COMPANY PROFILE

شركة امواج المروج الصناعية

AMWAJ AL MOUROJ INDUSTRIAL CO.

MANUFACTURER OF SWITCHGEARS, DISTRIBUTION PANELS AND CONTROL PANELS

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INTRODUCTION

Amwaj Al Mouroj Industrial Company was established in 2024 as a Division of **M/s. Three lions Group** of Companies one of leading panel board manufacturer in the Middle east. It was formed with a concrete aim to contribute towards providing quality service in electrical field, being an integral part of Saudi economy as well as society. It operates from a 1400 Square meters manufacturing premises of Al Awjam industrial area in Al Qatif.

Our range of scopes are manufacturing low voltage Switchgears such as, Main Distribution Boards, Sub Main Distribution Boards, Final Distribution Boards, Motor Control Centers, Pump Control Panel, Enclosed Circuit Breaker Panels, Busbar Chambers, Junction Boxes, APFC Panels (Automatic power factor control panels), ATS panels (with or without bypass system), Synchronizing Panel, Instrumentation Panels, PLC & Automation Panels, Control Desks, Package Sub Stations and a wide variety of Distribution Boards, all of which meets SASO standards.

Based in Al Awjam Industrial Area, Saudi Arabia equipped with latest state of the art facilities, Amwaj Al Mouroj industrial Company has established a reputation for quality and reliability, Supplied solutions to some major projects in the regional and international contractors with excellent support of our international technology partners.

Our engineers have practical hands – on experience and understand what the client and contractor required from switch board and switch gear solutions. The focus of our design and manufacturing team is to supply switch boards & special enclosures of high quality that meets our client's expectations, on budget and on time. As a middle East based company, we acknowledge the international standards, ensuring that Middle East specifications and climatic conditions are complied with through sound engineering-based type tested solutions. Due to Amwaj Al Mouroj's extensive experience in the region we believe our products are proven solutions that work.

RANGE OF PRODUCTS

We are a modern enterprise, mainly are engaged in production, sales and services for low voltage power distribution panel boards. Our company has world latest production & testing equipments and machines, can professional manufacture: -

MAIN DISTRIBUTION BOARDS

Main Distribution or Main Switch Boards are used for the safe distribution of Electricity through out commercial and industrial facilities. Main function of MDB is that, to split an incoming electric power feed into multiple secondary or subsidiary circuits. Most of the time these secondary circuits will be protected with a fuse or breaker.

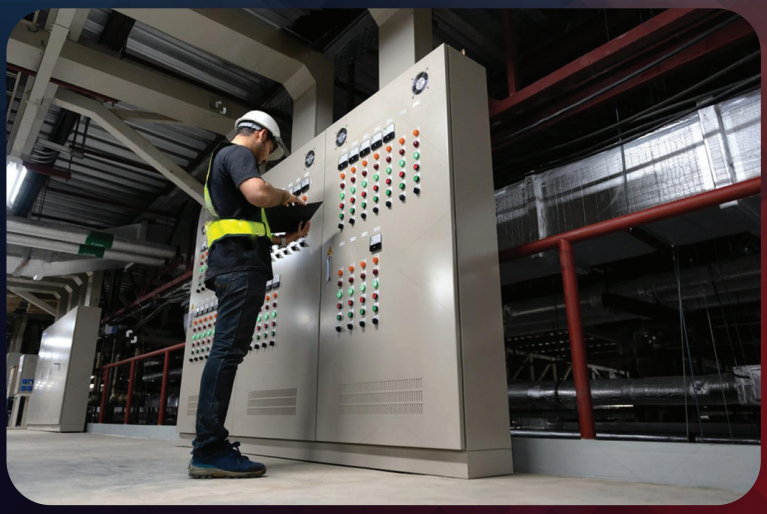
For the group mounted or individually mounted main and feeder devices, internal separation varied form Form1, Form 2A, Form 2B, Form 3A, Form 3B, Form 4A and Form 4B.

Technical Specifications

- Comply with SASO specifications, IEC 61439-1 & 61439-2
- Rated insulation voltage up to 1000V
- Main busbar rating is up to 6400A, and breaking capacity up to 100kA for 1 Sec / 65kA for 3 Sec.
- Main incomer rating is up to 6400A, Fixed / draw-out type
- ACB's & MCCB's are used as main incomer according to client requirements.
- Designed for Ambient temperature up to 55°C
- Available for indoor and Outdoor applications.
- Ingress Protection ratings up to IP65.
- Standard Color: RAL 7035 - (other colors on request)

SUB MAIN DISTRIBUTION BOARDS

Our sub main distribution boards offer the right low voltage (LV) solution for largebuildings by dividing the electrical power feed into subsidiary circuits. They are manufactured from high-quality materials and contain the latest safety features. Sub-distribution boards are generally installed between the main distributionboards and the final distribution boards.



Technical Specifications

- Comply with SASO specifications, IEC 61439-1 & 61439-2
- Rated insulation voltage up to 800V
- Main busbar rating is up to 1600A, and breaking capacity up to 50kA for 1Sec
- Available for indoor and Outdoor applications.
- Ingress Protection ratings up to IP65.
- Wall mounted and free-standing designs.
- Standard Color: RAL 7035 - (other colors on request)

FINAL DISTRIBUTION BOARDS

A final distribution board (FDB) is an assembly of protective devices, including Isolators, ELCB/RCCBs, MCBs & RCBO/RCDs arranged for the distribution of electrical energy to the final circuits.

Technical Specifications

- Comply with SASO specifications, IEC 61439-1 & 61439-2
- Up to 250A, 415V AC, 50Hz, 3 Phase
- 4 way to 14 ways - Split and Non-Spit types are available (Suitable for both lighting and Power circuits).
- Mainly MCB/MCCB used as incomer.
- With Copper Tin Plated Busbar.
- Standard Color: RAL 7035 - (other colors on request)

MOTOR CONTROL CENTERS

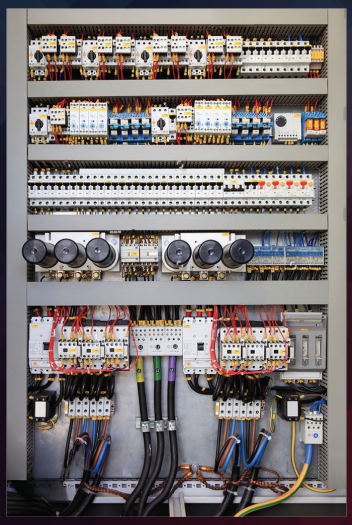
In many commercial and industrial applications, quite a few electric motors are required, and it is often desirable to control some or all of the motors from a central location. The apparatus designed for this function is the motor control center (MCC). Motor control panels can be used for a variety of applications, they are most commonly found in industrial and commercial settings.

Technical Specifications

- Comply with SASO specifications, IEC 61439-1 & 61439-2
- Rated insulation voltage up to 600V
- Main busbars are rated up to 6400A
- Busbar short circuit withstand capacity up to 100kA for 1 sec & 65kA for 3 sec Designed for Ambient temperature up to 50°C
- Available for indoor and Outdoor applications.
- Ingress Protection ratings up to IP55.
- Standard Color: RAL 7035 - (other colors on request)

PUMP CONTROL PANEL

Pump control panels are designed to operate pumps for various designations and can be customized as required. It monitors the flow and/or level variables and control a pump accordingly to maintain the desired levels or more advanced controls for pump speed, output pressure, etc. Our pump control panels are factory wired to provide flexible control and protect against short circuits and overloads. We provide ample space for field modifications and installation of accessories.



Technical Specifications

- Comply with SASO specifications, IEC 61439-1 & 61439-2
- It can install both indoor and outdoor as per client requirements.
- Rated insulation voltage 600V, 60Hz, 3 Phase
- It can be operated either automatic or manual type.
- Ingress Protection ratings up to IP65.
- Standard Color: RAL 7035 - (other colors on request)

ECB-ENCLOSED CIRCUIT BREAKER

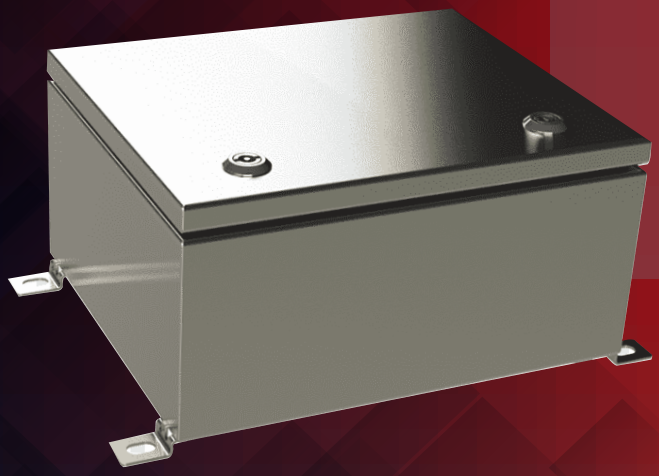
The ECB (Enclosed Circuit Breaker) is used for the protection of appliance or equipment. In ECB, circuit breaker will monitor the circuit. This is often called “breaker trip” or “tripping breaker,” and it commonly happens when appliance or equipment act up or too many high-power tools are plugged into a single circuit.

Technical Specifications

- Comply with SASO specifications, IEC 61439-1 & 61439-2
- Designed for Ambient temperature up to 55°C
- Available for indoor and Outdoor applications.
- Ingress Protection ratings up to IP65.
- Maximum rated current up to 1600A
- Standard Color: RAL 7035 - (other colors on request)

BUSBAR CHAMBER & JUNCTION BOX

Busbar chamber & Junction boxes are used as a junction between different locations. Main power comes from a site and accommodate in the busbar chamber or junction box, it distributes to various locations. The number of holes in busbar may vary as per the client requirements.



Technical Specifications

- Comply with SASO specifications, IEC 61439-1 & 61439-2
- Designed for Ambient temperature up to 55°C
- Available for indoor and Outdoor applications.
- Ingress Protection ratings up to IP65.
- Maximum rated current up to 2500A
- Standard Color: RAL 7035 - (other colors on request)

AUTOMATC POWER FACTOR CONTROL PANELS

APFC are mainly used for the improvement of power factor. Power factor is the ratio of active power to apparent power and it is a major component in measuring electrical consumption. APFC is an automatic power factor control panel which is used to improve Power factor, when ever required, by switching On and OFF the required Capacitor back units automatically.

Technical Specifications

- Comply with SASO specifications, IEC 61439-1 & 61439-2
- Designed for Ambient temperature up to 55°C
- Rated insulation voltage 600V.
- Can be interfaced with Building Management System (BMS) for monitoring and controlling.
- Available for indoor applications.
- Fast Real Time Transient-Free switching of capacitor banks.
- Highly intelligent microprocessor based 3 phase P.F. Controller with duel P.F. setting and master slave modes.
- LCD Controller has inbuilt with Load Manager with front optical port.
- Saves Energy with P.F Control and Harmonic Filtration.
- Extremely long-life expectancy.
- Available with Tuned, 7%, 5.6%, 4% or any other Tuning frequency as per customer request
- System is available with Contactor switching for non-dynamic and normal loads – Ratings and Dimensions are same as Active Comp System
- Standard Color: RAL 7035 - (other colors on request)

AUTOMATIC TRANSFER SWITCH PANEL

An automatic transfer switch (ATS) is a device that automatically transfers a power supply from its primary source to a backup source when it senses a failure or outage in the primary source. The same way it will be automatically changed to the primary source as soon as the primary power resumes.

Technical Specifications

- Comply with SASO specifications, IEC 61439-1 & 61439-2
- Designed for Ambient temperature up to 55°C
- Available for indoor & Outdoor applications.
- Rated insulation voltage 600V.
- Can be interfaced with Building Management System (BMS) for monitoring and controlling.
- Current rating for ATS is up to 2000A.
- Standard Color: RAL 7035 - (other colors on request)

SYNCHRONIZING PANELS

DG Synchronization Panel comprises of special relay that automatically performs synchronization of two or more sources of power. Beside that we also provide load sharing relays so that each DG shares equal load and load management relays to control starting & shutting off Generators depending upon load requirement.

Technical Specifications

- Comply with SASO specifications, IEC 61439-1 & 61439-2.
- Rated insulation voltage up to 1000V.
- Main busbars are rated up to 6400A.
- Busbar short-circuit withstand capacity up to 100kA for 1 Sec / 65KA for 3Sec.
- Neutral busbars rated up to 100% of the main busbar.
- Earth busbars rated up to 50-100% of the Neutral busbar.
- Fully compartmentalized design up to Form-4b separation.
- Designed for Ambient temperature up to 55 °C.
- Positive interlocks to avoid accidental withdrawal of the modules during operation.
- Available for indoor & outdoor applications, up to IP65.
- Standard Color, RAL 7035 (other colors on request).

INSTRUMENTATION PANEL

Instrumentation Control Panels are designed to monitor and control levels such as temperature, flow, current, and pressure from the field instruments that are connected to it. These panels have fully custom-made design where various control or protection components are used for monitoring, controlling or protecting various kind of machineries. These panels are used in a wide variety of industries including: petrochemical, refineries, pipelines, pharmaceutical, Wasterwater, and food processing.

Amwaj has built Instrumentation Panels to meet unique customer specifications such as beacons, purge systems, and rain hoods.

Technical Specifications

- Comply with SASO specifications, IEC 61439-1 & 61439-2.
- Designed for Ambient temperature up to 55 °C.
- Available for indoor applications, up to IP65.
- Standard Color, RAL 7035 (other colors on request).

PLC & AUTOMATION PANELS

Programmable Logic Controller (PLC) Panels are a common component of control upgrades and automation projects in a wide variety of industries.

Amwaj has extensive experience with PLC Panels with a wide variety of designs and components. The team at AAMI has developed and implemented time-tested procedures to minimize the chance of miswiring during the production stage. These Procedures, along with detailed final QC, help to ensure all PLC panels are built correctly and meet customers' expectations.

Technical Specifications

- Comply with SASO specifications, IEC 61439-1 & 61439-2.
- Designed for Ambient temperature up to 55 °C.
- Available for indoor applications, up to IP55.
- Standard Color, RAL 7035 (other colors on request).

CONTROL DESK

The control desks are designed to make monitoring and control of devices easier and more convenient in facilities such as industrial plants and laboratories.

Technical Specifications

- Comply with SASO specifications, IEC 61439-1 & 61439-2.
- Designed for Ambient temperature up to 55 °C.
- Available for indoor applications, up to IP55.
- Rated insulation voltage 600V
- It can be interface with Building Management System (BMS) for monitoring and controlling.
- Standard Color, RAL 7035 (other colors on request).

PACKAGE SUB-STATIONS

Package substation is a combination of ring main unit, transformer and low voltage panel. We offer a wide range of package substations that are designed to efficiently distribute electrical power from the power station to the consumer. They are suitable for a wide range of commercial and industrial applications.

Technical Specifications

- Comply with SASO specifications, IEC 61439-1 & 61439-2.
- Designed for Ambient temperature up to 55 °C.
- Rated voltage (KV): 13.8, 17.5, 24, 36
- Rated frequency (HZ): 60
- Ring Main Unit: Load break switch (A) with 400 or 630 A
- Transformer feeder type: Circuit breaker, fuse switch
- Transformer: Hermetically sealed type, up to 3150 KV
- Location of operation: Outdoor
- Ventilation type: Natural
- Degree of protection: IP55 for (MV and LV), IP23 for Transformer.
- Standard Color, RAL 7035 (other colors on request).

MANUFACTURING PROCESS

Electrical panel board plays a crucial role in the world of Electrical power system. They ensure that, All electrical system, devices and machines are efficiently controlled, monitored and protected. Without them, the manufacturing process can be chaotic and dangerous.

For these reasons, electrical panel design, building and assembly can be a complex process that requires attention to detail, planning and expertise. We will take you through the essential steps needed to build and assemble an electrical panel to control your manufacturing process ensure that it is safe and run smoothly.

PLANNING AND DESIGNING

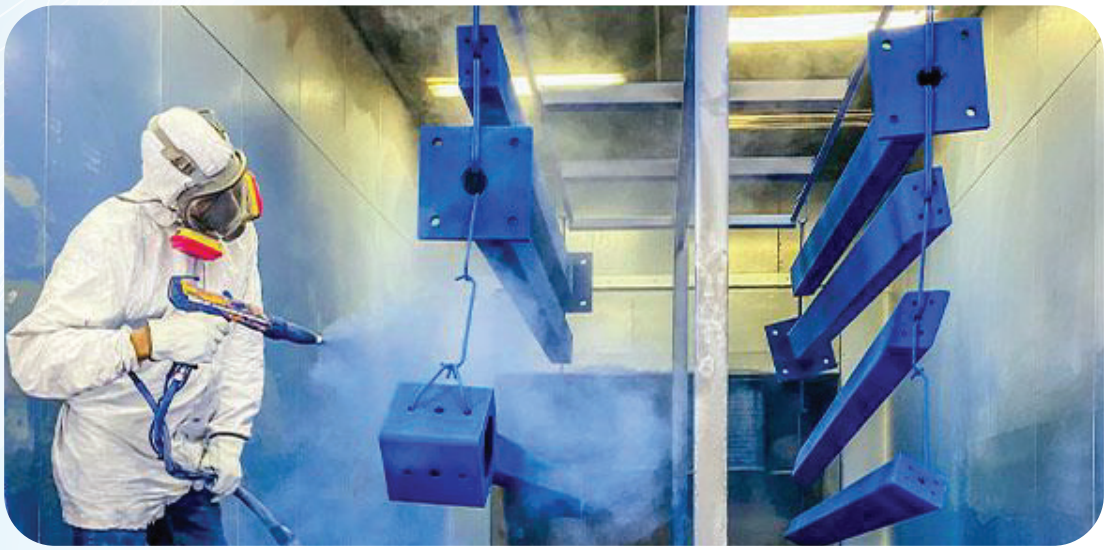
Before starting any electrical control panel project, we need to have a clear idea understanding of the manufacturing process requirements and safety standards. This knowledge enables us to design a set of electrical schematics and panel layouts that include all the necessary details such as power requirements, equipment specifications, signal types, and safety features. The design should be customized to our manufacturing process needs. The design should be reviewed by our technical team to ensure functionality, rating and safety requirements will be met. During the design review, it's crucial to ensure that the control panel complies with all applicable Electrical Safety Standards, IEC 61439-1 and IEC 61439-2

SHEET METAL FABRICATION

The sheet metal fabrication is the process of forming metals sheets to the desired shape using different manufacturing methods. The completion of a product usually comprises of many steps from cutting of the sheets, CNC punching, bending of the sheet and finally welding to the finished fabricated panel.

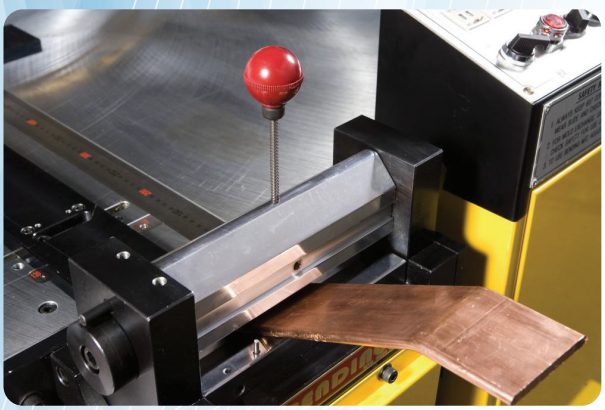
TEXTURED POWDER COATING

When we produce distribution boards, metal enclosure and electrical cabinets in order to anti resting and corrosion, we will clean the steel surface and level the material by using putty and coating by textured polyester powder with the oven by heating up to 200°C. usually our product maintains a powder coated thickness of 80-120µ.



BUSBAR FABRICATION

Busbar is the major part in an electrical panel system and plays a vital role for the efficient distribution and management of electrical power. The busbar is a conductor or group of conductors are responsible for distributing electrical power from a transformer or generator to various loads. Copper and Aluminum are the most common materials used for the busbar. Copper has high conductivity and melting point, which makes it an ideal choice for the busbar as well as suitable for high voltage applications. The process involves in the busbar fabrication are cutting, punching and bending.

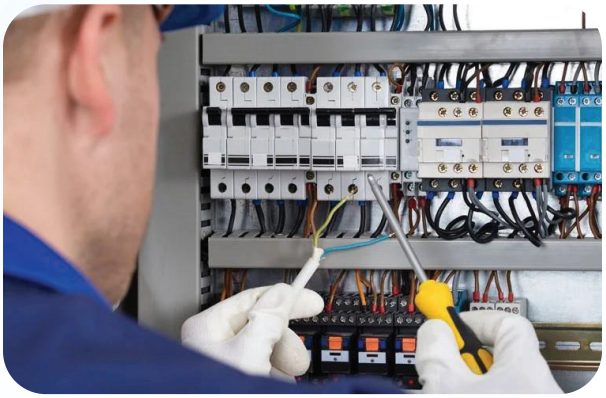


ASSEMBLY & WIRING

AAMI Technology panel assembly and wiring build electrical panel boards to meet our client specification technically and also follows IEC 61439-1&2.

Being a panel builder in the Kingdom, panel assembly and wiring service provider, we are committed to customer service, quality assurance and on time delivery.

AAMI always keeps efficient space for the component's arrangements and effective cable terminations.



QUALITY ASSURANCE POLICY

Quality assurance on electrical panels involves thorough inspection and testing to ensure compliance with specifications, safety standards, and functionality (operation sequence). This includes checking components, wiring, and connections for proper installation, as well as conducting performance tests to verify the panel's reliability and efficiency. Regular maintenance and adherence to industry regulations are essential for optimal performance and safety.

THANK YOU

Contact Us

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