MCC

MOTOR CONTROL CENTER UP TO 3200A

MOTOR CONTROL CENTER

INDEX

1.General description

A motor control center (MCC) is an assembly of one or more enclosed sections having a common power bus and principally containing motor control units. Motor control centers are in modern practice a factory assembly of several motor starters. A motor control center can include variable frequency drives, programmable controllers, and metering and may also be the electrical service entrance for the building.
Today they are used in many industrial and commercial applications. Where very dusty or corrosive processes are used, the motor control center may be installed in a separate air-conditioned room, but often an MCC will be on the factory floor adjacent to the machinery controlled.

2.Commissioning of the drawer:

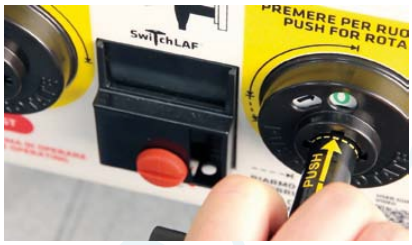
An innovative disconnecting switch that enables the installation and the quick replacement of the drawer only in three steps.

1.drawer in "test" position

2.drawer in "disconnected" position

3.drawer in "connected" position

Replacement of the drawer



3.Main characteristics:

- Assembled structure made of sheet with a thickness of 2 mm.
- Degree of protection from IP30 (open version) to IP55 with transparent door with toughened glass.
- Compartment with side and horizontal partitions, rear wiring plate with female connector for auxiliary circuits and power supply pliers.
- Withdrawable unit with customizable front panel, disconnecting switch, male connector for auxiliary circuits and power contacts.
- Possibility of side connection.
- Installation of circuit breakers of all leading manufacturers (ABB, Schneider, Siemens, etc.).
- Epoxy powder coating after phosphating in RAL 7035 B (other colors on request).
- Patented and certified earth connection system.
- Plinth with reinforced covering flanges for a handling on rollers.
- Full range of internal finishing accessories to provide solutions for any requirement.
- On request, cabinet in stainless steel.

4.Details:

Side bus-bars: placed on the left for the connection of the power supply pliers and the disconnecting switch.

Linear bus-bar system: bus-bar system up to 3200 A placed on the top.

Auxiliary connections and cables space: placed on cable housing and at the back of the single cabinet.

Upper segregation: made of Aluzinc sheet steel ,which can be used to fix the cable ducting.

5.Typology:

Cabinet:
Assembled structure made of sheet with a thickness of 2 mm.
Cabinet with access from the back.

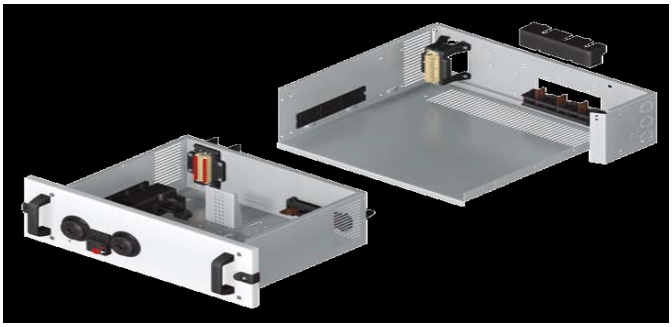
Cabinet with cable housing:
Assembled structure made of sheet with a thickness of 2 mm with cable housing for cables and terminal block.
Cabinet with access from the front.

Mixed cabinet:
Single cabinet or cabinet with cable housing equipped with withdrawable units, fixed units, etc.

Cabinet with glass door:
Single cabinet or cabinet with cable housing supplied with glass door and internal withdrawable units.
Degree of protection up to IP55.

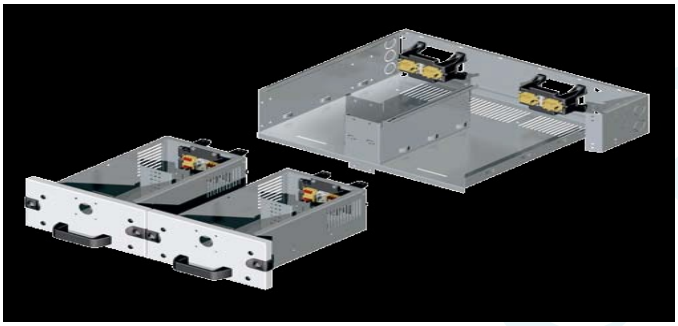
Inox: on request, cabinet in stainless steel.

6.Drawers:

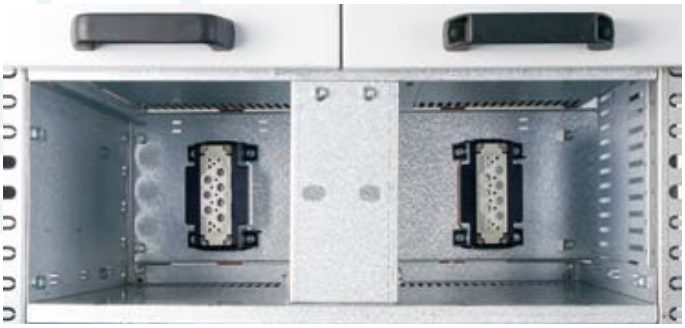


Single drawer:
- Disconnecting switch.
- Male connector 24 poles for auxiliary circuits.
- Power supply pliers.
- Position switch.
- Bracket for circuit breaker.
- Locking device of the drawer.

Functional unit for single drawer:
- Side cover on bus-bars space.
- Female connector 24 poles for auxiliary circuits.
- Contacts power supply pliers.



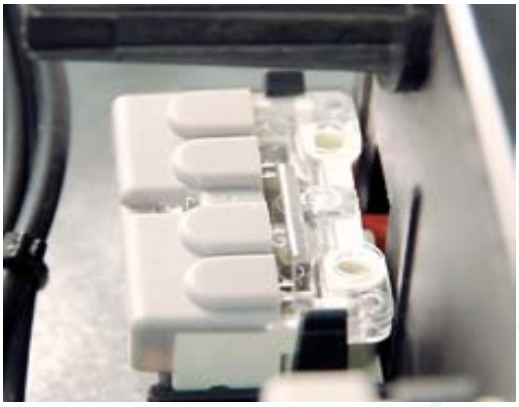
Double drawer:
- Male connector for auxiliary circuits max 100 A.
- Bracket for circuit breaker.
- Locking device of the drawer.

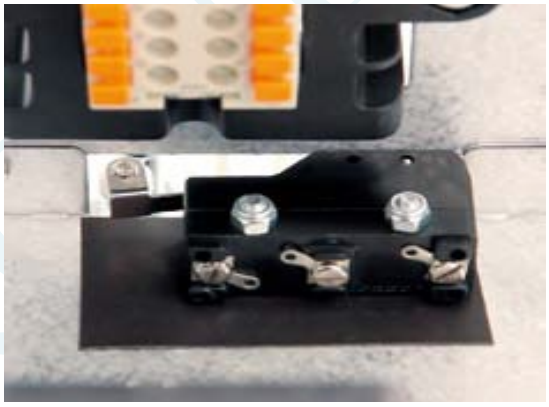


Functional unit for double drawer:
- Female connector for auxiliary circuits max 100 A.

7.Accessories:

Safety:
• safety of "withdrawn drawer".
• safety of "not connected drawer"





Position switches:
• position switch "disconnected drawer".
• position switch "withdrawn drawer".

Identification system of the drawer: a system to identify correctly the position of the drawer in the cabinet.

Double connector:
auxiliary circuits 48 poles.

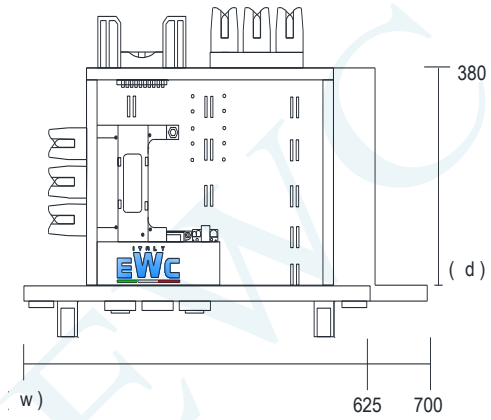
Double pliers:
star-delta starting.

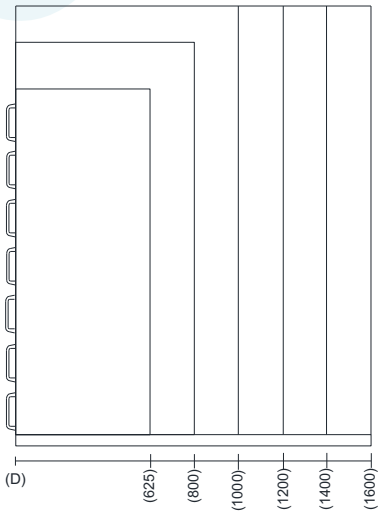
8.Technical specifications:

	Width (W) mm	Height (H) mm	Depth (D) mm
Cabinet	625 (24 modules) 700 (24 modules)	2000 / 2200 / 2400 (usable space = H - 200)	625 / 800 / 1000 / 1200 / 1400 / 1600
Cabinet with cable housing	625 + 300 (24 modules) 700 + 300 (24 modules) 625 + 400 (24 modules) 700 + 400 (24 modules)	2000 / 2200 / 2400 (usable space = H - 200)	625 / 800 / 1000 / 1200 / 1400 / 1600
Back to back cabinet	On request		

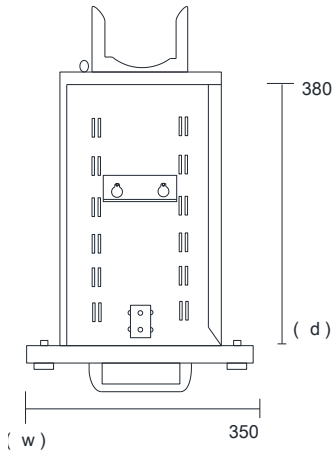
Electrical data	Voltage ratings	Rated insulation voltage (*U*i)		1000 V
		Rated operational voltage (*U*e)		690 V
		Rated impulse withstand voltage (*U*imp)		6 / 8 / 12 kV
		Rated frequency (*f*n)		50 / 60 Hz
	Current ratings	Rated current (*I*n)	Main busbars	Up to 3200 A
			Distribution busbars	400 / 630 / 800 A
		Rated short-time withstand current for 1 sec. (*I*cw)		70 kA
	Resistance of internal arc	Permissible current under arcing conditions*I* p(arc)		70 kA
		Permissible arc duration (t arc)		300 ms
	Clamps on withdrawable units			160 / 320 A
	Auxiliary contacts connectors			16 A
	Auxiliary contacts			24 / 48

Mechanical characteristics	IP degree of protection	Internal		Up to IP2X
		External enclosure		From IP30 to IP55
	Drawers height (h)	150 / 200 / 250 /300 / 350 /400 / 450 / 500 /600		
	IK test (shock resistance)	IK09 glazed door		
		IK10 blind door		
	Access	From the front / Side / Rear		
	Execution	Form 3b / Form 4b		
	Materiel	Structure	Pickled plate, 15/10 - 20/10 mm thick	
		Accessories	Aluzinc® sheet steel, 15/10 - 20/10 mm thick	
	Powder coating	Standard	RAL 7035 B light grey (orange peel)	
		On request	Powder RAL colours and stainless steel	
	Plastic components	Halogen-free, flame retardants, self-extinguishing, CFC-free		
	Options	Busbar system	Silvering / Tinning	
		Components	Position switch “disconnected drawer”	
			Position switch “withdrawn drawer”	
			Identification system of the drawer	



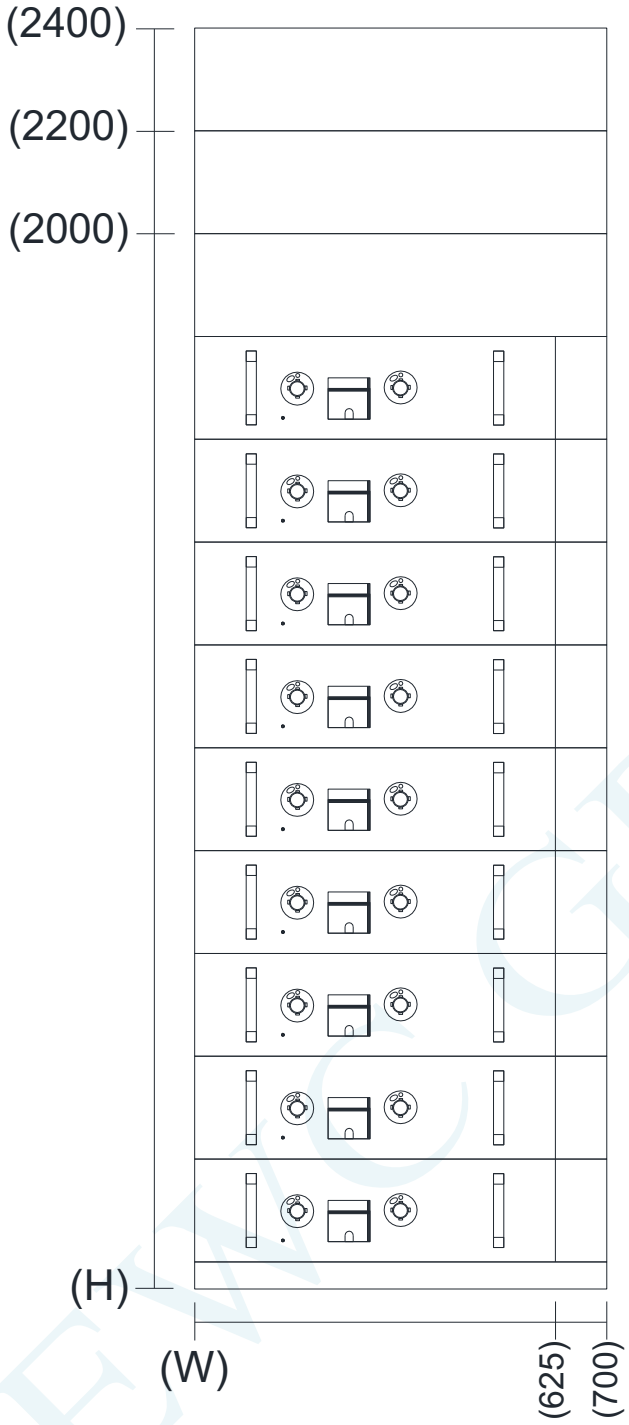


h = 150 / 200 / 250 /300 / 350
400 / 450 / 500 /600

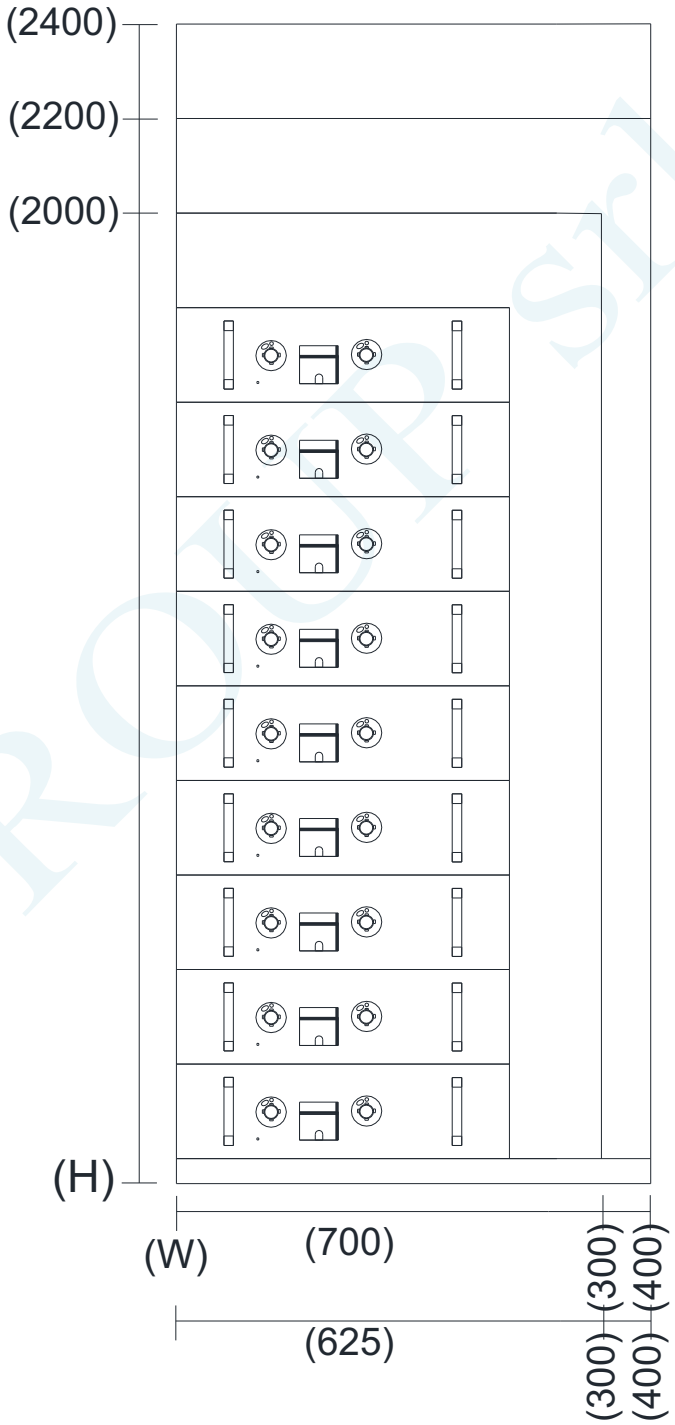


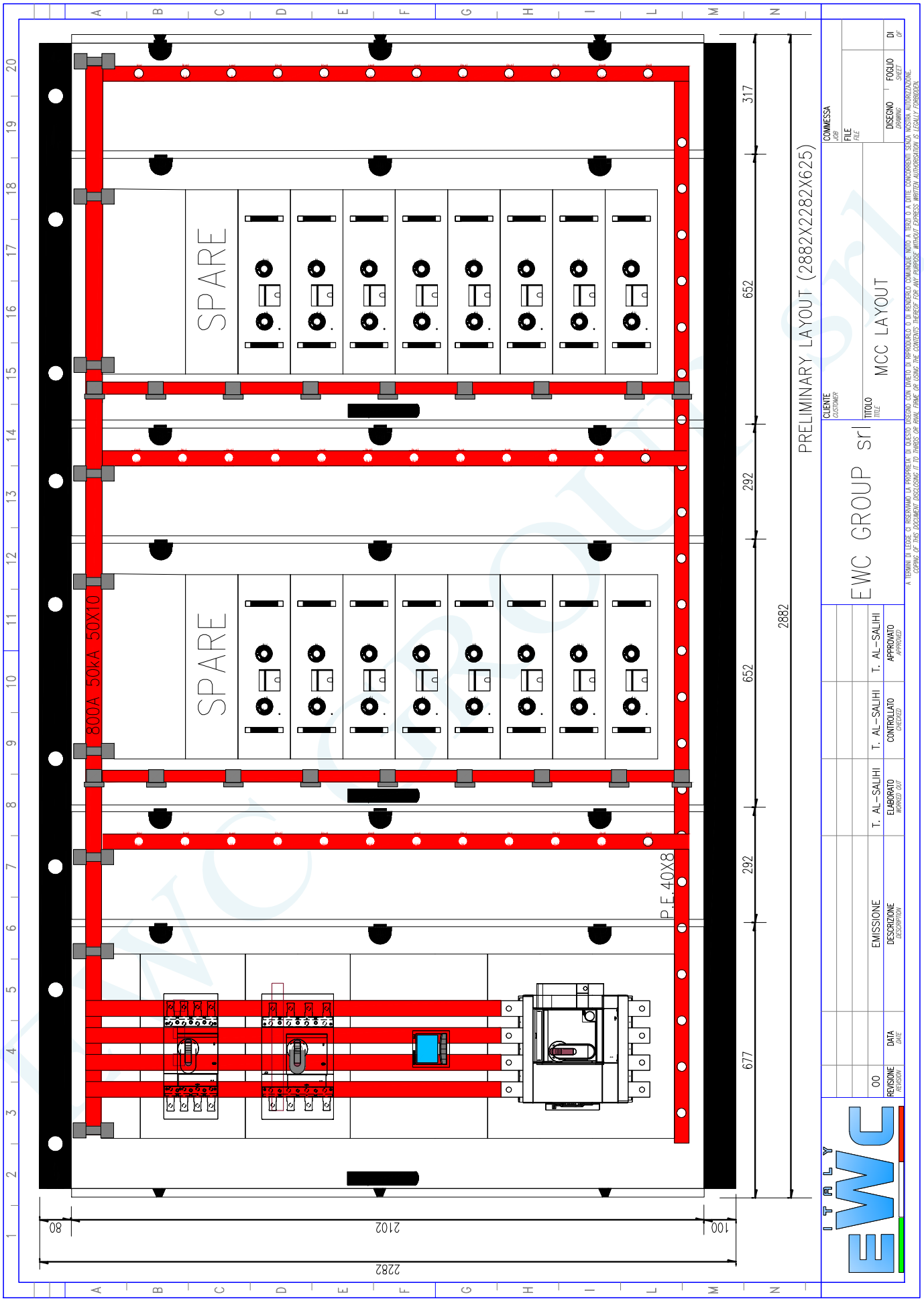
h = 150 / 200 / 250

Cabinet



Cabinet with cable housing
L = 300 e L = 400




PRELIMINARY LAYOUT (2882X2282X625)
SPARE
SPARE
800A 50kA 50X10
P.E.40X8
317
652
292
652
292
677
2882
80
2102
100
2282
EWC GROUP srl
MCC LAYOUT
EMISSIONE
T. AL-SALIHI
T. AL-SALIHI
T. AL-SALIHI
00

CONTACT US

EWC GROUP srl
(ITALY – BOTTICINO)
Via Giulio Pastore, 36
(25082) Botticino (BS) - Italy
Tel.&Fax: +39 0302692486
Mobile: +39 3398887519
Email: thaer@ewcgroup.it
Website: www.ewcgroup.it