

# Excellence and Innovation in Electrical.

Design, Manufacture, Installation  
and Service.





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# Company Overview

Hong Thinh Joint Stock Company was incorporated in Vietnam year 2000 and has quickly gained a reputation for high quality, reliability and first class electrical engineering service. Our factory is situated in a modern industrial zone in Binh Duong province and built to international standards.

Hong Thinh is a joint venture company between Vietnamese and Australian shareholders who believe strongly in modern production techniques and training. Our overriding aim is to remain ahead of our competition through consistently training our staff to improved levels and offering the customer value added service and electrical engineering and strong after sales support.



Top of 100 Electrical Supplies in Vietnam



Trusted Quality Supplier 2014, 2015.



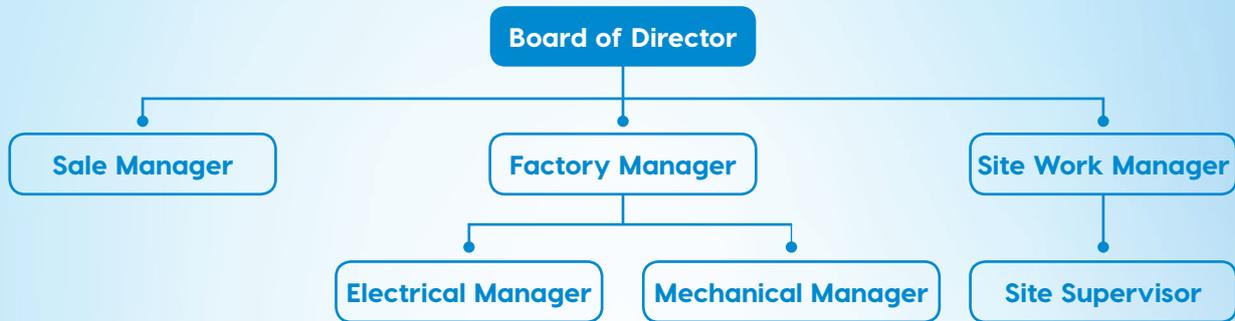
TOP BRANDS YEAR 2015



TYPICAL BRAND, PRODUCT, QUALITY, SERVICE OF ASEAN 2017



# Organization Chart



# Achievement

## HongThink's Record of Achievement

- 2007 : Quality management system has been certified by ISO 9001 version 2000
- 2008 & 2009 : We won Golden ISO cup, top of 135 companies in Vietnam successful in running ISO system
- 2010 : Be certified Top of 100 Electrical Supplies in Vietnam
- 2011 : Successful in upgrading ISO system to lasts Version 2008
- 2014 : Successful Trusted Quality Supplier
- 2015 : Certified Top Brands
- 2017 : Successful in upgrading ISO system to lasts Version 2015
- 2017 : Typical brand, Product, Quality, Service of Asean 2017

Our principle aim to save customer resource to enable our customers to succeed which in turn enables us to succeed.

Our management and engineering team are highly experience and skilled in the design and manufacture of:

- MV and LV, Motor Control Centers.
- DB, Distribution Boards.
- Customized Control panels.
  - Industrial and Commercial electrical power distribution panels.
  - PLC, Computer automated systems.
  - Cable ladder and ducting

Engineers and Manufacturing staff at Hong Think are committed to a "Total Quality Management system" with pride and quality the foremost responsibility of every employee.

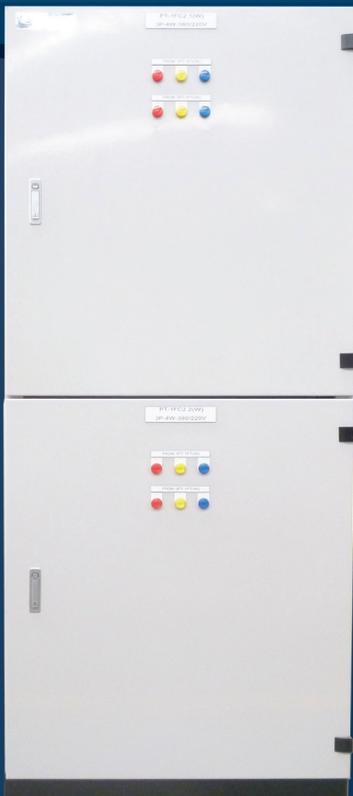
Our employees are the driving force behind our success and we focus on extensive training courses to acquire up to date technology in Electrical Engineering and manufacturing skills and continue to be able to stand the ever-increasing challenges of modern business reflected on customer's demands.



# Products & Services



- Design, manufacture and service LV&MV panels, fixed and draw out type MCC panels.
- Primary / secondary design solution for customized application power network up to 22KV.
- Design, manufacture and program for PLC, HMI panels for machinery and production line.
- IEC design, build, wiring and supply components are as per specifications using Schneider, Siemens, Mitsubishi, Omron, Allen-Bardley, ABB and more.
- Program for HMI interface, SCADA system and PLC network.
- Process PLC Desk Control.
- Manufacture of Cable Support Systems.
- CNC punching, bending, robotic welding and laser cutting machines producing high accuracy stainless steel and mild steel parts for electrical enclosures and cable support system products.
- Factory plant electrical, instrumentation installation service and maintenance.
- Full capability, experience, technical know-how to undertake large complex.



# Main Switch Board

Main Switch Board enclosure for Low Voltage distribution panel from 160A to 6300A, 3 phases.

All design panel constructions are compiled and have been passed Type tested required by standard IEC 61439-part 1&2 Version 2009. The panels are designed of kit-form enclosures make from steel sheet, can be stand alone, top/ bottom cable entry, and easy extent or modify in future.

Panels are equipped with individual functional unit, consisting of mounting plates or mounting frames support one or more low voltage devise and covered with metal cover plates to prevent from accidental access to live parts.

## SPECIFICATION

Standard conformity  
Voltage rate operational  
Insulation voltage rate  
Rated current of bus bar system  
Rate short circuit withstand current  
Ambient temperature  
IP Protection  
Form segregation

## STANDARD

IEC 61439 part 1&2  
690V / 1000V  
1000V  
up to 6300A  
Tested @ 65KA/sec, available for 150KA/sec on request  
Up to 55°C  
Standard @ IP43, can be IP65 on request  
Form 2a/2b/3a/3b/4a/4b



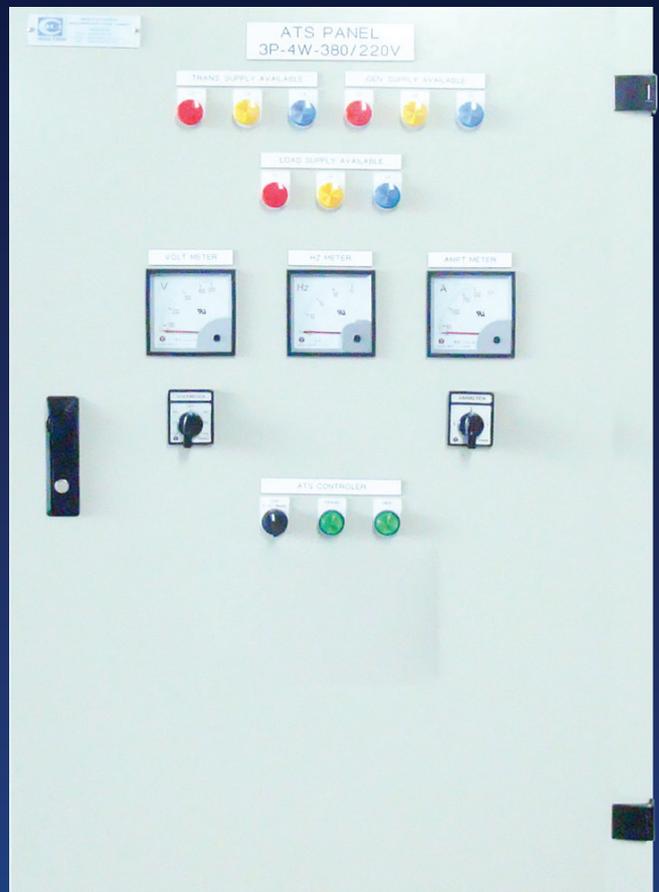
TYPICAL PANEL SIZE

CODE	H	W	D	T	Ver.	IP
EF20896MSO-43	2080	900	600	2.0	0	43
EF20898MSO-43	2080	900	800	2.0	0	43
EF208106MSO-43	2080	1000	600	2.0	0	43
EF208108MSO-43	2080	1000	800	2.0	0	43
EF2081010MSO-43	2080	1000	1000	2.0	0	43
EF2081012MSO-43	2080	1000	1200	2.0	0	43
EF2081014MSO-43	2080	1000	1400	2.0	0	43



# ATS Panel

ATS stand for (Automatic Transfer Switch) is automatic system switches the power supply from multi power source supply. Could be transformers, Generators or UPS supply.



**ATS SPECIFICATION**

SPECIFICATION	STANDARD
Standard conformity	IEC 61439 part 1&2
Source transfer	National grid/transformers/Generators/UPS
Voltage rate	up to 1000 Voltage AC/DC, 2/3 Phase system
Current capacity	from 63A up to 6300A
Rated short circuit withstand current	up 150Ka/s
Contact/Switch	Well-known component such as Socomec/LS/ABB/Schneider/Siemens,...
Control type	Manual mode or Automatic logic control mode

**TYPICAL PANEL SIZE**

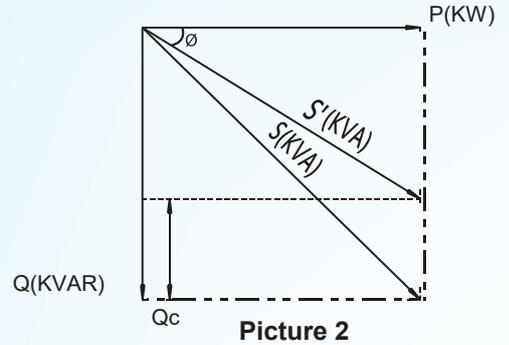
CODE	H	W	D	T	Ver.	IP	Note
EF20864MSO-43	2080	600	400	2.0	0	43	Free floor standing
EF20866MSO-43	2080	600	600	2.0	0	43	
EF20874MSO-43	2080	700	400	2.0	0	43	
EF20876MSO-43	2080	700	600	2.0	0	43	
EF20878MSO-43	2080	700	800	2.0	0	43	
EF20884MSO-43	2080	800	400	2.0	0	43	
EF20886MSO-43	2080	800	600	2.0	0	43	
EF20888MSO-43	2080	800	800	2.0	0	43	
EF20896MSO-43	2080	900	600	2.0	0	43	
EF20898MSO-43	2080	900	800	2.0	0	43	
EF208106MSO-43	2080	1000	600	2.0	0	43	
EF208108MSO-43	2080	1000	800	2.0	0	43	
EF2081010MSO-43	2080	1000	1000	2.0	0	43	
EF2081012MSO-43	2080	1000	1200	2.0	0	43	
EF2081014MSO-43	2080	1000	1400	2.0	0	43	



# Automatic Power Factor correction panel

The AC electrical networks consume both active and reactive power as we called (Kw) and (Kvar).

- The real-active power (P-Kw) transmitted to loads such as motors, lamps, heaters...they are transformed into mechanical power, people called heat or light.
- Reactive power (Q-Kvar), used supply only magnetic part of the machine where they have motors and transformers.
- Apparent power (S-KVA) is combined vector of both active and reactive power.
- Cos pi representation of power factor (P/S).



## ATS SPECIFICATION:

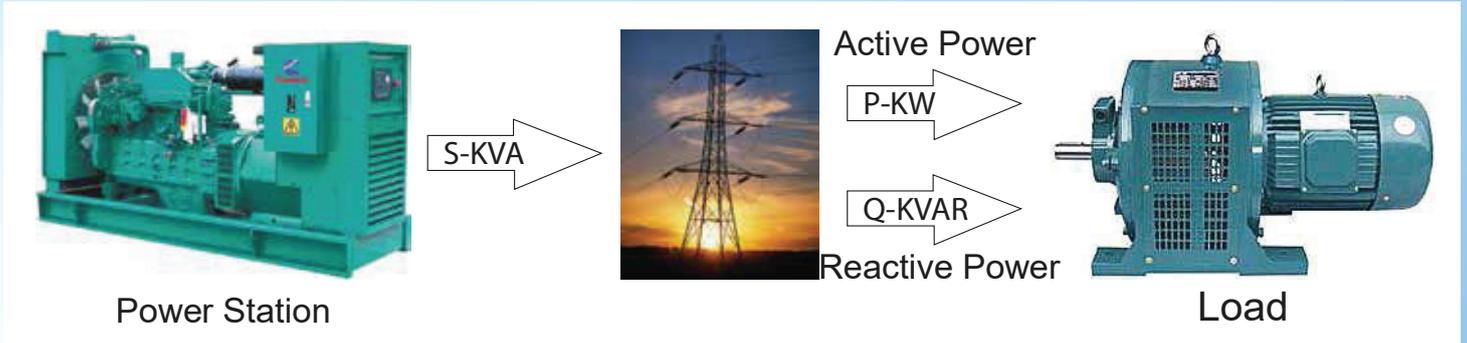
### SPECIFICATION

- Standard conformity
- Source transfer
- Voltage rate
- Current capacity
- Rated short circuit withstand current
- Contact/Switch
- Control type

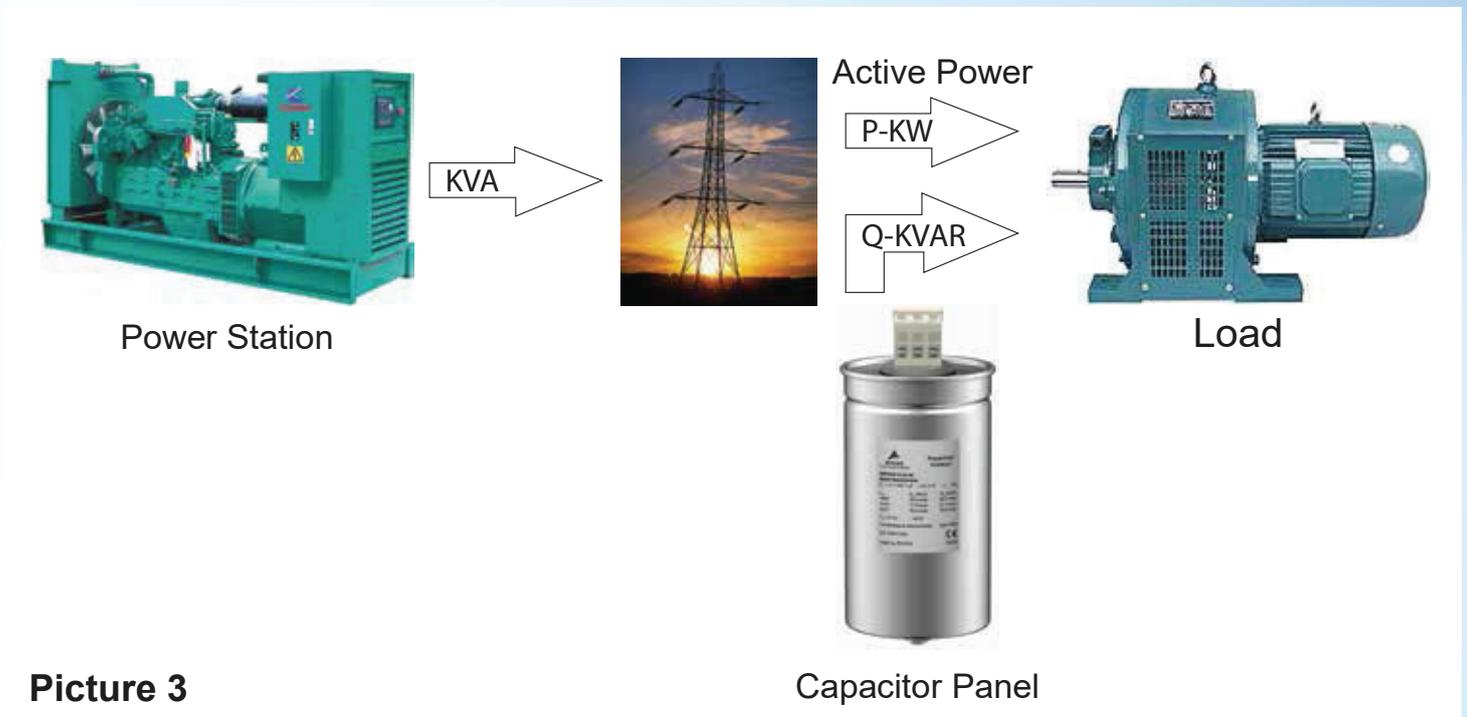
### STANDARD

- IEC 61439 part 1&2
- National grid/transformers/Generators/UPS up to 1000 Voltage AC/DC, 2/3 Phase system
- from 63A up to 6300A
- up 150Ka/s
- Well-known component such as Socomec/LS/ABB/Schneider/Siemens,...
- Manual mode or Automatic logic control mode





Picture 1



Picture 3

**Benefits of Capacitor Power Factor correction panels bring to electrical network**

(Pic 1) and (Pic 2) shown how electrical power transmit from power station to ending load special motors, magnetic load which mainly consume reactor power (Kvar).

Regard to vector pic.2 assume Total power S (KVA) transmitted from power station to ending load without capacitor banks in the network system and S' (KVA) present for AC electrical network system have capacitor banks nearby motor loads. Apparently, these capacitor banks made system work more efficient, bring in a lot advantage for network: (Pic 3)

- Decreasing load for transmission transformers.
- Decreasing power loss created by transmission cables.
- Control voltage drop better by controlling number of capacitor banks cut in and out.



# Diesel Generator Synchronizing Control Panel

We design & manufacture generator synchronizing panels, all control switchgear and components necessary for the generator synchronized operation in auto mode or manual mode such as Circuit Breakers, protection relays, scope meter and relays...

Manual/Auto/Load sharing mode synchronized panels provide all control relays, PLC control and meters to observe various parameters to help the operator safely perform manual start of parallel generators. Increasing your standby power generator sets reliability, expandability, flexibility and serviceability.



# Sub-Distribution Panel

Sub-DB (Distribution) is a part of electricity supply system which divides electric power feed into individual circuits while providing protective overload breaker for each circuit in one common panel. In Modern practices RCD- Residual Current Devices or RCBO- Residual Current Breaker with overcurrent protection are being incorporated increasing safety and protection from electrical shock to person who directing operate electric equipment attached to the sub distribution panel power outlets.



**GENERAL SPECIFICATION**

**SPECIFICATION**

Applied standard  
 Insulation voltage rate  
 Rate current  
 Rate short circuit  
 High Voltage tested  
 Protection degree  
 Fixing type  
 Housing Material  
 Finishing  
 Cable entry

**STANDARD**

IEC 61439 Part 1&2  
 up to 1000V AC/DC  
 up to 3200A  
 50KA-1s. available 70KA-1s on request  
 3000V AC -60s  
 Standard IP43, can be IP65 on request  
 Wall mount or free Floor standing  
 Stainless steel 304, 316 or mild steel  
 Epoxy powder coated, standard RAL 7032 roughed type, other colors on request  
 Top and bottom, available side entry on request

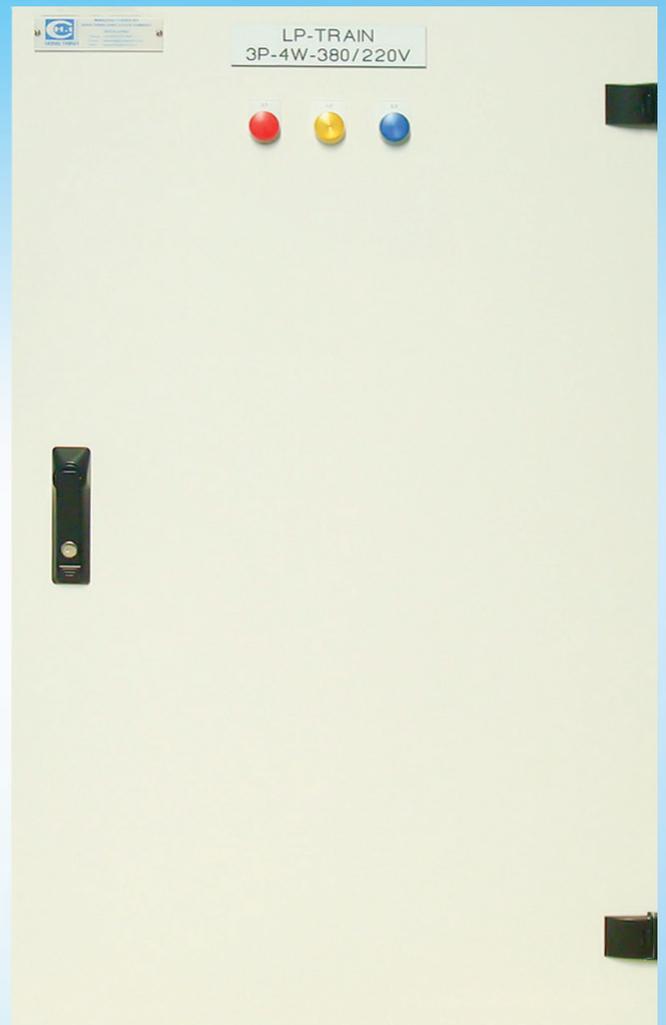
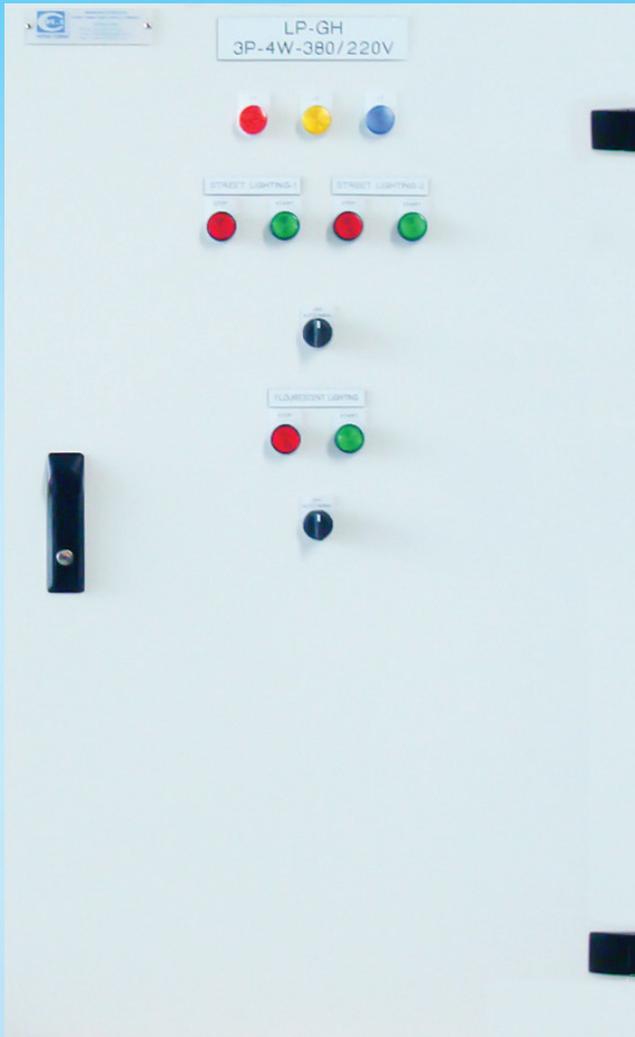


**TYPICAL PANEL SIZE**

CODE	H	W	D	T	Ver.	IP
EF20864MSO-43	2080	600	400	2.0	0	43
EF20866MSO-43	2080	600	600	2.0	0	43
EF20874MSO-43	2080	700	400	2.0	0	43
EF20876MSO-43	2080	700	600	2.0	0	43
EF20878MSO-43	2080	700	800	2.0	0	43
EF20884MSO-43	2080	800	400	2.0	0	43
EF20886MSO-43	2080	800	600	2.0	0	43
EF20888MSO-43	2080	800	800	2.0	0	43

# Lighting Panel

The compact design lighting panel is cost effective to save space, reduce equipment cost and energy. Our solutions deliver flexibility, ease of installation, and allow modification with minimized difficulty. All these benefits will bring to cost saving and energy savings to the customer.



**GENERAL SPECIFICATION**

**SPECIFICATION**

Standard conformity  
 Insulation voltage rate  
 Rate current  
 Rate short circuit  
 High Voltage Factory tested  
 Protection degree  
 Fixing type  
 Material  
 Finishing  
 Cable entry

**STANDARD**

IEC 61439 Part 1&2  
 up to 1000V AC/DC  
 up to 250A, 630A on request  
 32KA-1s. available 50KA-1s on request  
 3000V AC -60s  
 Standard IP43, can be IP65 on request  
 Wall mount or stand on plinth support  
 Mild steel, Available for Stainless steel 304, 316 on request  
 Epoxy powder coated, standard RAL 7032 roughed type, other colors on request  
 Top and bottom, available side entry on request

**TYPICAL PANEL SIZE**

CODE	H	W	D	T	Ver.	IP	Note
EW050422MSO-43	500	400	220	15	0	43	Wall-mounted
EW060422MSO-43	600	400	220	15	0	43	
EW070522MSO-43	700	500	220	15	0	43	
EW080625MSO-54	800	600	250	15	0	54	
EW090625MSO-54	900	600	250	15	0	54	
EW100625MSO-54	1000	600	250	15	0	54	
EW120640MSO-54	1200	600	250	15	0	54	
EF140640MSO-43	1400	600	400	2.0	0	43	Floors standing
EF160640MSO-43	1600	600	400	2.0	0	43	
EF180640MSO-43	1800	600	400	2.0	0	43	
EF180840MSO-43	1800	800	400	2.0	0	43	

# Motor Control Center Panel

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 Center's are in modern practice a factory assembly of several motor starters. A motor control center can include variable frequency drives, programmable controllers, and metering

MCC panels are manufactured, assembled, wired and tested as a complete free standing system. They can be combined or connected on site with the minimum outlay of time and cost.



MCC panel's also offer outstanding simplicity in the connection of cables. All components are pre-wired and connected to terminals ready for operation onsite.

The overall design of a Motor Control Centre allows for a large measure of flexibility, providing for a wide range of variations and configurations to satisfy a customer's project requirements.

- High degree of protection and safety for operating and maintenance personnel by means of door interlocked circuit breaker or fused switches. Transparent door for distribution boards optional.
- All usually required switchgear, control gear and instrumentation can be fitted.
- Maximum transport sections = 3200mm (4 sections)
- Modules powder coat paint finishing, Hong Thinh standard RAL 7032 Rough type, other colors in optional.



## GENERAL SPECIFICATION

### Specification

Standard conformity  
Voltage rate  
Current rate incoming

Short circuit rating on Man busbars  
Short circuit rating on Dropper bars

IP Protection  
Design concept  
Load module  
Wiring control  
Arrangement  
Future extension  
Cable entry

Option  
Option

### Standard

IEC 61439 part 1&2  
Up to 1000V 50Hz AC  
Up to 6300A Main busbars  
Up to 800A vertical dropper bars  
Option 1200A dropper bar for distribution sections available  
65KA/1s or 50KA/3s  
50KA/1s standard  
Option 65KA/1s  
Standard is IP43 up to IP54 on your request  
Compact design. Easy, time saving assembly from self-supporting sections  
Fixed or draw-out  
Wired and functionally tested ready for connection on site  
Single front arrangement or Back-to-back arrangement for space saving  
Easily extendable without the needing of cutting or drilling tools  
Top and bottom, ample cabling room and fixing facilities in cableway  
Terminal rails for control and power, terminals in cableway  
Bus-duct system entries available  
Control cable plugs (if required)

# Industrial Process Control Panel

We are leading in manufacture and supply process panels, process meter panel, color MIMIC panels for individual machinery or whole complex systems.

The process PLC base control panels are used in various industries like petrochemicals, chemicals, steels plant, pharmaceuticals, cements, waste water or water supply plant, power plant...

We provide a wide range of process Computerized or PLC base control panel complete with HMI (Stand for Human Machine Interface). The panels are widely used for various purpose sequentially process controls.

Panel structures are designed easily for trouble shooting, monitor, maintain and less difficult in modifying and future extensional.



## GENERAL SPECIFICATION

### Specification

Standard conform  
Voltage rate  
IP Protection  
Option  
Panel structure  
Rate current  
Short circuit withstand current  
Fixing type  
Material  
Finishing standard for mild steel material

### Standard

IEC 61439/AS 61439/NEMA/JIS  
up to 1000V AC/DC  
Standard IP43, Dust proof  
up to IP65, Water proof  
1.5mm/2.0mm T steel sheet, mounting plate with folded edge in  
Max 1000A  
50KA-1s  
free floor standing  
Standard Mild steel, other S/S 304/316 on request  
Epoxy polyester powder coating, RAL 7032 Rough type. Other colors on request.



# Outdoor Panel

Outdoor Panels are made from zinc mild steel sheet with double fold at front and back to stop rain water reaching inside. All the parts of panel are treated and coated with UV resistive Epoxy powder coating system for outdoor use.

Outdoor enclosures are designed with rubber gaskets inside door to create seal to create water proof protection tested and rated to IP65 Standard.



## GENERAL SPECIFICATION

### Specification

Standard conform  
Voltage rate  
Rate current  
Option  
IP Protection  
Short Circuit withstand current  
Panel structure  
Transparent Door  
Lifting type  
Fixing type  
Material  
Finishing standard for mild steel material

### Standard

IEC 61439/AS 61439/NEMA/JIS  
up to 1000V AC/DC  
Designed standard 1000A  
Up to 6300A, in request  
IP65, water proof  
50KA-1s, option for request 150KA-1s  
1.5mm/2.0mm T steel sheet, mounting plate with folded edge in  
Transparent Glass 5mmT c/w seal  
Eyelets lifting for easy to install  
free floor standing  
Standard mild steel, other S/S 304/316 on request  
Epoxy polyester powder coating, RAL 7032 Rough type. Other colors on request.



**TYPICAL PANEL SIZE**

CODE	H	W	D	T	Ver.	IP	Note
EW0642.5MSO-65	600	400	250	1.5	0	65	Wall-mounted
EW0842.5MSO-65	800	400	250	1.5	0	65	
EW0862.5MSO-65	800	600	250	1.5	0	65	
EW10062.5MSO-65	1000	600	250	1.5	0	65	
EF12064MSO-65	1200	600	400	2.0	0	65	
EF14064MSO-65	1400	600	400	2.0	0	65	
EF18064MSO-65	1800	600	400	2.0	0	65	Floors standing
EF18084MSO-65	1800	800	400	2.0	0	65	
EF18094MSO-65	1800	900	400	2.0	0	65	

# Scada Design PLC Panel



We are leading in the manufacture in the manufacture and supply process PLC panels, meter panel, color mimic panels for individual machinery or whole complex systems. The process PLC based control panels are used in various industries like petrochemicals, chemicals, steels plant, pharmaceuticals, cements, waste water or water supply plant, power plant...

We provide a wide range of process Computerized or PLC based control panel complete with HMI (Human Machine Interface). Panels are widely used for various purpose logic process controls. Panel structures are designed with the concept of easily to trouble shoot panel problems, monitoring, maintain and less difficulty in modifying and future expansion.

## GENERAL SPECIFICATION

### Specification

Standard conform  
Voltage rate  
IP Protection  
Option  
Panel structure  
Rate current  
Short circuit withstand current  
Fixing type  
Material  
Finishing standard for mild steel material

### Standard

IEC 61439/AS 61439/NEMA/JIS  
up to 1000V AC/DC  
Standard IP43, Dust proof  
up to IP65, Water proof  
1.5mm/2.0mm T steel sheet, mounting plate with folded edge in  
Max 1000A  
50KA-1s  
free floor standing  
Standard Mild steel, other S/S 304/316 on request  
Epoxy polyester powder coating, RAL 7032 Rough type. Other colors on request.



**TYPICAL PANEL SIZE**

CODE	H	W	D	T	Ver.	IP	Note
EF20864MSO-43	2080	600	400	2.0	0	43	Floors standing
EF20866MSO-43	2080	600	600	2.0	0	43	
EF20874MSO-43	2080	700	400	2.0	0	43	
EF20876MSO-43	2080	700	600	2.0	0	43	
EF20884MSO-43	2080	800	400	2.0	0	43	
EF20886MSO-43	2080	800	600	2.0	0	43	
EF20896MSO-43	2080	900	600	2.0	0	43	
EF208106MSO-43	2080	1000	600	2.0	0	43	

# Computer Rack Solutions



We provide complete data center racks, server rack cabinets, enclosure solutions for all size computer rooms. Rack enclosure can combine not only for server computers, switches, hubs, routers but also for UPS power supply, cooling fans, cable management with door lockable.

We offer a multitude of sizes and ranges and accessories for overall solution meet all requirements made of professional data distributors



## FEATURES

Doors

Front transparent Glass or acrylic 3mmT viewing panel. Doors can be quick fitted and removed.

Vented roof

Vented roof plate or Solid Roof plate on request.

Utility power supply strips

Available for strip of 240Vac power outlets on the back side.

Side panels

Easy removable and can be lockable

Data cable entry

Top or bottom entry, event side entry design available on request.

19" mounting equipment

4x19" Mounting angles, 2 in front, 2 in rear, are design for mounting all range of 19" size data equipment.

Material

Standard Mild steel, other S/S 304/316 on request

Finishing standard for mild steel material

Epoxy polyester powder coating, RAL 7032 Rough type. Other colors on request.

# Custom Enclosure

Box type panel was manufactured follow multi-purports selection. They are blank panel with mounting plate.



Standard	IEC-61439 OR 439-1 : 1992
Body and door manufacture in	1.5mm sheet
Door thickness	1.5, 2.0mm
Mounting plate with folded edge in	2.0mm sheet steel
Finish	Epoxy polyester powder coating <ul style="list-style-type: none"> <li>· Body and door RAL 7032 textured finish</li> <li>· Mounting plate in RAL 2004 smooth finish</li> </ul>
Protection IP	Up to IP41, 55 for indoor, IP65 for outdoor

## PACKING:

Boxes are complete with:

- Mounting plate
- Gland plate and gasket
- Package with hardware for each connection and screws to mount all components
- Locking system with 3mm double bar key

# Degrees of Protection

The degree of protection IP indicates a level of protection provided by the assembly against access to or contact with live parts, against ingress of solid foreign bodies and against the ingress of liquid. The IP code is the system used for the identification of the degree of protection, in compliance with the requirements of Standard IEC 60529.

Unless otherwise specified by the manufacturer, the degree of protection applies to the complete switchboard, assembled and installed for normal use (with door closed). The manufacturer shall also state the degree of protection applicable to particular configurations which may arise in service, such as the degree of protection with the door open or with devices removed or withdrawn.

Elements of the IP Code and their meanings

Numerals Meaning for the Element or letters protection of equipment protection of persons Ref.

1 <sup>ST</sup> CHARACTERISTIC NUMERAL	2 <sup>ND</sup> CHARACTERISTIC NUMERAL	ADDITIONAL LETTER	SUPPLEMENTARY LETTER
Against ingress of the solid foreign objects	Against ingress of water with harmful effects	Against access to hazardous parts with	Supplementary information specific to:
0 (non-protected)	0 (non-protected)	a Back of hand	a High voltage apparatus
1 $\geq$ 50mm diameter (back of hand)	1 Vertically dripping	b Finger	b Motion during water test
2 $\geq$ 12.5mm diameter (finger)	2 Dripping (15° tilted)	c Tool	c Stationary during water test
3 $\geq$ 2.5mm diameter (tool)	3 Spraying	d Wire	d Weather conditions
4 $\geq$ 1.0mm diameter (wire)	4 Splashing		
5 Dust-protected (dust)	5 Jetting		
6 Dust-tight (dust)	6 Powerful jetting		
	7 Temporary immersion		
	8 Continuous immersion		

# Form of Separation & Classification of Switchboards

## Forms of internal separation

By form of separation it is mean the type of subdivision provided within the switchboard. Separation by means of barriers or partitions (metallic or insulating) may have the function to:

- Provide protection against direct contact (at least IPXXB) in the case of access to a part of the switchboard which is not live, with respect to the rest of the switchboard which remains live;
- Reduce the risk of starting or propagating an internal arc;
- Impede the passage of solid bodies between different parts of the switchboard (degree of protection of at least IP2X).

A partition is a separation element between two parts, while a barrier protects the operator from direct contact and from arcing effects from any interruption devices in the normal access direction. The following tables from Standard IEC 61439-1&2 highlight typical forms of separation which can be obtained using barriers or partitions:

### Main criteria Subcriteria Form

