quick and easy verification of the network protector state. It features five LED indicating lights and connects to each protector via the bulkhead junction box.

Bulkhead junction box

The bulkhead provides a means of feeding cable/wiring in and out of the submersible network protector tank while maintaining submergibility. The box features up to 16 wire connections to the network protector.

ARMS (Arcflash Reduction Maintenance System)

Improves safety by providing a simple and reliable method to reduce fault clearing time. The ARMS unit uses a separate analog trip circuit that proves faster interruption times than the standard protection.

Remote Access Device (RAD)

RAD provides real-time data, control and ability to update relay services via a secure Wi-Fi connection to a utility-approved smart device.

Quick latches

The easy-access quick latch makes accessing the inside of the CM52 network protector simpler.

Visible-break windows

Provides a true visible break for the CM52 network protector with or without Eaton's RemRack accessory.



General specifications

General features										
Maximum design voltage (V) ①	600	600	600	600	600	600	600	600	600	600
Impulse withstand voltage (kV BIL)	10	10	10	10	10	10	10	10	10	10
Maximum continuous current ratings, (50/60 Hz) (A) ②	800	1200	1600/1875	2000	2250	2500/2825	3000	3500	4500	6200 ③
Load break current (50/60 Hz) (A)	800	1200	1600/1875	2000	2250	2500/2825	3000	3500	4500	6200 ③
IEEE®/ANSI suggested matching transformer rating for 216Y/125 V (kVA)	225	300	500	500	500	750	1000	1000	1000	Rating not defined
IEEE/ANSI suggested matching transformer rating for 480Y/277 V (kVA)	500	750	1000	1000	1000	1500	2000	2000	2500	Rating not defined
IEEE/ANSI system interrupting rating requirements, (kA)	30	30	30	35	60	60	60	60	60	Product not defined
CM52 system interrupting rating, (kA)	42	42	42	42	65	65	65	85	85	85
CM52 withstand rating (1 s), (kA)	42	42	42	42	65	65	65	85	85	85
IEEE/ANSI system fault close and latch rating, (kA)	25	25	25	35	40	40	40	40	40	Product not defined
CM52 system fault close and latch rating, (kA) ④	35	35	35	35	45	45	45	65	65	65
Mechanical features										
Mechanical operations	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Breaker element poles	3	3	3	3	4	4	4	6	6	6
Breaker element weight (lb)	170	170	170	170	185	185	185	350	350	350
Traditional breaker element approximate weight (lb)	400	400	400	400	550–650	550–650	550–650	700–1300	700–1300	700–1300
Breaker element width in inches/mm	17.00/431.8	17.00/431.8	17.00/431.8	17.00/431.8	17.00/431.8	22.00/558.8	22.00/558.8	35.00/889.0	35.00/889.0	35.00/889.0

Note: Ratings apply to submersible and open frame style enclosures.

- ① CM52 should be specified for 216 V, 480 V or 600 V use (dual voltage operation available).
- ② Protectors sized in accordance with network transformer, MVA ratings. Overload safety margins are already included in current ratings.
- ③ 6200 A available in an open frame style only.
- ④ Close and latch ratings apply only to spring close and stored energy mechanisms. The CM22 does not have a close and latch rating.

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