



MCP-10 make up a product family that cover the entire range of applications, but with focus on Power Distribution and Motor Control respectively. The MCP-10 platforms are fully scalable and complementary, enabling you to create a fit-for-purpose low voltage system comprising entirely electrical components.

MCP-10 is Eaton's IEC high-performance Motor Control and distribution center up to 6300 A. The system provides reliable motor control and power distribution functionality for applications that have the highest requirement for reliability and safety. MCP-10 is a reliable solution for applications where the motor control is vital.

Basic Design

MCP-10 is modular in construction. It is a self supporting sheet steel structure, consisting of profiles and sheet steel side walls and covers. The MCP-10 panels have three major sections:

1. The busbar section

The fully segregated main

busbar chamber can be located in the back (top/bottom position) of the structure or available as a top configuration (top/middle/ bottom position).

2. The cabling section

Located in a separate fully segregated cable chamber

at the rear or besides the equipment section.

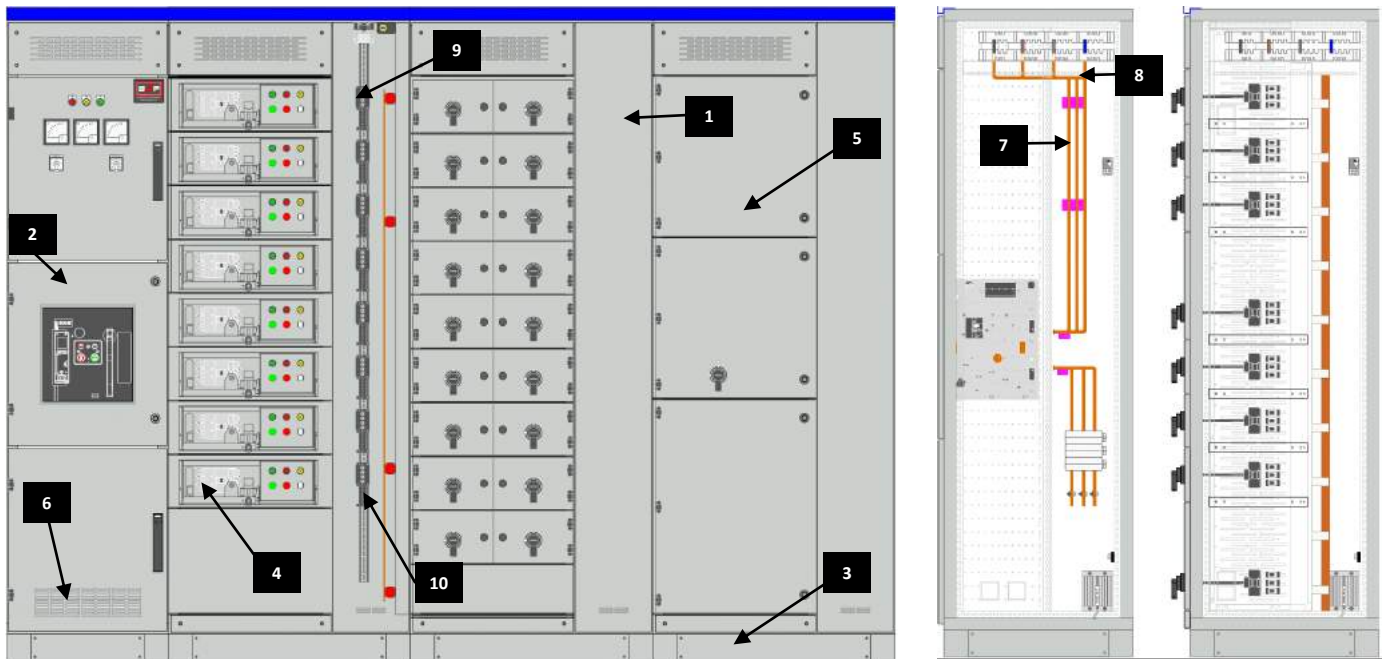
3. The equipment section

Located at the front where the functional units are fitted.

The system is designed for 'front cable access for applications

where the panels must be located adjacent to a rear wall. Alternatively the system can be arranged for rear access, a 'single line of structures' giving all around access to panels for operation and cabling. Arrangements for 'back to back' configurations are possible.

Panel Configuration



1. Outgoing Cable Connection Compartment
2. Main Incoming Feeder Unit
3. Mounting Plinth
4. Outgoing Feeder
5. Empty Compartment

6. Ventilation
7. Vertical Busbar Compartment
8. Horizontal Busbar Compartment
9. Socket Power
10. Socket Control

Power Sections

- Incoming, outgoing and bus coupling solutions
- Air Circuit Breakers, Moulded Case Circuit Breakers and Switch Disconnectors
- Safety due to internal separation up to Form 4
- Flexibility by choice of cable and busbar trunking connection from the top or bottom

Removable Outgoing Sections

Busbar Back configuration only

- Power Distribution feeders with removable circuit breakers and Fused Combination Switches up to 630 A
- Internal separation up to Form 4
- Easy maintenance and reduced down times

Fixed Outgoing Sections

- Power Distribution feeders with circuit breakers up to 630A
- Internal separation ranging from Form 2b up to Form 4b (type 6 and 7)
- Toggle and rotary operation
- Available with Plug-in adapter

Withdrawable Outgoing Sections

- Power distribution feeders with circuit breakers up to 630 A
- Motor starters up to 250 KW
- Drawers can be replaced under live-line working conditions ensuring minimum down times
- Internal separation up to Form 4
- Remote monitoring and control with Smart-Wire DT and C440 based communicating solutions



SmartWire DT - Connectivity

Eaton's SmartWire-DT communication system is used in MCP-10 to record information from motor starters, soft starters and variable frequency drives. The retrieved information is transferred via standard fieldbus protocols to the higher-level PLC. In a power distribution assembly SmartWire-DT collects all relevant breaker information in Breaker Visu.

Thanks to the use of intelligent Smart Wire-DT switchgear, this not only consists of digital signals for switching or monitoring of positions or overload information but also analogue values such as the actual current or the condition of a trip unit can be determined and evaluated.

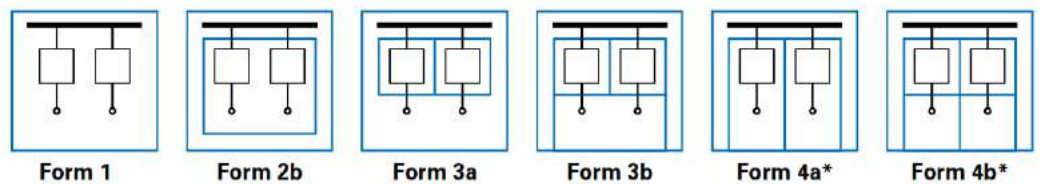
Form of Internal Separation

MCP-10 panels are designed around three different areas:

1. The main busbar and distribution busbar section segregated from the equipment section.
2. The cabling section located in a separate fully segregated cable chamber for feeding cables to the functional sections and/or housing control and power cable terminations, depending on the form of separation.
3. The equipment section at the front where the functional units are fitted.

IEC 61439-2 defines the various forms of internal separation. The form of internal separation determines how busbars, functional units and terminals are separated from each other. MCP-10 is designed to provide separation in Form 2b, 3b, 4a and 4b solutions.

Internal separation in accordance with IEC 61439-2



	Form 1	Form 2b	Form 3a	Form 3b	Form 4a*	Form 4b*
Busbars (main + distribution) are separated from functional units	✓	✓	✓	✓	✓	✓
Functional units are separated from other functional units			✓	✓	✓	✓
Terminals are external to functional units			✓	✓		✓
Terminations to functional units are separated from each other			✓		✓	✓
Terminals are separated from the busbars	✓			✓	✓	✓

Draw out Unit

Reference selection chart of withdrawable unit size in fuction of three phase circuit voltage and power in kW.

Type	RATING	Unit	M1/4	M1/2	M1	M2	M3	M4	KETERANGAN
FEEDER	Max 100 (A)	A	X	X					
	Max 125 (B)	A			X				
	Max 250 (B)	A				X			
	Max 250 (C)	A			X				
	Max 320 (B + C)	A				X			
	Max 500 (2C)	A				X			
	Max 630 (B + 2C)	A					X		
	Max 1000 (D)	A						X	
DOL	Max 14 (A)	KW							
	Max 30 (B)	KW			X				
	Max 55 (B)	KW				X			
	Max 110 (1C)	KW					X		
	Max 160 (B + C)	KW						X	fixed plug in
STAR - DELTA	Max 30 (B)	KW				X			
	Max 55 (B)	KW					X		
	Max 110 (C)	KW						X	fixed plug in
VSD WITHOUT BYPASS	Max 30 (B)	KW					X		
	Max 40 (B)	KW						X	fixed plug in
SOFT STARTER WITH BYPASS	Max 55 (B)	KW					X		
	Max 115 (C)	KW						X	fixed plug in

- A Socket Power 100 A
- B Socket Power 125 A
- C Socket Power 250 A
- D MCCB Withdrawable

M1 = 180
M2 = 380

M3 = 580
M4 = 780

- + 1 PILOT LAMP
- + 1 PILOT LAMP, 1 CT, 1 AMMETER 48X48
- + 3 PILOT LAMP, 3 CT, 1 AMMETER , CPT , PB, SS.
- + PB ILUMINATION, 1SS, RELAY MY4 MAX 3 PCS
- + EX FAN + FILTER 6 "



Front view of a withdrawable motor starter unit up to 15—30 kW (180 mm).



Front view of a withdrawable motor starter unit up to 37—55 kW (380 mm).



Front view of a withdrawable motor starter unit up to 75—110 kW (580 mm).

Note: The withdrawable units sizes aboved advised are not valid for diagrams requiring a lot of auxiliary equipment so that it's better to contact our Technical Office.

Technical Data

Standards/regulations	IEC/EN 60439-1, IEC/EN 61439-2, TR61641, DEKRA (KEMA)	
Apply Cu according to	EN 13601-CU-ETP-R250-SH	
Ambient temperature	°C	50
Relative humidity	%	50 at 40°C
Protective measure	Protection class I	
Degree of protection 1)	IP31, IP42, IP55 according to IEC/EN 60529, IK10	
Rated insulation voltage U_i	V	1000
Rated voltage U_e	V	690
Insulation coordination	III/3	
Rated impulse withstand voltage U_{imp}	kV	up to 12
Overvoltage category	IV	
Degree of pollution	3	
Rated frequency	Hz	40-60
Busbar rated current I_e	A	Up to 5500
Busbar rated impulse withstand current I_{cw}	kA	up to 100 (1s)
Busbar rated peak withstand current I_{pk}	kA	up to 220
Sheet thickness	mm	Door and frame = 2, rear, side and top panels = 1.5 Metal surfaces Powder-coated
Color	RAL 7035 , other color as by request	
Lock mechanism	Espagnolette lock with 2 or 4 point locking and turn-lock 3 mm two-way key bit	
Main Busbar Design	Top - Rear, Bottom - Rear, Top - Above	
Structure Design	Single, double - front, back to back assembly	
Dimensions	mm	Width: 425 – 1350
		Height: 2000, 2200, 2400 (optional 100 or 200 mm with plinth) Depth: 400, 600, 800, 1000
Cable Entry	Bottom or Top Entry	

Certificate



Type Test Certificate by LMK



Test Certificate IP 41 by Sucofindo



Test Certificate IP 55 by Sucofindo

Success Story

NO	Project Name	Customer	Market Application
1	Terminal LPG Bosowa, Makassar	PT. WIJAYA KARYA	Oil & Gas
2	Pipanisasi Minyak Pertamina Tempino Plaju, Sumsel	PT. M & I Electric Indonesia	Oil & Gas
3	LPG Plant Tuban	PT. Gasuma Federal Indonesia	Oil & Gas
4	Suban Midterm	Conoco Philips	Oil & Gas
5	Pertamina EP-SKG Lembak, Sumsel	PT. Sarana Gastekindo	Oil & Gas
6	CNG Bangkanai Plant	PT. Timas Suplindo	Oil & Gas
7	LPG Plant Upgrading, Sengkang	PT. Bina Sarana Putra	Oil & Gas
8	Pembangunan Gas Pipa Duri Dumai	PT. Globalindo Buana	Oil & Gas
9	Pembangunan Fasilitas Gas Alas Dara Kemuning	PT. Patra Drilling Contactor	Oil & Gas
10	PLTU 2x7MW Berau, Kaltim	PT. Indokomas Buana Perkasa	Utility
11	PLTU 2x7MW Tanjung Selor, Kaltim	PT. ADHI KARYA	Utility
12	PLTU 2x7MW Tembilahan, Riau	PT. ADHI KARYA	Utility
13	PLTD 120MW BELAWAN 2 & 3	PT. ABB Sakti industri	Utility
14	PLN Paket 2 PLTMG 10MW	PT. Truba Jya Engineering	Utility
15	Palm Tree Energy Conversion	PT. Suluh Ardhi Engineering	Utility
16	PAG - PLTMG 2 PLN	PT. Patra Drilling Contractor	Utility
17	PT. Petrokimia Gresik	CV. Zhafira Barakat	Industrial
18	Sungai Kedang Palm Oil - East Kalimantan	PT. Modern Widya Teknikal	Industrial
19	Waste Water Treatment Plant (WWTP) PT. Smart TBK. (Tarjun)	PT. Lautan Organo Water	Industrial
20	Sungai Kedang Project	PT. Modern Widya Technical	Industrial