ItalTechnics

Mechanics & Industrial Application

Solutions Provider

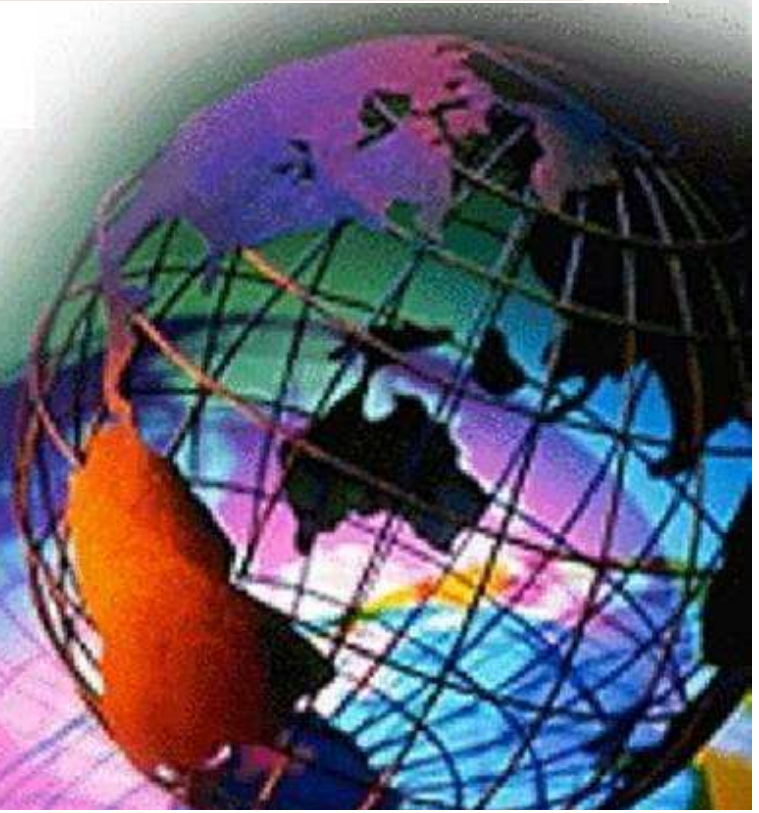
to the

Automation - Electrical Services

and

Electrical Switchboards

LV/MV



Where we are located

ItalTechnics

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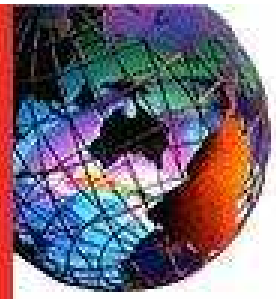


Main Current Features

MAIN FIGURES:

COVERED PRODUCTION AREA: > 12.000 SQ. M.

ANNUAL TURNOVER: > 20 Mln €

WORKFORCE: > 200 Units

CERTIFICATIONS:

UNI EN ISO 9001 : 2008
EN 1090 : 2009
UNI EN ISO 3834-2 : 2006
OHSAS 18001 : 2007 BS
UNI EN ISO 14001 : 2004
IGQ Qnet 9529

«NETWORKING AS A VALUE»

Mission / 1

ItalTechnics designs, sells and install the following product lines:

- **Cabinets Metal Indoor / Outdoor** systems for telephony and electromechanical devices.

- Energy control and distribution **Switchboards** for low and medium voltage designed for sectors like: surroundings, industrial, marine, petro chemical, oil & gas of the following types:

  - **MCC Switchboards (Motor Control Center)**
  - **P.C. Switchboards (Power Center)**
  - **Automation Switchboards** with software designed internally to suit the client needs

- **INTEGRATED Cabinets and Shelter** with back planes, air conditioning, power station, wiring, final functional test and installation, characteristic of both the civil and military sector.

IT, thanks to the long experience in the field of design and installation of electrical switchboards systems, has developed a specific experience in the production of technological equipment complex enough to offer to its customers, of any sector, the support of a real **Pole of Technological Excellence**.

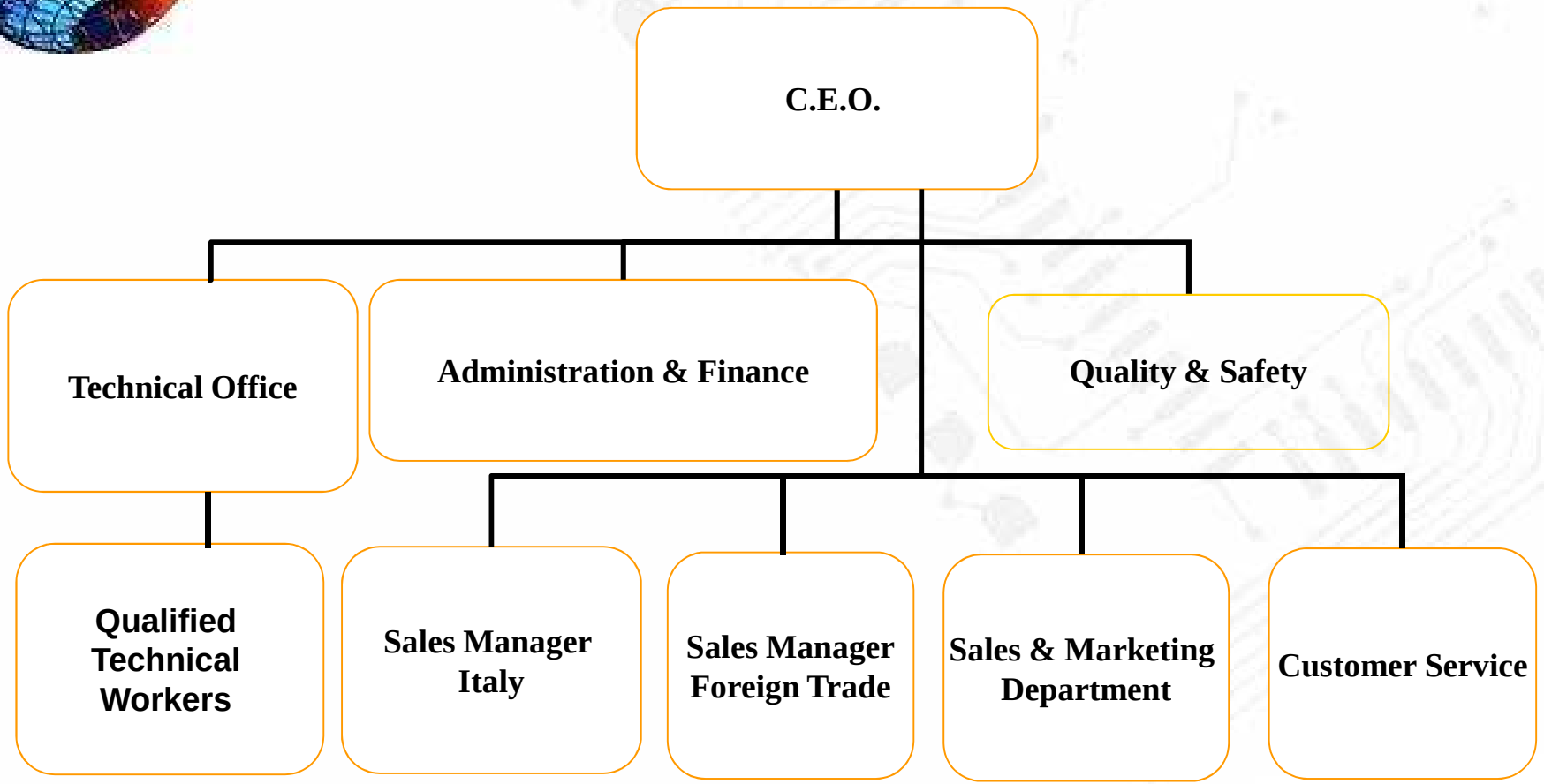
Mission / 2

ItalTechnics, thanks to its **product – process** know-how, collaborates with its clients to the:

- ✓ **definition of the technical supply of the products**
- ✓ **design / co-electromechanical design with the customer**
- ✓ **prototyping**
- ✓ **product qualification**
- ✓ **production / functional final test**
- ✓ **Standard installation**
- ✓ **after-sales / maintenance service in the field**

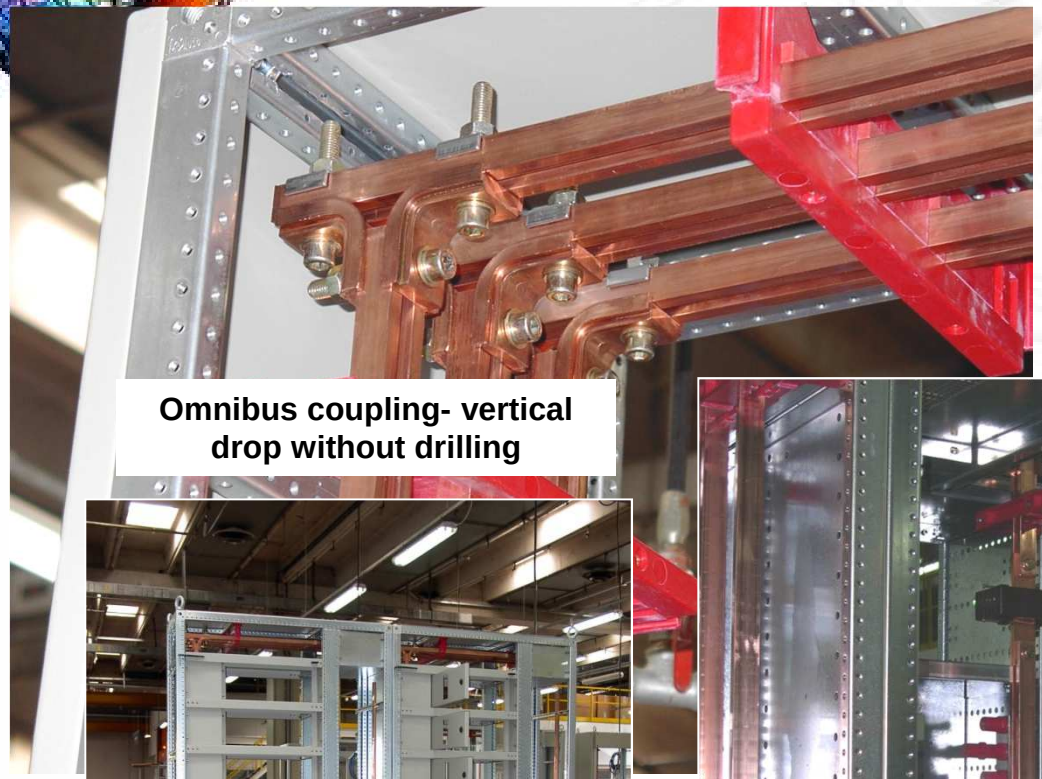
tested according to internal procedures comply with the standard requirements of **UNI EN ISO 9001-2008.**

Organization chart ItalTechnics



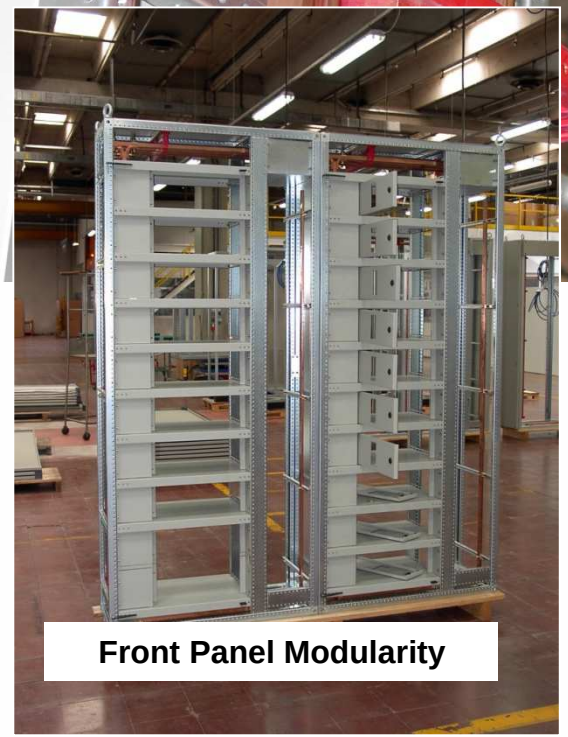
Products Types

Electrical Panels

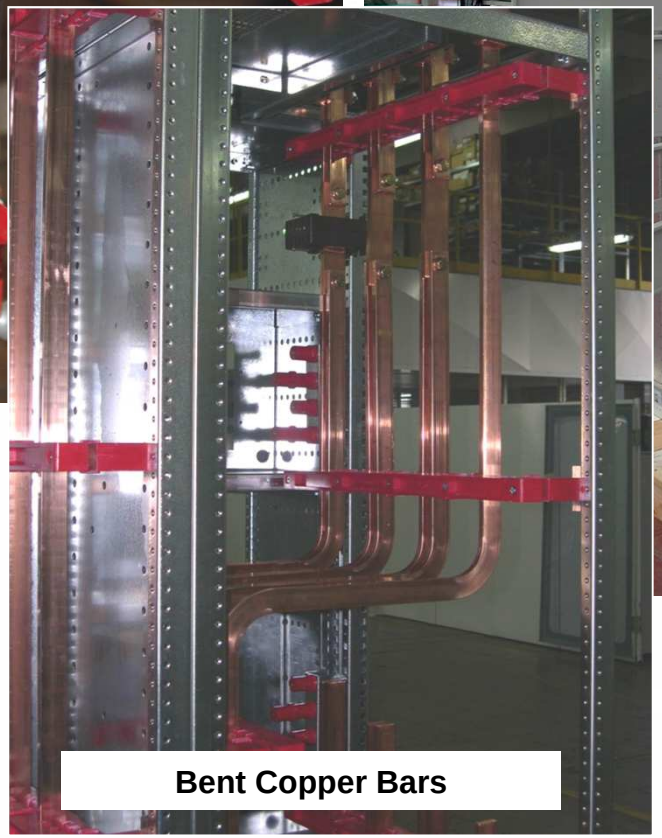


Omnibus coupling- vertical drop without drilling

Front panel modularity



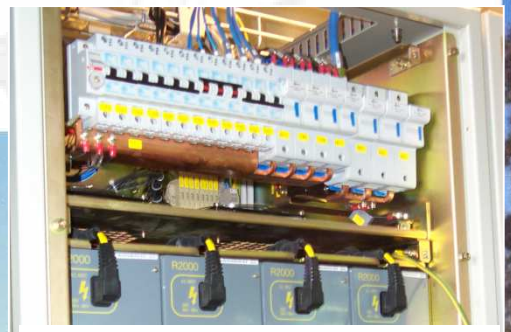
Front Panel Modularity



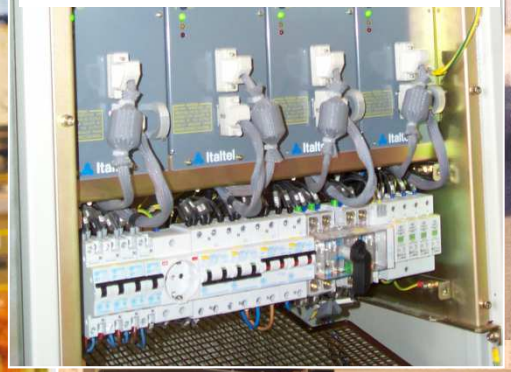
Bent Copper Bars

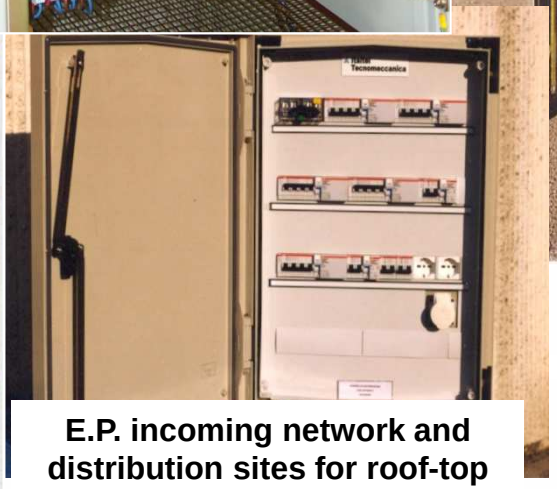
Electrical Panels for Telephone Station

General Framework Distribution Equipment - Indoor



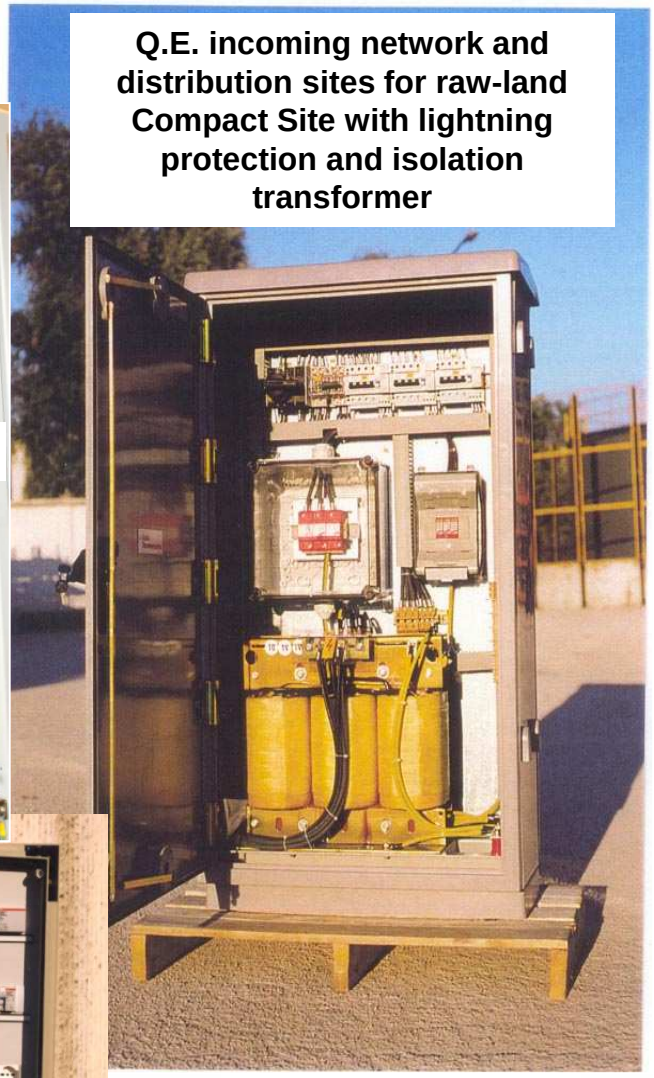
Energy station for telephony





E.P. incoming network and distribution sites for roof-top indoor and outdoor

Q.E. incoming network and distribution sites for raw-land Compact Site with lightning protection and isolation transformer



Electrical Panels for Industrial Plants

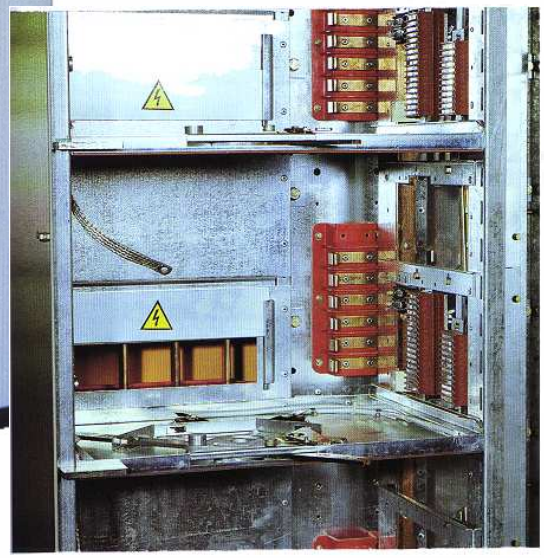
Switching Electrical Panels Network / Group and Command for Generator E.P.

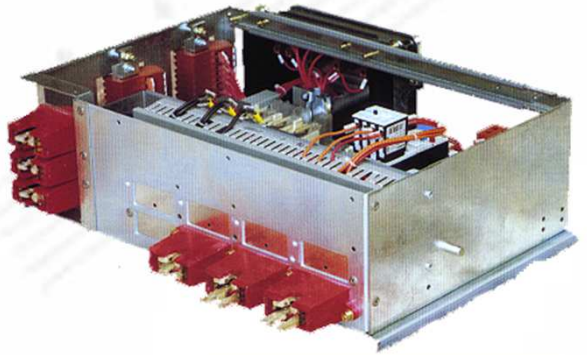
Electrical Low Voltage Panel in P.C. Type for industrial plants

Electrical Panel for general distribution for light and motive power

Electrical Panels P.C – Power Center &

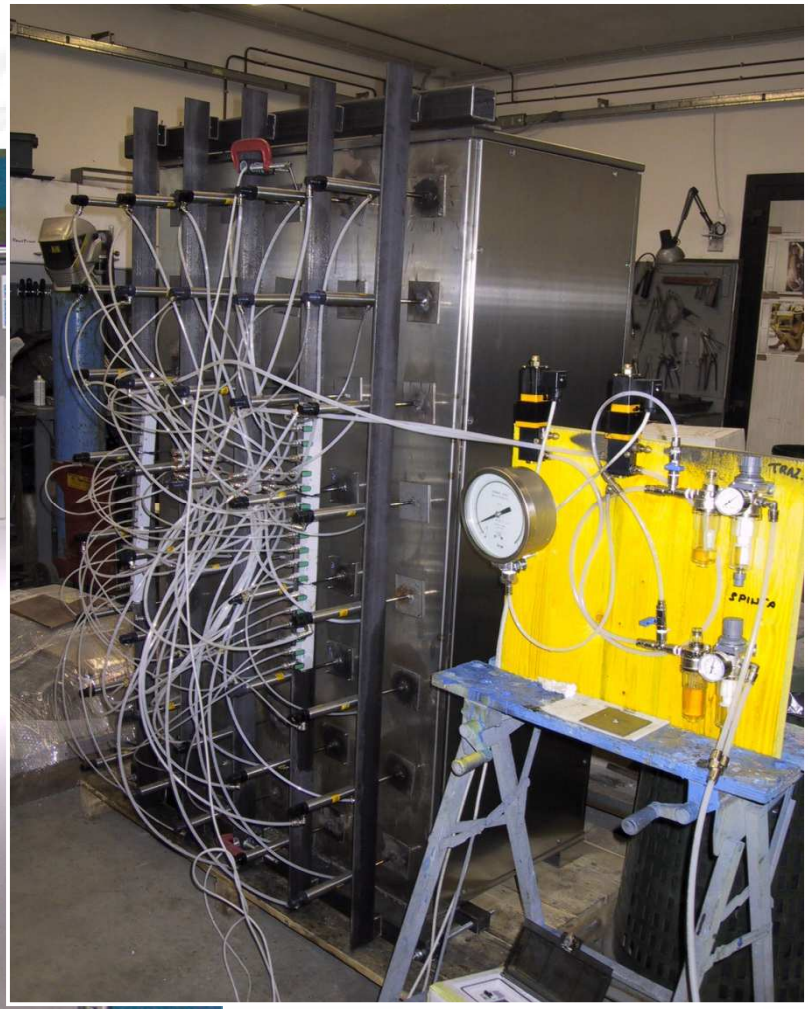
MCC - Motor Control Center



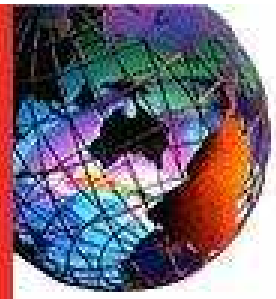


Electrical Panels for Railway use

Test phase did from Certification Company



Electrical Panels for Naval use



Our Products:

- **OMEGA System – Power Center e Motor Control Center with Fixed and Removable Drawers**
- **OMEGA Units – Fixed and Removable Drawers Configuration**
- **Marine and Offshore Panels**
- **ALPHA Enclosure System – Electrical Panels for Secondary LV Distribution**
- **BOX Station – Containerised Substation Cabins MV/LV**

Technical Information of Electrical Panels «1»

Mechanical Data

Internal Separation

- IEC 61439-2 / 60439-1 Up to Form 4A and 4B
- BS EN 61439-2 / BS EN 60439-1 Type 1 to 7

National Annex

Degree of Protection

- IEC 60529 IP2X up to IP44 (IP54 optional)

Materials

- Doors & Plates Painted Steel 1.5mm or 2.0mm
- Framework Painted Steel or Aluzinc 2.0mm
- Plinth Painted High Strength Steel 2.5mm with Magnelis Coating
- Mounting Plates Aluzinc 2.0mm
- Internal Plates Aluzinc 1.0mm - 2.0mm
- Stainless Steel (optional) ANSI 304 160/80
- Rear Plates Aluzinc 1.5mm
- Painted Steel 1.5mm or 2.0mm
- Top Plates Aluzinc 1.5mm

Colour

- Doors & Plates RAL 7035 Fine Structure
- Plinth RAL 9005 Fine Structure

Reference Standards

Type-tested Switchgear and Controlgear Assembly

- IEC-61439-2 & 1 / 60439-1,
- BS EN 61439-2 & 1 / 60439-1,
- EN 61439-2 & 1 / 60439-1, IEC 60529,
- IEC 62208, IEC/TR 61641,
- CSA-C22.2 No. 31 & 14,
- DIN VDE 0660 part 500, DIN 43671/12.75,
- Ships Classifications Societies

Dimensions (mm)

With flat plates (AGP)

- Height: 1995, 2185, 2375
- Width: 440, 630, 820, 1010, 1200
- Depth: 600, 790

Technical Information of Electrical Panels «2»

Electrical Data

Rated Voltages

- Rated impulse withstand voltage (Uimp) 8 Kv (up to 12kV)
- Rated insulation voltage (Ui) 1000 V
- Rated operational voltage (Ue) 690 V

Rated Currents

Main Busbar System, Horizontal & Vertical

- Rated current (In) up to 8500 A
- Rated Peak withstand current (Ipk) up to 363 kA
- Rated Short-time withstand current (Icw) up to 165 kA 1 sec

Distribution Busbars, Fixed System

- Rated current (In) up to 2000 A
- Rated Peak withstand current (Ipk) up to 220 kA
- Rated Short-time withstand current (Icw) up to 100 kA 1 sec

Distribution Busbars,

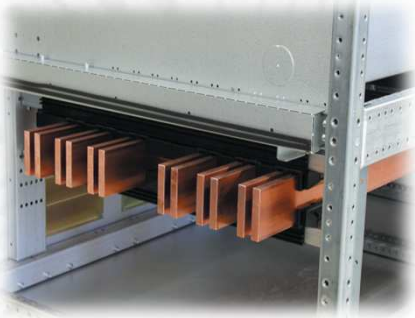
Withdrawable & Removable System

- Rated current (In) up to 1800 A
- Rated Peak withstand current (Ipk) up to 154 kA
- Rated Short-time withstand current (Icw) up to 70 kA 1 sec
- Rated Conditional withstand current (Icc) up to 100 kA 1 sec

Service Conditions

- Installation Indoor
- Ambient Temperature 0℃ to +40℃
- Relative Humidity Max 50% at 40℃
- Altitude ≤2000m

OMEGA SYSTEM – Power Center and Motor Control Center



OMEGA SYSTEM – Power Center and Motor Control Center

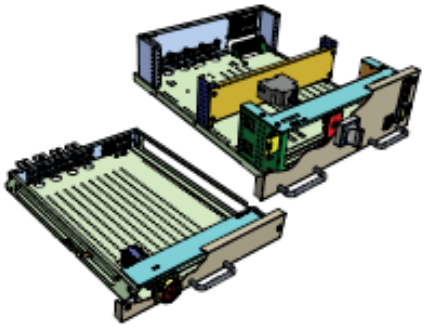
Key benefits include:

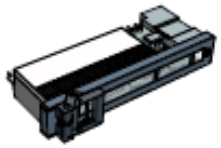
- Minimal downtime
- Easy re-configuration of units while live
- Interchangeability of different unit types
- Easy upgrade or repair
- Possibility to fit components from many
- manufacturers
- ProfiBus and DeviceNet capable

The Omega System can be supplied as loose part kits or mechanically assembled, and is suitable for a broad spectrum of industries including:

Chemical

- Pharmaceutical
- Marine/Offshore
- Petrochemical
- Building Services
- Power Stations
- Paper Mills
- Water Treatment Plants
- Car Industry
- Mining Industry





The Omega System is available in a wide variety of configurations to cover all applications:

- Fixed
- Removable
- Withdrawable
- Inline
- Front Access
- Rear Access
- Minimum

OMEGA SYSTEM – Power Center and Motor Control Center

The primary demand in today's society is personal safety.

The Omega System achieves the highest safety standards:

- Type Test acc. IEC 60439-1 / 61439-1,2
- Internal Arc Test acc. IEC 61641
- Section Arc Protection Barriers
- Unit Arc Protection
- Thermographic inspection areas
- Mechanical safety interlocks
- IP20 internal protection

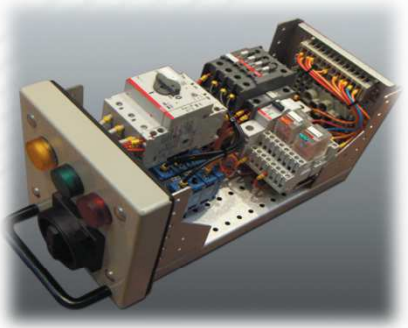
The busbar system forms the main power distribution within an assembly and is one of the critical elements determining the assembly's operational reliability and safety.

Features of the Omega System include:

- Fitted to top or bottom of panel
- 2, 3 or 4 bar systems up to 8,500 A
- IP20 protection
- Distribution bars up to 1600A
- Internal arc barriers (optional)

The Omega framework and cladding system provides the most robust flexible system available:

- High strength 5 bend profile
- 2mm Aluzinc material
- Modular in 3 axes
- Doors in 1.5mm or 2.0mm
- IP44 standard (IP54 optional)
- Special colours available
- Customised cut-out's



OMEGA SYSTEM – Power Center and Motor Control Center

The Omega Switchgear and Controlgear System offers unlimited flexibility with a large range of unit types:

Fixed

- Steel compartmentation up to Form 4 Type 7
- Adjustable depth mounting plates
- Non ferrous gland plates
- Metal or plastic cable box
- Sizes: 4 widths, 16 heights, 6 depths

Removable Units Type

- High protection against contact
- Rating up to 630 A, 500 kW, 690 V
- Fixed or hinged front panel
- Coding system
- Unique safety interlocking mechanism
- Fully re-configurable while live
- Accommodates components from many
- manufacturers
- Sizes: X = 3, 4 Y = ½, 1, 1½, 2, 2½, 3, 3½, 4.
- Up to 20 units per section

Mini-withdrawable

- High personal protection
- Rating up to 80 A, 55 kW, 690 V
- Auxiliary controls up to 46 control pins
- Front or rear access
- Removable interface box
- Interface box can be pre-wired
- Fully re-configurable while live
- Coding system
- DeviceNet & ProfiBus compatible
- Sizes: X = 1, 1½, 2, 3. Y = 1
- Up to 40 units per section

OMEGA SYSTEM – Power Center and Motor Control Center

The Omega Switchgear and Controlgear System offers unlimited flexibility with a large range of unit types:

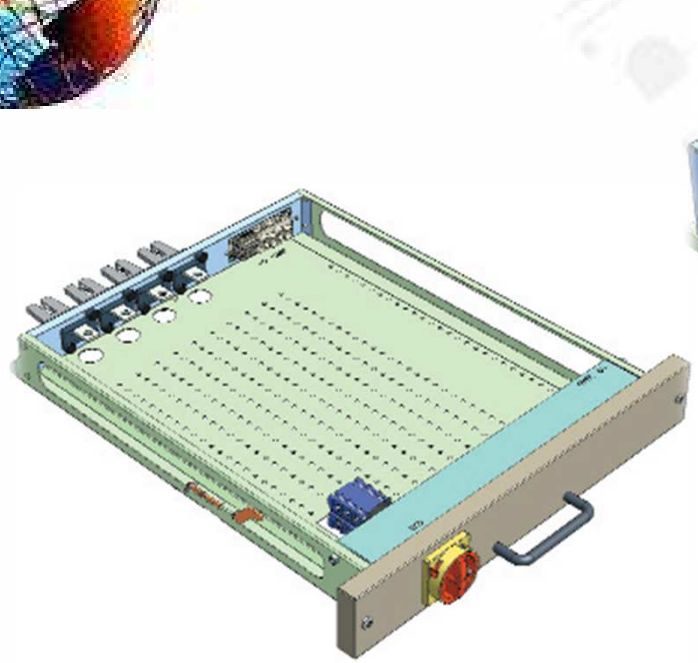
Withdrawable Units

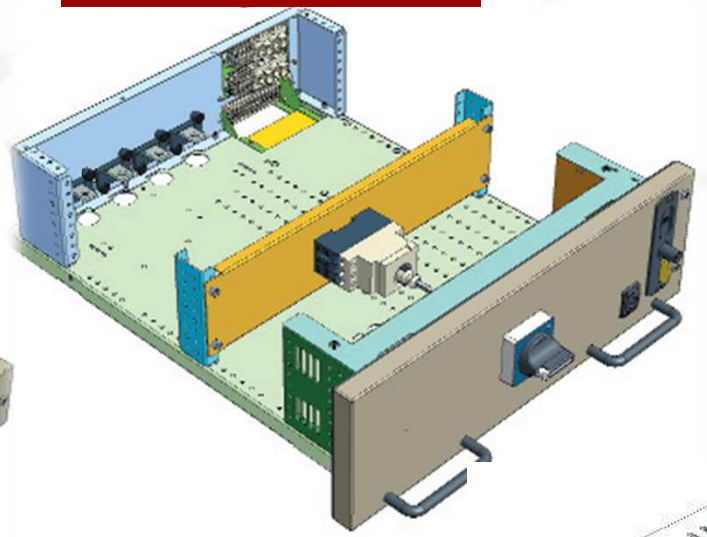
- High operational safety
- Rating up to 630 A, 500 kW, 690 V
- Auxiliary controls up to 46 control pins
- Fully re-configurable while live
- Coding system
- Safe operation...IP20 protection in all positions
- Fixed or hinged front panel
- DeviceNet & ProfiBus compatible
- Accommodates components from many
- manufacturers
- Sizes: X = 3, 4 Y = ½, 1, 1½, 2, 2½, 3, 3½, 4.
- Up to 20 units per section

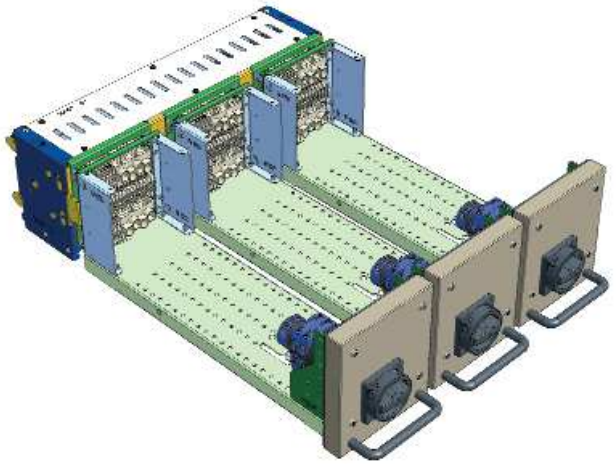
Inline Units

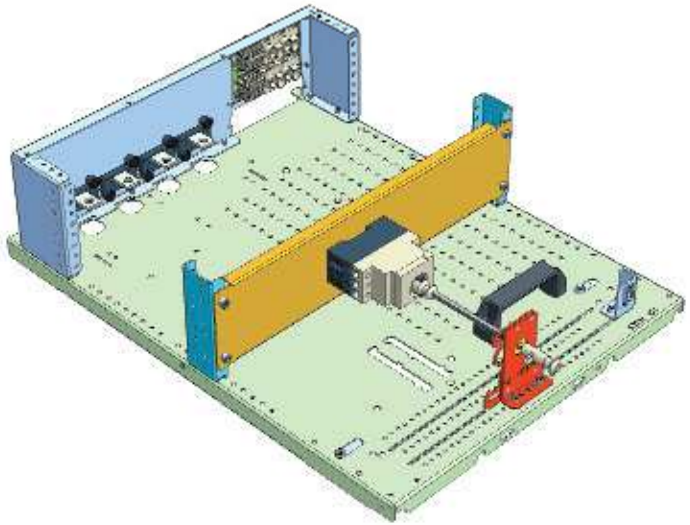
- Accepts ABB Slimline Products
- Accepts Jean Muller Sasil Products
- Rating 160-630 A
- Fully re-configurable while live
- Modular design
- Easy installation
- High operational safety
- High protection against contact
- High breaking capacity
- High short-circuit strength
- Up to 36 units per stack

OMEGA UNITS – Fixed and Removable Drawers Configuration





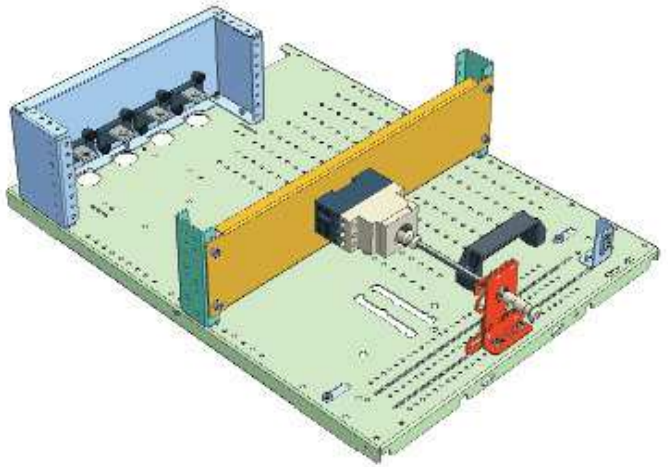




OMEGA UNITS – Fixed and Removable Drawers Configuration

Omega Removable Unit – A

Omega RMU type A is a removable unit with door on the frame.



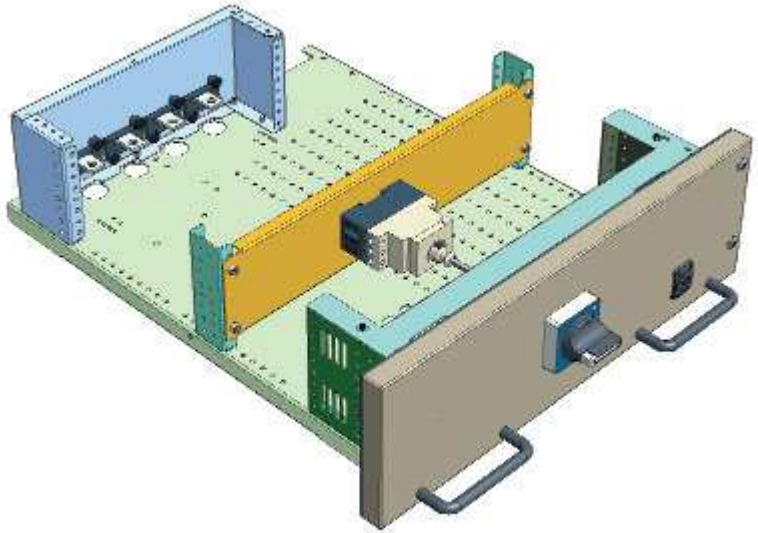
Features:

- Door on frame not on unit.
- 2 dedicated positions achieved by physical movement of unit:
  - Removed position
  - Connected position
- Isolated position may be achieved by means of disconnector of right type in off position, according to DIN standard.
- Test position may be achieved either by means of a disconnector that has a test position or by means of an external test function (switch or pushbutton) when disconnector is in off position.
- Outgoing power cables connected on components.
- Mechanical interlock on disconnector shaft with key and/or locked with screws inside
- Optional Logstrup coding system.
- Optional microswitch in connected position.
- Door can be closed with unit removed.
- Type of electrical connections (acc. To IEC 61439-2) : W F F/D (depending on configuration)

OMEGA UNITS – Fixed and Removable Drawers Configuration

Omega Removable Unit – B

Omega RMU type B is a removable unit with door on the unit



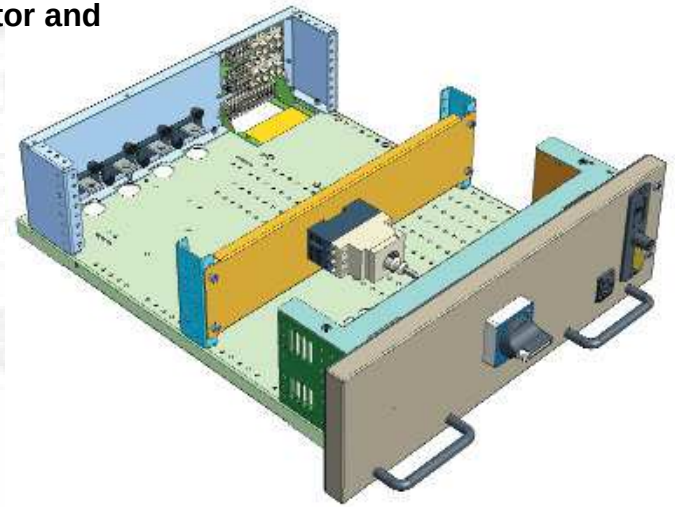
Features:

- Door on unit not on frame.
- 2 dedicated positions achieved by physical movement of unit:
  - Removed position
  - Connected position
- Isolated position may be achieved by means of disconnector of right type in off position, according to DIN standard.
- Test position may be achieved either by means of a disconnector that has a test position or by means of an external test function (switch or pushbutton) when disconnector is in off position.
- Outgoing power cables connected on components.
- Mechanical interlock on disconnector shaft with key and/or locked with screws inside
- Optional Logstrup coding system.
- Optional microswitch in connected position
- Type of electrical connections (acc. To IEC 61439-2) : W F F/D (depending on configuration)

OMEGA UNITS – Fixed and Removable Drawers Configuration

Omega Withdrawable Unit - A

Omega WDU Type A is a withdrawable unit with a position indicator and moving control unit



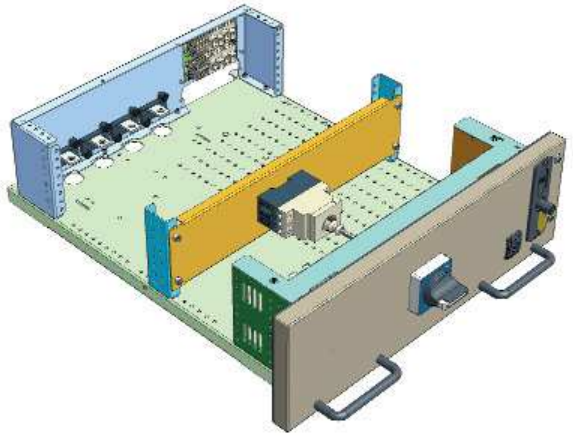
Features:

- Door on unit not on frame.
- 4 dedicated positions achieved by physical movement of unit:
  - Removed position
  - Isolated position (padlocking possible)
  - Test Position (padlocking possible)
  - Connected position
- Isolated position may additionally be achieved by means of disconnector of right type in off position, according to DIN standard.
- Test position may additionally be achieved either by means of a disconnector that has a test position or by means of an external test function (switch or pushbutton) when disconnector is in off position.
- Outgoing power cables connected on outlets or terminals in cable section.
- Auxiliary cables are connected on terminals in cable section.
- Mechanical interlock on disconnector shaft and key.
- Optional Logstrup or Harting coding system depending on plug configuration.
- Optional microswitches in isolated, test and connected position.
- Type of electrical connections (acc. To IEC 61439-2) : W W W

OMEGA UNITS – Fixed and Removable Drawers Configuration

Omega Withdrawable Unit - B

Omega WDU Type B is a withdrawable unit with a position indicator but without moving control unit



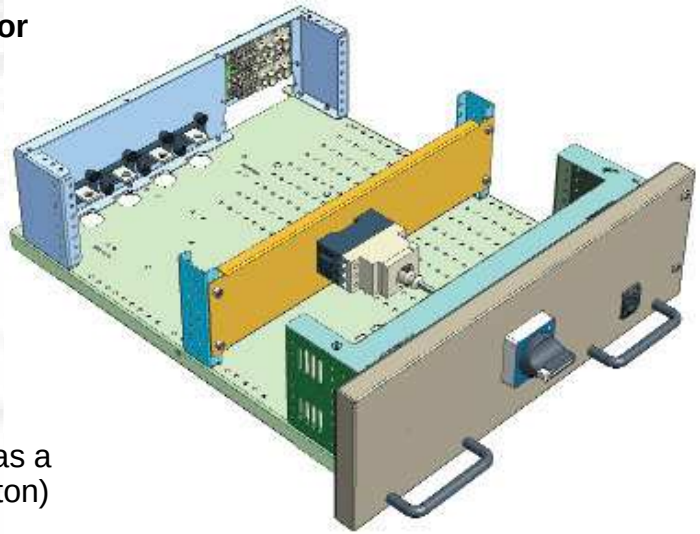
Features:

- Door on unit not on frame.
- 3 dedicated positions achieved by physical movement of unit:
  - Removed position
  - Isolated position (padlocking possible)
  - Connected position
- Isolated position may additionally be achieved by means of disconnector of right type in off position, according to DIN standard.
- Test position may be achieved either by means of a disconnector that has a test position or by means of an external test function (switch or pushbutton) when disconnector is in off position.
- Outgoing power cables connected on outlets or terminal in cable section.
- Auxiliary cables are connected on terminals in cable section.
- Mechanical interlock on disconnector shaft and key.
- Optional Logstrup or Harting coding system depending on plug configuration.
- Optional microswitches in isolated, test and connected position.
- Type of electrical connections (acc. To IEC 61439-2) : W W W

OMEGA UNITS – Fixed and Removable Drawers Configuration

Omega Withdrawable Unit – C

Omega WDU Type C is a withdrawable unit without a position indicator and moving control unit



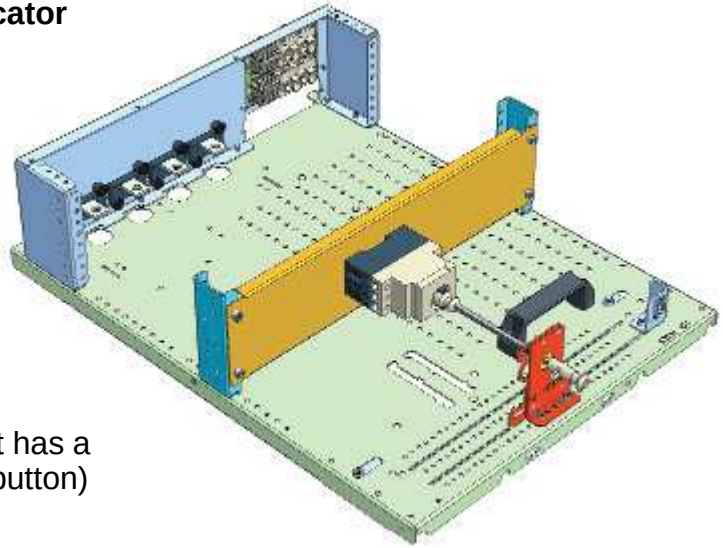
Features:

- Door on unit not on frame.
- 2 dedicated positions achieved by physical movement of unit:
  - Removed position
  - Connected position
- Test position may be achieved either by means of a disconnector that has a test position or by means of an external test function (switch or pushbutton) when disconnector is in off position.
- Isolated position must be achieved by means of disconnector of right type in off position, according to DIN standard.
- Outgoing power cables connected on outlets or terminals in cable section.
- Auxiliary cables are connected on terminals in cable section.
- Mechanical interlock on disconnector shaft and key.
- Optional Logstrup or Harting coding system depending on plug configuration.
- Optional microswitches in isolated and connected position.
- Type of electrical connections (acc. To IEC 61439-2) : W W W

OMEGA UNITS – Fixed and Removable Drawers Configuration

Omega Withdrawable Unit – D

Omega WDU Type D is a withdrawable unit without a position indicator and moving control unit



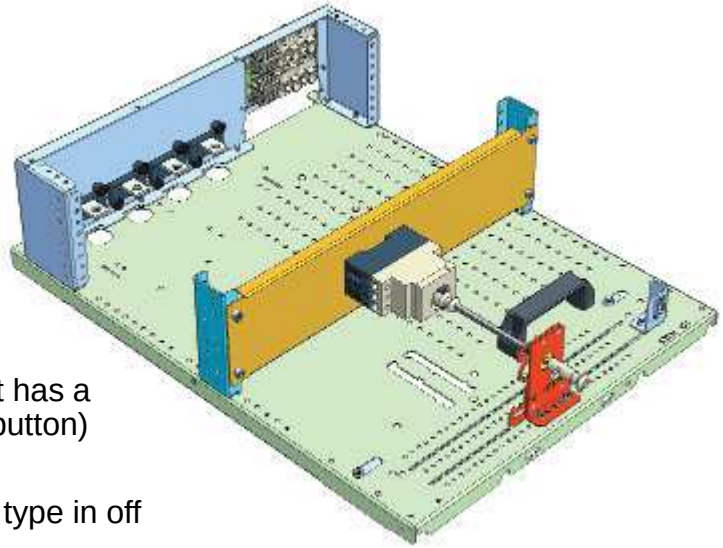
Features:

- Door on frame not on unit.
- 2 dedicated positions achieved by physical movement of unit:
  - Removed position
  - Connected position
- Test position may be achieved either by means of a disconnector that has a test position or by means of an external test function (switch or pushbutton) when disconnector is in off position.
- Isolated position must be achieved by means of disconnector of right type in off position, according to DIN standard.
- Outgoing power cables connected on outlets or terminals in cable section.
- Auxiliary cables are connected on terminals in cable section.
- Mechanical interlock on disconnector shaft and key.
- Optional Logstrup or Harting coding system depending on plug configuration.
- Optional microswitches in isolated and connected position.
- Type of electrical connections (acc. To IEC 61439-2) : W W W

OMEGA UNITS – Fixed and Removable Drawers Configuration

Omega Withdrawable Unit – E

Omega WDU Type E is a withdrawable unit in ½ module size



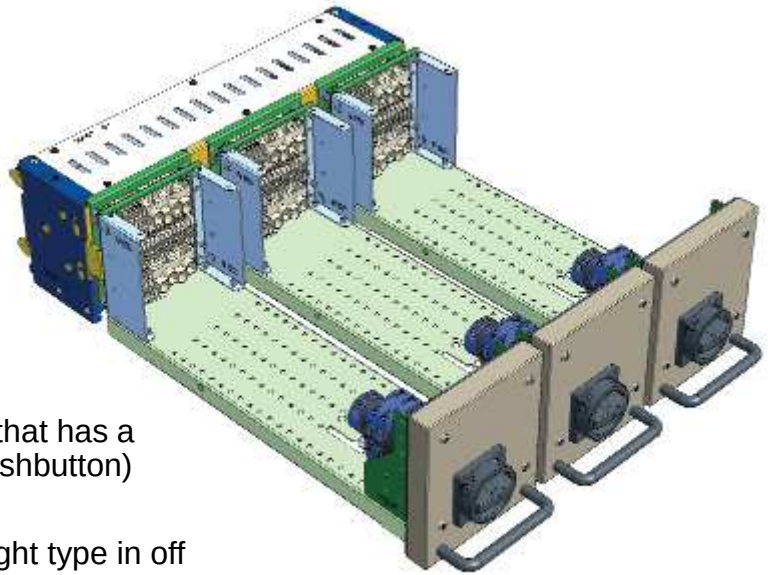
Features:

- Front panel on unit not on frame.
- 2 dedicated positions achieved by physical movement of unit:
  - Removed position
  - Connected position
- Test position may be achieved either by means of a disconnector that has a test position or by means of an external test function (switch or pushbutton) when disconnector is in off position.
- Isolated position must be achieved by means of disconnector of right type in off position, according to DIN standard.
- Outgoing power cables connected on terminals in cable section.
- Auxiliary cables are connected on terminals in cable section.
- Mechanical interlock on disconnector shaft and key.
- Optional Harting coding system depending on plug configuration.
- Type of electrical connections (acc. To IEC 61439-2) : W W W

OMEGA UNITS – Fixed and Removable Drawers Configuration

Omega Mini-Withdrawable - A

Omega MDU Type A is a mini-withdrawable unit



Features:

- Door on unit, not on frame.
- 2 dedicated positions achieved by physical movement of unit:
  - Removed position
  - Connected position
- Test position may be achieved either by means of a disconnector that has a test position or by means of an external test function (switch or pushbutton) when disconnector is in off position.
- Isolated position must be achieved by means of disconnector of right type in off position, according to DIN standard.
- Outgoing power cables connected on terminals in cable section.
- Auxiliary cables are connected on terminals in cable section.
- Mechanical interlock, on disconnector shaft and key.
- Optional Harting coding system depending on plug configuration.
- Type of electrical connections (acc. To IEC 61439-2) : W W W

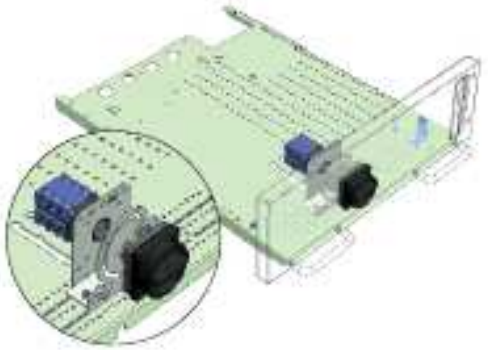
OMEGA UNITS – Fixed and Removable Drawers Configuration

Mechanical interlocks

Rotary Switch

Features:

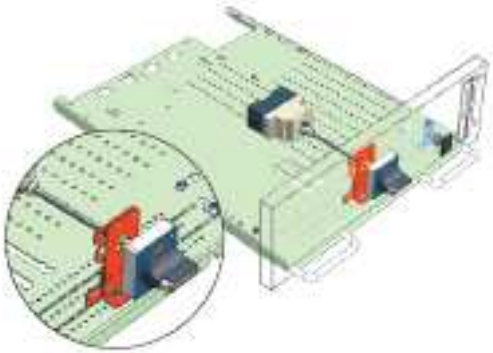
- Mechanical interlock RMU / WDU, disconnector type Kraus & Naimer
- Specified position of shaft.
- No extra key.



Fixed Height

Features:

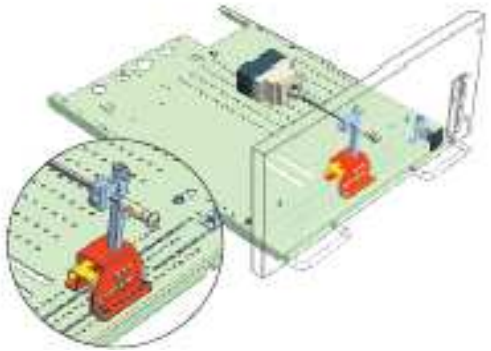
- Mechanical interlock RMU WDU.
- Specified position of shaft.
- Extension part can be added for other height on shaft.
- Extra key required.



Adjustable Height

Features:

- Mechanical interlock RMU / WDU.
- No specified position of shaft.
- Extra key required.



Marine & Offshore Panels

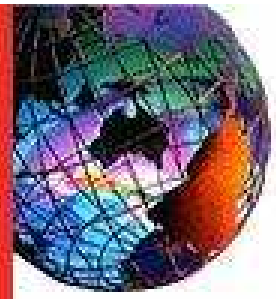
The company is a major supplier to the marine and offshore industries for the following:

- Main Switchboards
- Motorcontrol Centres (Fixed/Withdrawable)
- Control Panels
- Bridge Control Consoles
- Water Cooled Drive Panels

Systems are available as loose part kits or mechanically assembled.

Logstrup is a major supplier to all types of vessels:

- Container Vessels
- Private Yachts
- Tankers
- Cruise Liners
- Tug Boats
- Ferries
- Dredgers
- Marine Vessels
- Pilot Boats
- Supply Boats
- Deepwater Construction Vessels



Marine & Offshore Panels

The primary demand in today's society is personal safety.

The Logstrup Marine and Offshore panels achieve the highest safety standards:

- Type Test acc. IEC 60439-1 / 61439-1,2
- Internal Arc Test acc. IEC 61641
- Certified by all major Ship Classifications companies
- Arc Barriers
- Thermographic inspection areas
- Mechanical safety interlocks
- IP20 internal protection

The framework and cladding system provides the most robust flexible system available:

- High strength 5 bend profile
- 2mm Aluzinc material
- Modular in 3 axes
- Doors in 1.5mm or 2.0mm
- IP3X and IP44 standard (IP54 optional)
- Special colours available
- Customised door cut-out's

Marine & Offshore Panels

Logstrup Marine & Offshore Panels incorporate advanced features to ensure optimum use of space on the vessel while still maintaining correct temperature within the panels.

- Front or Rear Access
- Ventilation front and back
- Raised roofs to IP31
- Interlacing of phases
- Fitting of stainless steel in busbar area to reduce magnetic effect

The busbar system forms the main power distribution within an assembly and is one of the critical elements determining the assembly's operational reliability and safety. Features of the busbar system include:

- 2, 3 or 4 bar systems up to 8,500A
- High fault level up to 135kA
- Rated voltage 690 V AC
- IP20 protection
- Internal Arc barriers optional
- Fitted to top, centre or bottom of panel

Marine & Offshore Panels

Logstrup provides customised solutions for Bridge Control Consoles using the latest 3D technology.

Services include:

- 3D Concept Model
- 3D Visualisation
- Detailed design
- CAD/CAM manufacturing
- Precision welding
- Manufactured in mild or stainless steel
- Choice of colours and textures

Marine & Offshore Switchboards and Motorcontrol Centres are available in various types

- Fixed Type
- Removable Type
- Withdrawable Type
- Inline Type

Marine & Offshore Panels

TECHNICAL INFORMATION

Technical Information

Standards:

- IEC-60439-1 / 61439-1,2
- DIN EN 60439-1 (VDE 0660 Teil 500)
- BS EN 60439-1
- IEC 60529
- CSA - C22.2 No. 31 & 14
- DIN 43671/12.75
- IEC 61641
- IEC 62208

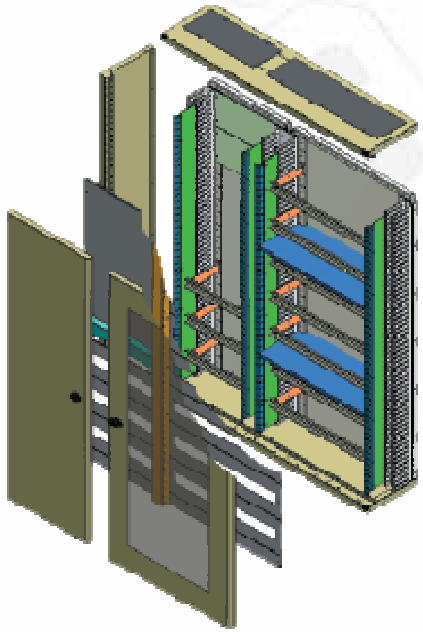
Tests and Approvals.

IPH, Berlin, Germany. (Member of LOVAG)	
Acae, Genoa, Italy. (Member of LOVAG)	
ASTA, Rugby, England. (Member of LOVAG)	
KEMA, Arnhem, Holland, (Member of LOVAG)	
Underwriters Laboratory, Melville, USA	(approval)
CSA, Rexdale, Canada.	(approval)
DEMKO, Herlev, Denmark	
Elektronikcentralen, Hørsholm, Denmark	
Bureau Veritas	(approval)
Det Norske Veritas	(approval)
Germanischer Lloyd	(approval)
Lloyds Register	(approval)
The Russian Maritime Register of Shipping	(approval)

Electrical Data.

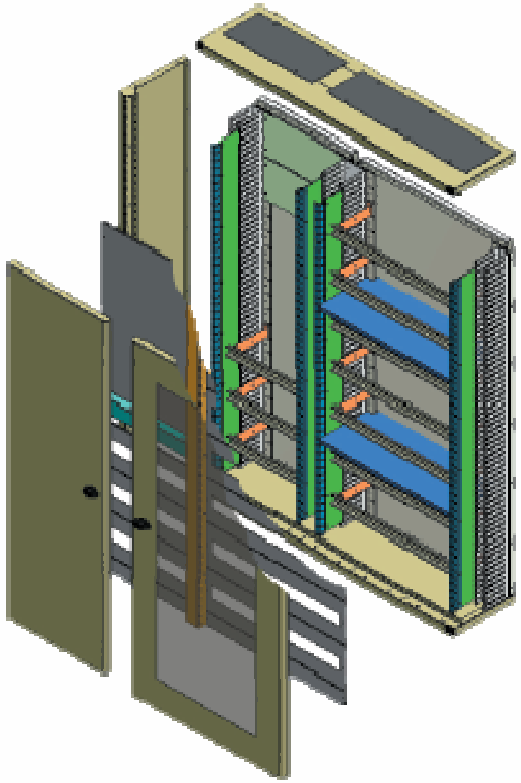
Rated voltage (Ue)	690 V
Rated insulation voltage (Ui)	1000 V
Rated impulse withstand voltage (Uimp)	8 up to 12 kV
Rated frequency (f)	40-60 Hz
Rated current (In)	250 A-8500 A
Rated short-time withstand current (Icw)	Up to 135 kA 1 sec
Rated peak-withstand current (Ipk)	Up to 300 kA

Alpha Enclosure System – Electrical Panels for Secondary LV Distribution



Alpha Enclosure System

THE ALPHA ENCLOSURE SYSTEM HAS BEEN DEVELOPED FOR LOW POWER APPLICATIONS SUCH AS DISTRIBUTION, SUB-DISTRIBUTION AND CONTROL PANELS.



The system is completely modular and offers unlimited design configurations. Single unit construction from 400mm x 600mm up to 2000mm x 2000mm is possible, so there is no need to join boxes together.

Alpha provides a rigid heavy duty design with a modern style. Multiple door configurations are standard.

Alpha Enclosure System

THE PROCESS…

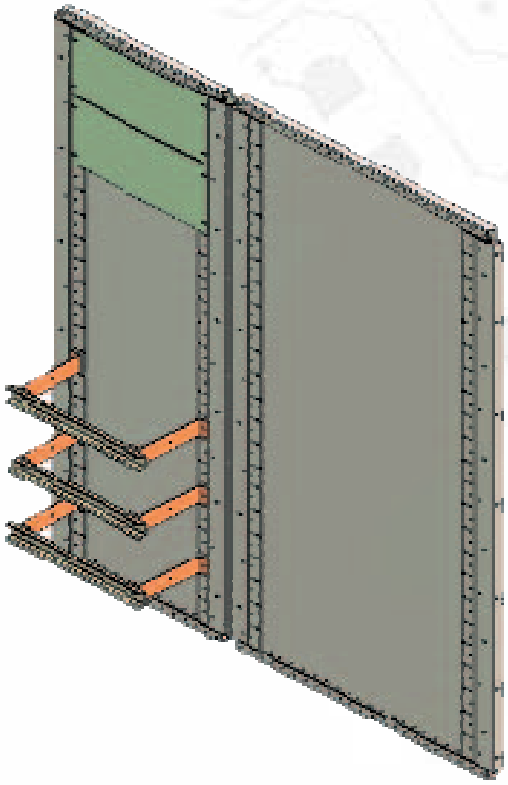
Back plates can be joined together in various combinations of

Widths from

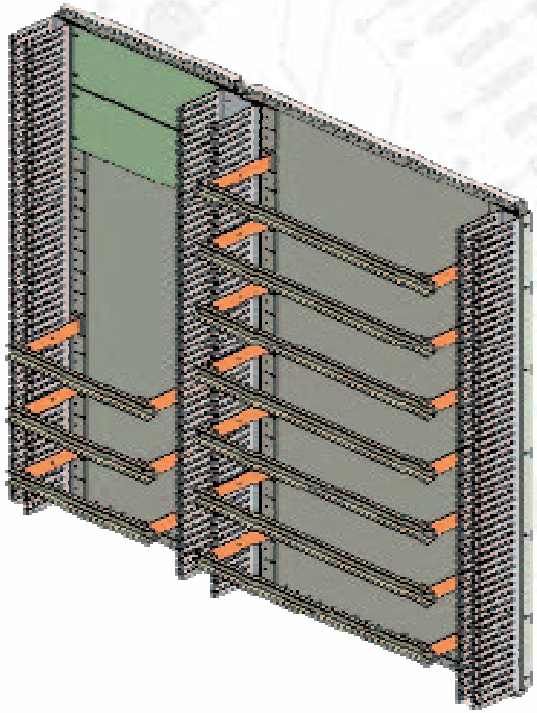
- 400 mm
- 600 mm

Heights from

- 600 mm
- 800 mm
- 1000 mm
- 1200 mm
- 1400 mm
- 1600 mm
- 1800 mm
- 2000 mm.

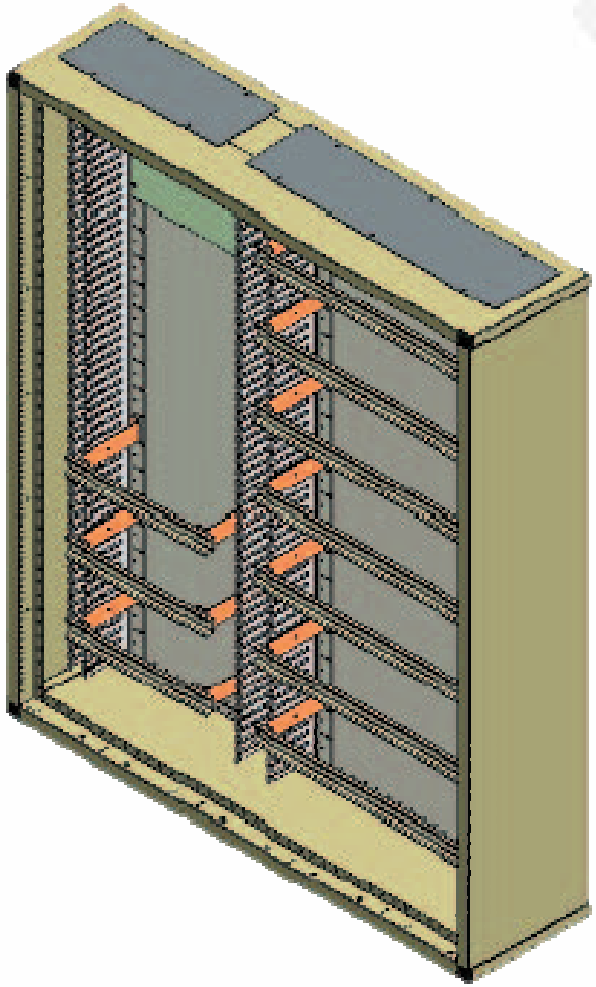


Alpha Enclosure System



Cable trunking is riveted between sections to facilitate wiring. Electrical equipment is then added and the panel can be fully wired at this stage allowing ease of access to all components and terminals.

Alpha Enclosure System

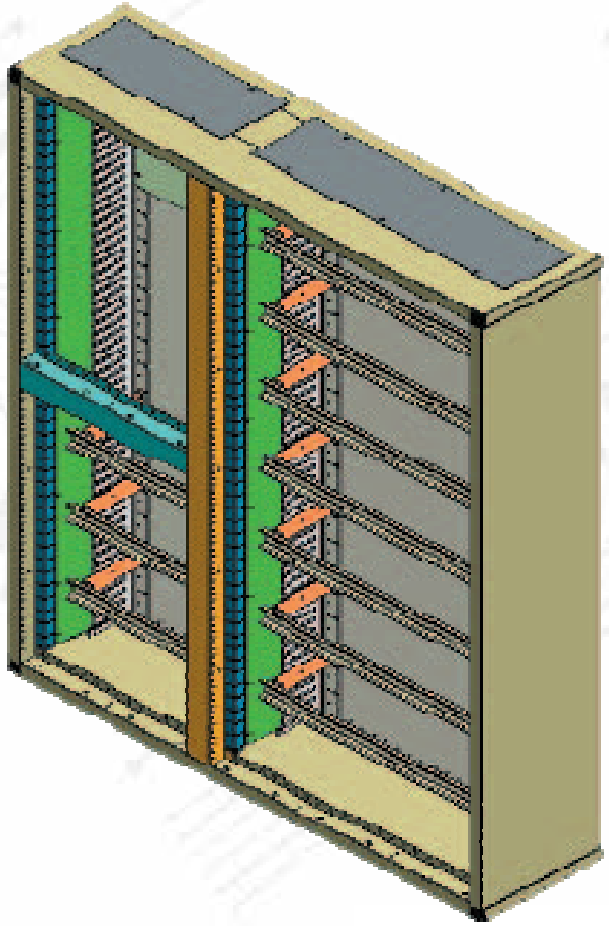


Top and bottom panels are fitted along with various gland plates. Side panels are then riveted on to form a rigid construction.

Alpha Enclosure System

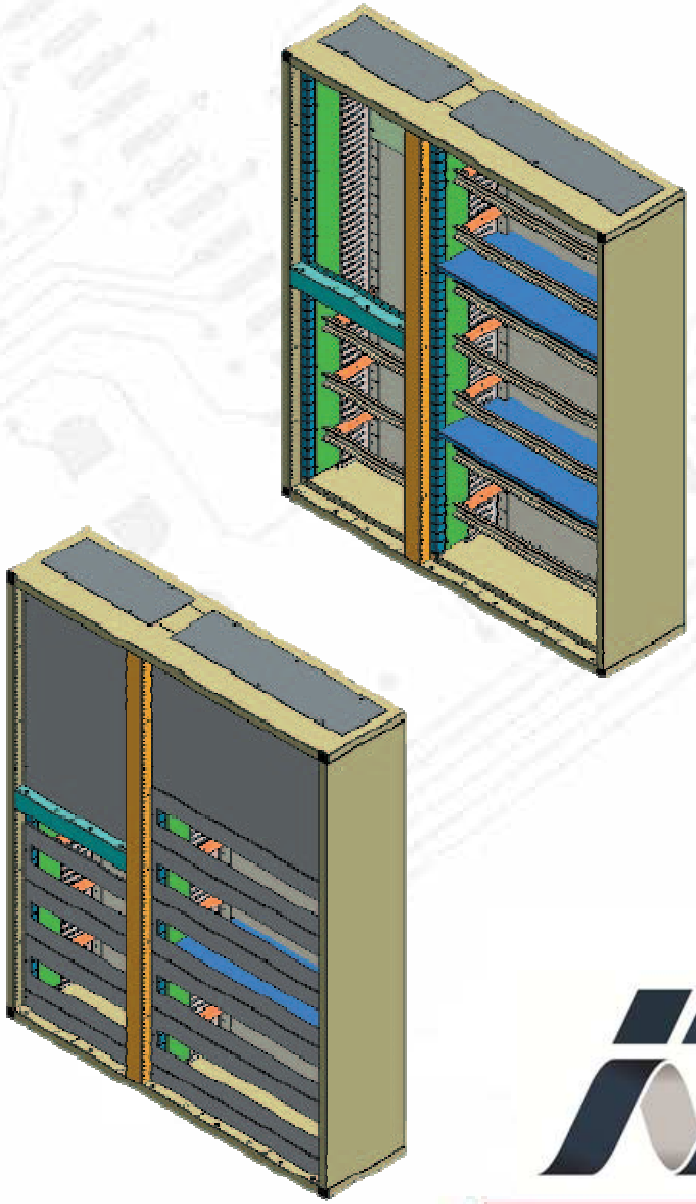
Enclosures can be sub-divided vertically and horizontally with rails to allow for Multiple door configurations.

Cable sections can be added to the side or top with individual doors if necessary.



Alpha Enclosure System

Vertical partitions can be fitted behind each rail. Horizontal dividers are used to create compartments between groups of circuits.



Blank covers are fitted in front of equipment.

These covers may also be hinged to allow for mechanical interlocking. DIN cover plates are fitted giving 17 or 28 modules per row for 400mm and 600mm wide sections respectively.

Alpha Enclosure System

Single full height doors or multiple combinations of various heights can be fitted as standard.

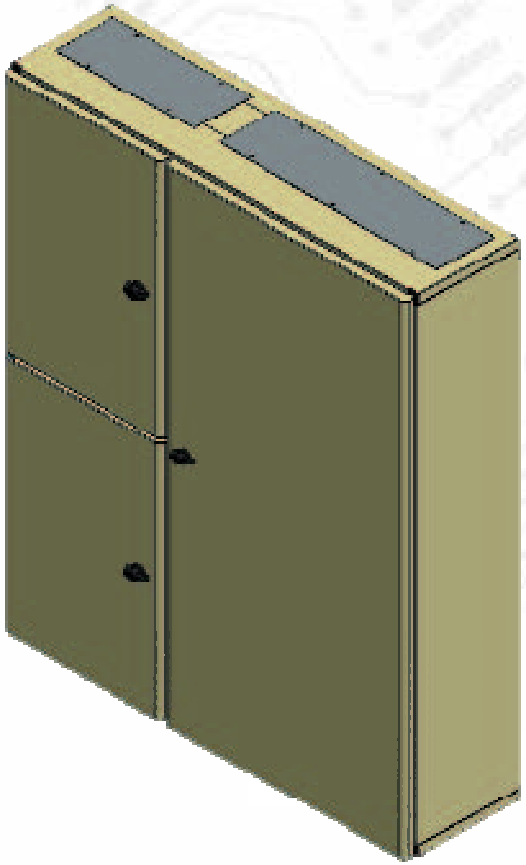
A wide range of combinations is available:

Widths from:

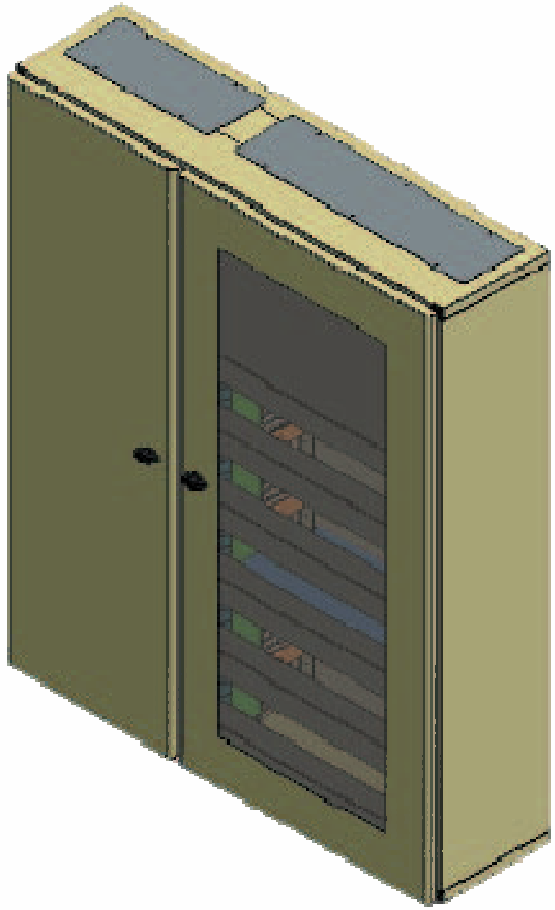
- 200 mm
- 400 mm
- 600 mm

Heights from:

- 600 mm
- 800 mm
- 1000 mm
- 1200 mm
- 1400 mm
- 1600 mm
- 1800 mm
- 2000mm



Alpha Enclosure System



Doors are made from 1.5mm steel to ensure rigidity and can be fitted with various type of single and 3-point locking devices.

Glazed doors are supplied as an option and a busbar system may also be fitted behind the equipment or in a separate busbar section.

Alpha Enclosure System

TECHNICAL DATA

Height (excluding plinth 100mm)		600mm up to 2000mm
Width (single enclosure)		400mm up to 2000mm
Usable width per section	200mm	115mm
	400mm	315mm
	600mm	515mm
Depth		250mm (280mm with door)
Material	Backplate	2.0mm Alzunic
	Door	1.5mm painted steel
	Side & Top	1.0mm painted steel
Paint		60 to 80 micron 100% Polyester
Colour		RAL 7032
IP Rating		IP30 to IP44

Box Station – Containerised Substation Cabins MV/LV

IT SERIES - CONTAINERISED SUBSTATION FOR OUTDOOR INSTALLATION

The IT series Medium Voltage heavy-duty substation for outdoor installation is a free standing, containerised unit, specifically designed for job site electrification.

- It is completely self contained and is easily movable. It can be lifted with the transformer fitted
- The substation is provided with MV switchboard, transformer and LV switchboard, designed to suit customer requirements

Box Station – Containerised Substation Cabins MV/LV

IT SERIES - CONSTRUCTION

The IT substation, which is painted both outside and inside is totally enclosed and is completely water proof for outdoor installation.

The structure is fully sealed with panels manufactured from 2.5 mm thick steel plate reinforced as appropriate.

The transformer is installed into a totally separate section accessible through independent outside end doors. A removable roof section above the transformer allows lifting by crane if required.

Access to the LV switchboard panels is through personnel doors in the side of the container. All substation doors are mounted with inox steel hinges. All bolts, screws and mechanical devices have anti-corrosion treatment.

All the internal equipment is provided with mechanical safety interlocks in order to avoid dangerous situations arising.

Box Station – Containerised Substation Cabins MV/LV

IT SERIES - PAINTING

The substation is painted and finished to the following specification:

- sandblasting of all surfaces
- one coat rust-preventative epoxy type paint, 40 micron thick
- two coats, air-dried epoxy enamel, 60 micron thick, colour standard RAL 7035 light grey (is possible different RAL colours in base request of Customers)
- the roof and underside are covered by an additional coat of bituminous paint

Box Station – Containerised Substation Cabins MV/LV

IT SERIES - SIZE AND POWER AT SERIES (1600-3500 kVA)

SIZE 1 (LxDxH) mm 4540 x 2400 x 2590

SIZE 2 (LxDxH) mm 6058 x 2400 x 2590

SIZE 3 (LxDxH) mm 7500 x 2400 x 2590

SIZE 4 (LxDxH) mm 9125 x 2400 x 2590

SIZE 5 (LxDxH) mm12190 x 2400 x 2590

Standards

EN61330

EN60529

EN60439-4

IEC 60909

IEC 60865

CE

Box Station – Containerised Substation Cabins MV/LV

IT SERIES - GENERAL TECHNICAL DATA

- Rated system voltage KV 12-24-36
- Insulation level at 50 Hz for 60 seconds KV 28-50-70
- Impulse insulation level KV 60-125-170
- Rated frequency Hz 50-60
- Rated secondary voltage V Value on request
- Highest capacity of transformer KVA 3500
- Auxiliary voltage Vac/Vdc 230 Vac/24-48 Vdc
- Enclosure (with cabinet closed) IP549 - IPH6
- Operating ambient temperature -10 / +40℃
- Humidity (non condensing) Rh 85%
- Transformer cast resin dry-type

Images of our Projects

Electrical Installation

Electrical Plants inside Tunnels

Electrical Plants of Industrial Automation

Technological Processes

Information System Technical / Managerial

AUTOMATIC PROCESSES

DESIGN & ENGINEERING

TEST

ASSEMBLY ELECTROMECHANICAL

ELECTRICAL INSTALLATION

Information System Technical / Managerial

ENTERPRISE NETWORK

Design :

- N°4 work stations Cad Elet

Engineering:

- N°4 work stations Cad/Cam
- Archive Drawings:
  Shared storage with Server with 15 Floating Licenses and stored about 70,000 documents electronically.

Administration:

- Management information system

Manufacturing:

- Management information system

Storage:

- Management information system

Technological Processes

ASSEMBLY ELECTROMECHANICAL

- FLEXIBLE ASSEMBLY LINES FOR ELECTRICAL PANELS AND CABINETS
- FINAL TEST STATIONS FOR MECHANICAL AND ELECTRICAL

MEDIUM & LOW VOLTAGE SWITCHBOARD WIRING

- ASSEMBLY AREA EQUIPPED WITH FLEXIBLE EQUIPMENT

TESTING

- FINAL TEST STATIONS FOR ELECTRICAL AND MECHANICAL TEST

EXAMPLES OF ELECTRICAL DESIGN

ELECTRICAL DESIGN AND AUTOMATION:

AUTOCAD 2014 - AUTODESK

CADELET 2013 FULL PROFESSIONAL – ELECTROGRAPHICS

SOLERGO software for renewables energy project ELECTROGRAPHICS

SPAC START 2013 – SDPROGET

PRIMUS 100 – ACCA SOFTWARE

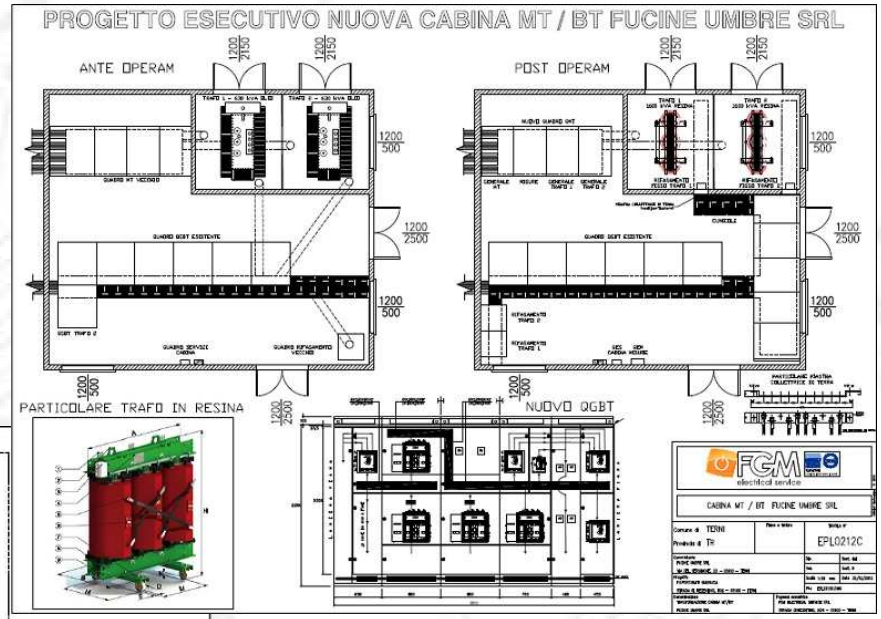
CERTUS 100 – ACCA SOFTWARE

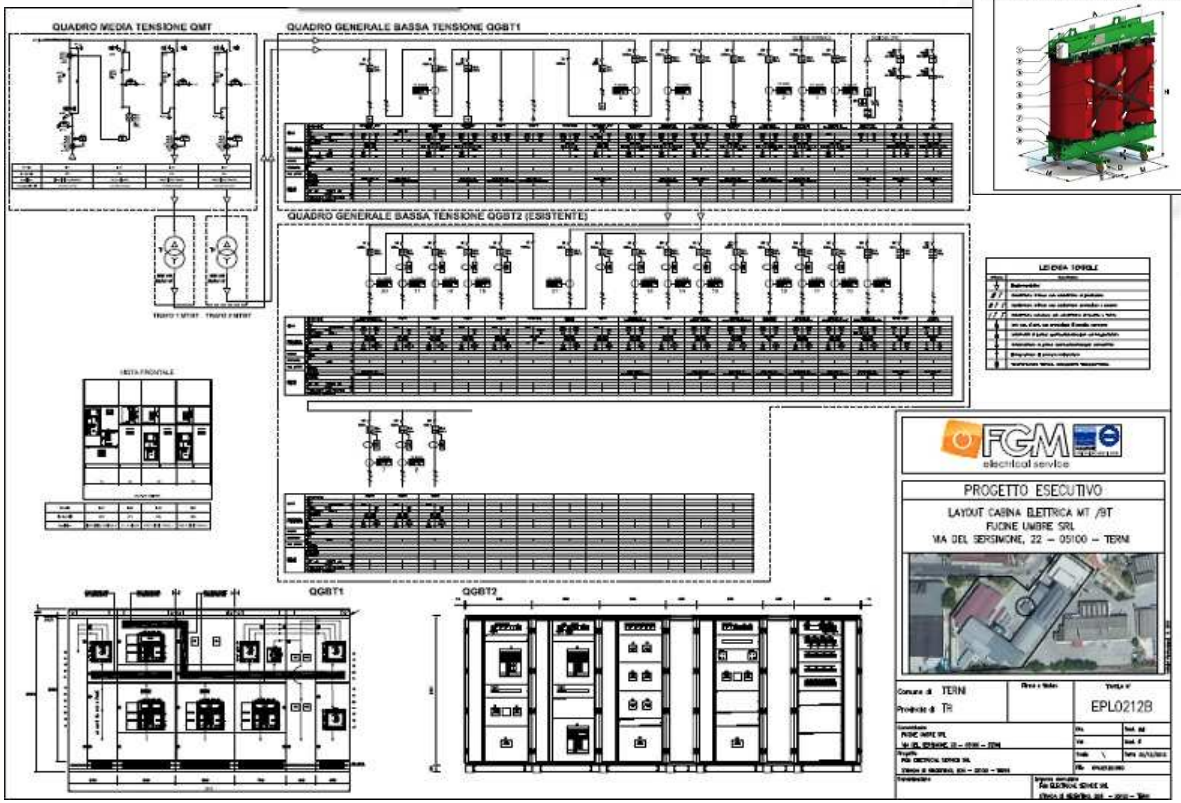
OFFICE 2013 - MICROSOFT

PROJECT 2013 - MICROSOFT

VISIO 2013 – MICROSOFT

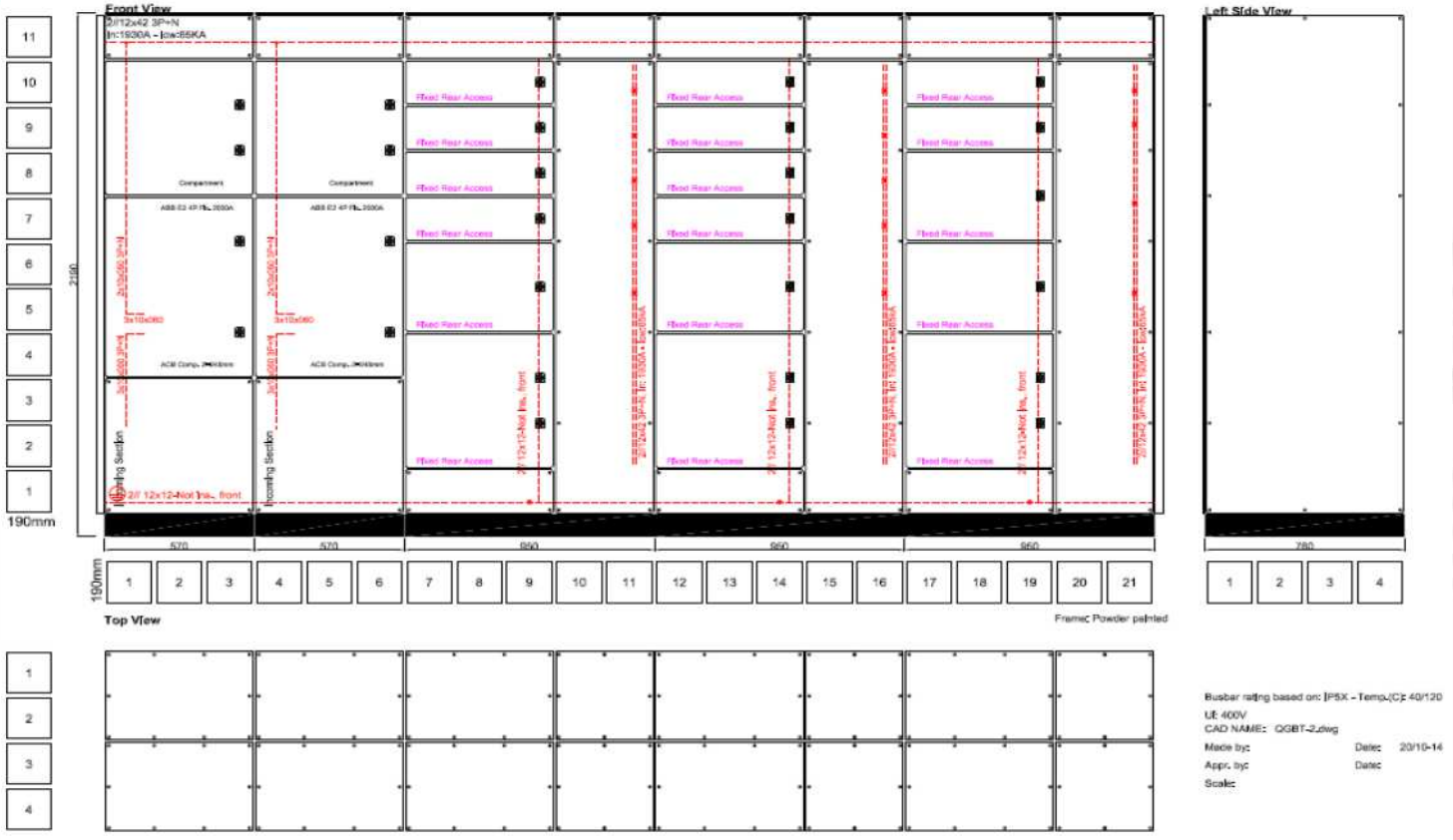
SOMACHINE – SCHNEIDER ELECTRIC





LAYOUT POWER STATION MV / LV

EXAMPLES OF ELECTRICAL PANELS LAYOUT DESIGN



Technological Processes

FUNCTIONAL TEST FINAL:

- Test Stands for Multi-Voltage tests in AC / DC up to 700 V
- Tools for the verification of releais protection
- Tools for electric strength test in BT / MT
- Equipment temperature test with currents up to 6kA.-6V.
- HT ZG47 Multifunction instrument for verification CEI 64-8 and network analysis in single-phase and three-phase systems
- METREL EUROTEST 61557 Advanced, multi-function digital instrument for measurements in low attention - safety tests in accord with IEC / EN 61557
- FLUKE DTX 1200 analyzer network cables and fiber.

CSQ IQNet CERTIFIED MANAGEMENT SYSTEM N - 9165 IT - 84156

ITALTECHNICS

IT offers an installation and assistance service in the field that allows customers to see us as a supplier "turnkey" can cover the entire logistics supply.

Is offered both the immediate post-sales assistance that periodic maintenance directly in the field or by return in our headquarter.

QUALITY SYSTEM

Total Quality, for **IT**, is the result of process methods adopted.

The company has received from CSQ certification of its Quality System in accordance with **UNI EN ISO 9001**. This certification is the most important recognition of the quality that **IT** introduces in its production process, products and services and it makes the company able to compete with the major and qualified operators in Italy and abroad.
On July 2012 the Management System for Quality of **IT** has been certified to comply with the new **UNI EN ISO 9001-2008.**

SAFETY SYSTEM

Total Safety, for **IT**, is the result of process methods adopted.

The company has received from CSQ certification of its Safety System in accordance with **BS OHSAS 18001-2007**.
This certification, the most important recognition of the quality that **IT** introduces in processes, products and services, makes the company able to compete with the major and qualified operators in Italy and abroad thanks the reduced numbers of accidents on the work.
In July 2015, the Management System for Safety of **IT** has been certified to comply with the **BS OHSAS 18001-2007**.

OUR CERTIFICATIONS

UNAE UMBRIA - AQUINEL

UNAE UMBRIA www.unae.it

ALBO DI QUALIFICAZIONE DELLE IMPRESE DI INSTALLAZIONE DI IMPIANTI ELETTRICI

L'UNAE rilascia il Certificato di Qualificazione alla ditta

"INSTALLATORE ELETTRICO QUALIFICATO"

ISCRIZIONE ALL'ALBO N° 179

L'iscrizione all'Albo comporta da parte della Ditta:

- L'obbligo di eseguire gli impianti a regola d'arte, utilizzando allo scopo materiali parimenti costruiti a regola d'arte, intendendosi costruiti a regola d'arte gli impianti che vengono realizzati secondo le norme tecniche del CEI (Comitato Elettrotecnico Italiano), nonché nel rispetto di quanto prescritto dalla legislazione tecnica vigente in materia;
- L'obbligo di osservare gli adempimenti previsti dalla legge n.46 del 5 marzo 1990 sulla sicurezza degli impianti e, in particolare, quelli connessi al rilascio, a fine lavori, della Dichiarazione di Conformità dell'impianto elettrico alla regola dell'arte;
- L'impegno a rispettare le indicazioni contenute nello Statuto - Regolamento associativo dell'Albo;
- La disponibilità all'assoggettamento alle verifiche periodiche programmate dall'Albo, al fine di verificare nel tempo il mantenimento delle condizioni che hanno determinato il riconoscimento della qualificazione.

Perugia li, 01 GENNAIO 2012

UNAE UMBRIA
Il Presidente

ABB
- QUADRI ELETTRICI - B.T.
- CABINE TRASFORMAZIONE - M.T.
- AUTOMAZIONE INDUSTRIALE
- SISTEMI ABB - BUS - EIB

ABB SACE LV
ABB Elettrocondutture
ABB LucaSystem
ABB Turati
ABB SACE

INSTALLATORE QUALIFICATO

CSQ N - 9165

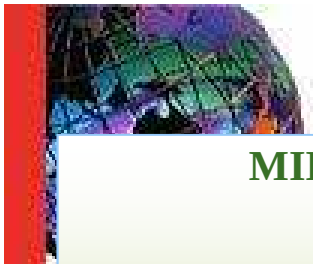
IQNet IT - 84156

SYSTEM CLUB Plus
Schneider Electric

EVpro
Professionista Qualificato
Sistemi di ricarica
Veicoli Elettrici
Schneider Electric

System Club Smart
Partner Qualificato
Quadri Elettrici BT Intelligenti
Schneider Electric

REFERENCES



MILITARY area

- Oto Melara SpA
- Marina Militare Italiana
- Polo Armi Leggere Terni

IRON AND STEEL area

- ThyssenKrupp AST SpA
- Marcegaglia Carbon Steel
- Gruppo Sassoli SpA
- Andritz/Sundwig
- Multiserv/Harsco
- Toscana Lamiere SpA

ENERGY area

- Enel SpA
- ENDESA SpA
- E.ON SpA
- Sorgenia SpA
- ASM SpA
- Solergy italia Srl
- Pacomm Ltd (Serbia)

PLANT DESIGN AND REALIZATION area

- Danieli SpA
- Tenova SpA
- STE energy SpA
- SMS MEER SpA
- SMS INNSE SpA
- FASPAR SpA
- Lario Energy Impianti
- Trenitalia SpA
- Orascom Construction (Egypt)
- Gruppo Sicura Spa
- Bertolotti Spa
- Esiet Spa
- KT – Kinetics Technology Spa

CHEMICAL area

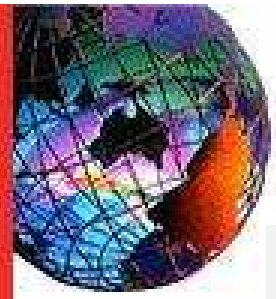
- Novamont SpA
- Tarkett SpA
- Meraklon SpA

OIL & GAS area

- Dafram SpA
- Ferriere Cattaneo SA
- Isab Srl – Lukoil Group

PRINTING INDUSTRY

- Cartiere Miliani Fabriano SpA
- Cartiera S. Martino SpA
- Chandraya Industries Ltd
-Tampaktissues Ltd
- Fine Print Ltd



ItalTechnics

«THE INTEGRATED QUALITY OF MADE IN ITALY»