



M.S. ENGINEERS

Comprehensive Product Catalogue

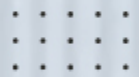
Authorised Vendor of Indian Oil & Hindustan Petroleum since 8 years MS Engineers specializes in the manufacturing of a wide range of electrical industrial products. With a proven track record of quality and reliability, we serve various industrial sectors with power control and distribution solutions



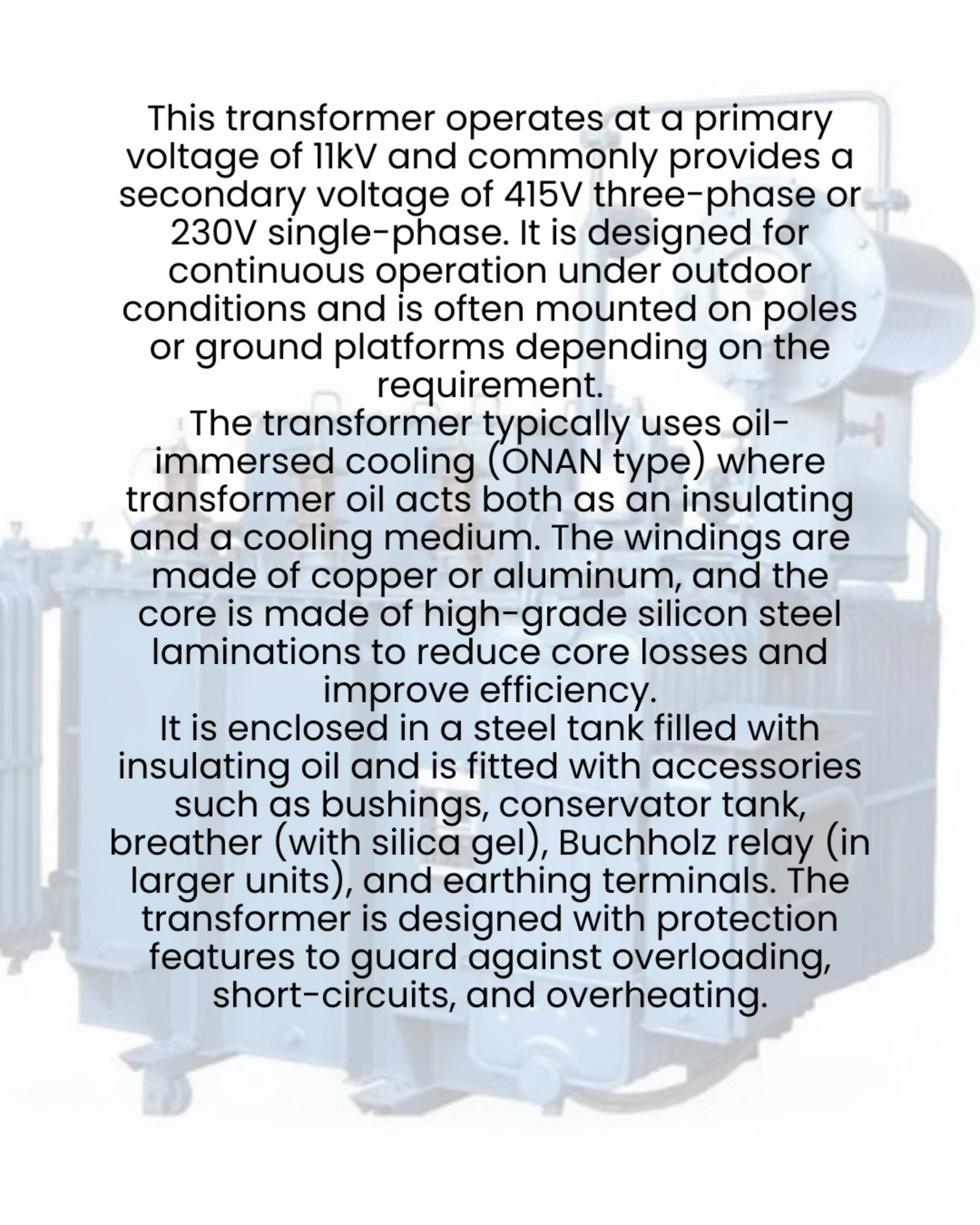
■ Factory Add:- Plot No. 04, Khasra No. 98, Ghaila, Lucknow - 226020



11kv distribution transformer



An 11kV distribution transformer is an essential electrical device used in the power distribution network to step down the high transmission voltage (typically 11,000 volts) to a lower voltage level (such as 415V/230V), which is suitable for use in residential, commercial, and light industrial applications. It serves as a final voltage transformation point in the power supply chain, ensuring safe and reliable delivery of electricity to end users.



This transformer operates at a primary voltage of 11kV and commonly provides a secondary voltage of 415V three-phase or 230V single-phase. It is designed for continuous operation under outdoor conditions and is often mounted on poles or ground platforms depending on the requirement.

The transformer typically uses oil-immersed cooling (ONAN type) where transformer oil acts both as an insulating and a cooling medium. The windings are made of copper or aluminum, and the core is made of high-grade silicon steel laminations to reduce core losses and improve efficiency.

It is enclosed in a steel tank filled with insulating oil and is fitted with accessories such as bushings, conservator tank, breather (with silica gel), Buchholz relay (in larger units), and earthing terminals. The transformer is designed with protection features to guard against overloading, short-circuits, and overheating.

An LT Panel (Low Tension Panel) is an electrical distribution board that receives power from a transformer or generator at a low voltage (typically 415V, 3-phase) and distributes it to various electrical devices and sub-panels. It plays a crucial role in managing, controlling, and protecting electrical power systems in residential, commercial, and industrial setups.

LT panels are installed after the distribution transformer (like 11kV/415V transformers) and are responsible for distributing power safely to end-use devices such as lighting, motors, HVAC systems, and machinery.

These panels are constructed from sheet metal enclosures and consist of busbars, circuit breakers (MCBs, MCCBs), switches, relays, meters, and protective devices.

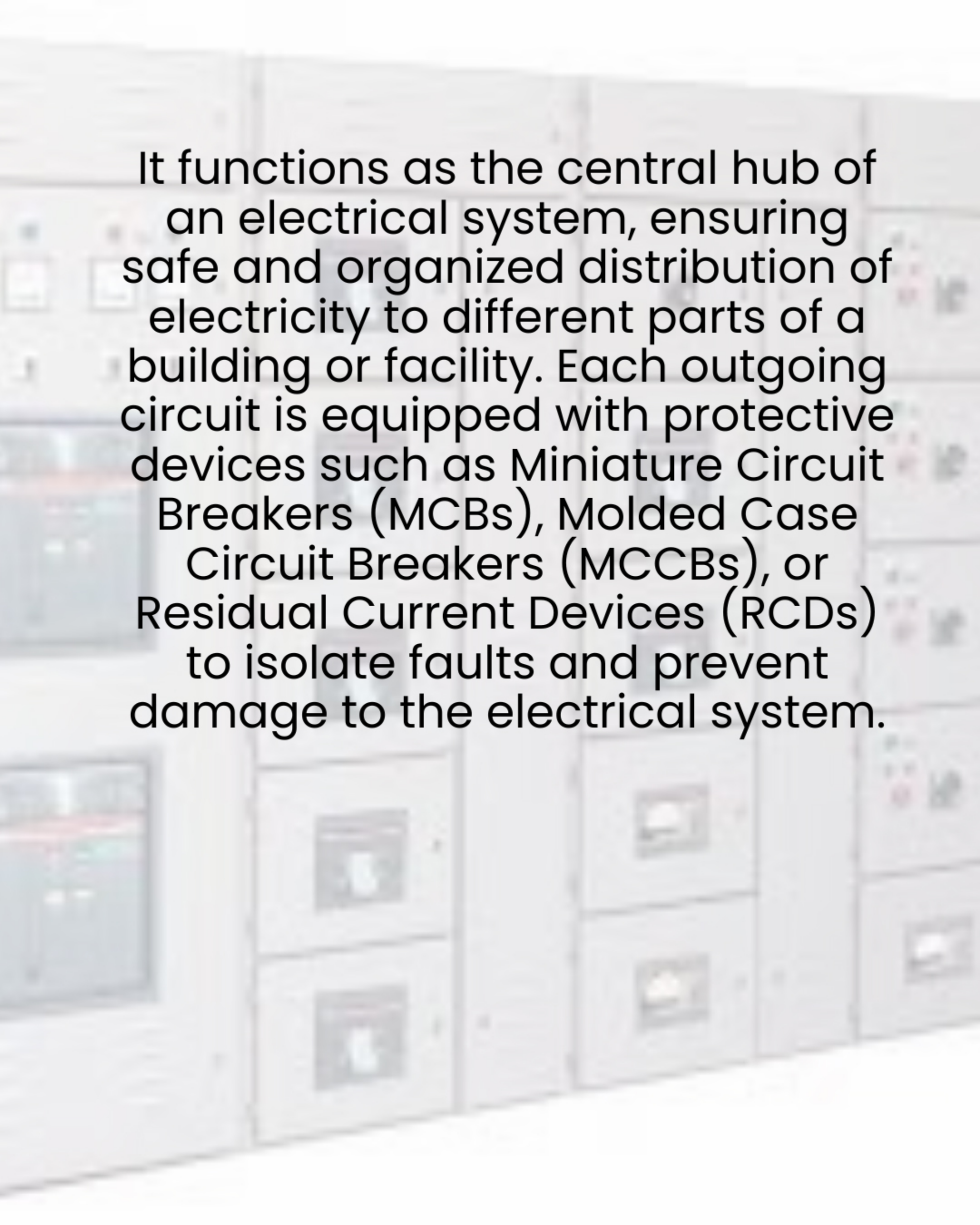
**LT
Panel**





Distribution Panel

A Distribution Panel, also known as a Distribution Board (DB) or Electrical Panel, is a vital component in the electrical power system that receives electrical power from the main supply source (like a transformer, generator, or LT panel) and distributes it to various branch circuits or loads in a controlled and protected manner.

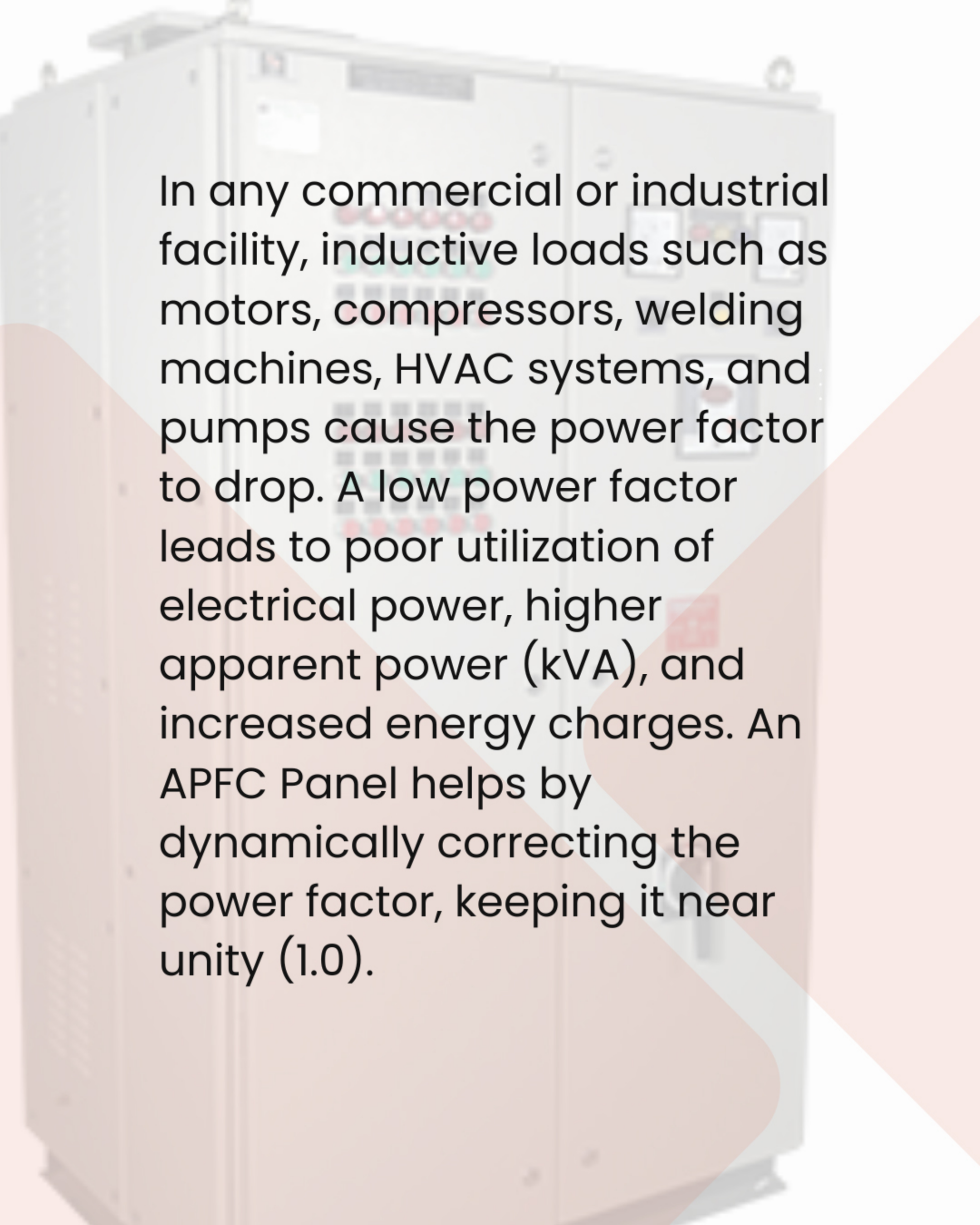


It functions as the central hub of an electrical system, ensuring safe and organized distribution of electricity to different parts of a building or facility. Each outgoing circuit is equipped with protective devices such as Miniature Circuit Breakers (MCBs), Molded Case Circuit Breakers (MCCBs), or Residual Current Devices (RCDs) to isolate faults and prevent damage to the electrical system.

APFC Panel

An APFC Panel, or Automatic Power Factor Control Panel, is an advanced electrical panel designed to improve the power factor of electrical systems by automatically switching capacitor banks ON or OFF in response to changes in load. It plays a vital role in ensuring energy efficiency, reducing electricity bills, and avoiding penalties from electricity boards for low power factor.



The background of the slide features a faded image of an APFC (Automatic Power Factor Correction) panel. The panel is a large, grey metal cabinet with multiple doors and internal components visible through some of the openings. Overlaid on this image are several large, semi-transparent, light-orange geometric shapes, including a large triangle on the right side and a curved shape at the bottom left, which serve as a decorative design element.

In any commercial or industrial facility, inductive loads such as motors, compressors, welding machines, HVAC systems, and pumps cause the power factor to drop. A low power factor leads to poor utilization of electrical power, higher apparent power (kVA), and increased energy charges. An APFC Panel helps by dynamically correcting the power factor, keeping it near unity (1.0).



MCC Panel

An MCC Panel, or Motor Control Center Panel, is an essential electrical panel used for controlling, managing, and protecting electric motors in industrial and commercial applications. It houses multiple motor starters in one centralized location, allowing for easy control, operation, and maintenance of motor systems. MCC Panels are critical for ensuring safe and efficient operation of motors in factories, plants, and machinery-based environments.



11kV VCB Panel

An 11kV VCB Panel is a medium-voltage switchgear panel designed to control, protect, and isolate electrical equipment in power systems operating at 11kV. It uses vacuum circuit breakers (VCBs) as the main switching and protection devices. These panels are commonly used in industrial substations, commercial buildings, utility substations, and power distribution systems where medium-voltage power needs to be managed safely and efficiently.

The VCB technology utilizes a vacuum interrupter as the medium to extinguish electrical arcs during circuit interruption. Unlike air or oil circuit breakers, vacuum breakers offer superior arc quenching properties, faster operation, and require minimal maintenance.



Distribution Board

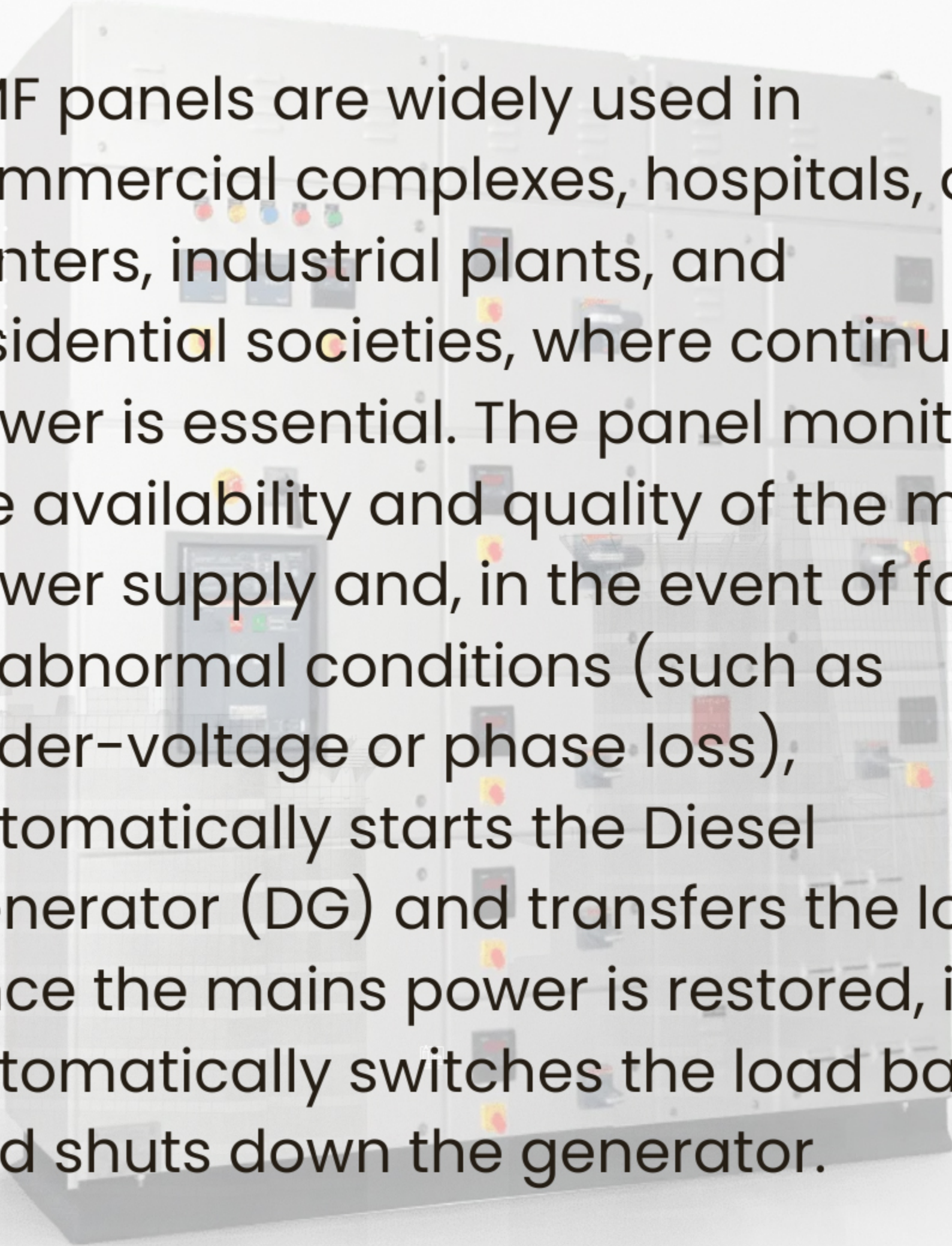
A Distribution Board (DB), also known as a distribution panel, breaker panel, or consumer unit, is a vital component of an electrical power system that facilitates the safe and organized distribution of electrical energy from a single incoming power source to multiple outgoing circuits.

It serves as the central point in an electrical system, where electricity is divided and delivered to various loads such as lighting, sockets, air conditioning units, and appliances. A distribution board not only divides power but also includes protective devices like Miniature Circuit Breakers (MCBs), Residual Current Devices (RCDs), or Molded Case Circuit Breakers (MCCBs), which protect circuits from overloads, short circuits, and earth leakage faults. DBs ensure safety, control, and manageability of electrical supply within residential, commercial, and industrial premises.



AMF Panel

An AMF Panel, or Automatic Mains Failure Panel, is an intelligent electrical control panel used to automatically switch between the mains (utility) power supply and a backup generator (DG set) during a power outage. It is a critical component in uninterrupted power systems, ensuring that the electrical load receives continuous power without requiring manual intervention.

A large, multi-bay electrical control panel, likely an Automatic Mains Failure (AMF) panel, is shown in the background. It features numerous switches, buttons, and indicator lights, typical of industrial or commercial power management equipment. The panel is light-colored with dark components.

AMF panels are widely used in commercial complexes, hospitals, data centers, industrial plants, and residential societies, where continuous power is essential. The panel monitors the availability and quality of the mains power supply and, in the event of failure or abnormal conditions (such as under-voltage or phase loss), automatically starts the Diesel Generator (DG) and transfers the load. Once the mains power is restored, it automatically switches the load back and shuts down the generator.

A PLC Panel is an industrial-grade control panel that houses a Programmable Logic Controller (PLC) and other necessary components to automate, monitor, and control machinery and processes in real-time. PLC panels serve as the brain of modern industrial automation systems, ensuring reliable and efficient operation across a wide range of sectors including manufacturing, power, water treatment, oil & gas, pharmaceuticals, and more. PLC Panels are designed to replace traditional relay-based control systems by offering flexible, programmable, and scalable automation. They receive inputs from sensors and field devices, process logic according to the programmed instructions, and generate outputs to control actuators, motors, solenoids, and other machinery.



PLC Panel



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