



LOOP ENGINEERING

ABOUT US

Loop Engineering Ltd. an American-based leading engineering company in Bangladesh, is moving forward with a clear vision to be the best design, supply, & installation provider in the engineering sector.

Services We Offer

- HVAC
- Lift & Escalator
- Generator
- Transformer
- Fire Detection & Safety
- Automation
- Electrical Accessories
- HT & LT Switchgear
- Solar Solution
- Security Camera
- Project Proposal

Core Values

- Safety
- Professional Ethics
- Justice & Fairness
- Transparency
- Responsibility
- Social Commitment
- Respect
- Caring





SUB-STATION

POWER TRANSFORMER

power transformer is a mere classification of transformers with a voltage range varying between 33 kV-400 kV and a rating above 200 MVA. The voltage ratings of power transformers available in

- 400 kV,
- 200 kV,
- 110 kV,
- 66 kV,
- 33kV.



DISTRIBUTION TRANSFORMER

Distribution transformer is also known as a typical kind of isolation transformer. In the distribution system, there are different kinds of transformers available like single phase, 3-phase, underground, pad-mounted, pole-mounted transformer. Generally rated below 200 MVA.

- 230 V,
- 440 V,
- 3.3 kV,
- 6.6 kV,
- 11 kV.



OIL & DRY TYPE DISTRIBUTION TRANSFORMER

- (Mineral) Oil Natural Air Natural (ONAN) – The core and coils are cooled by surrounding in oil. Heat transfer of oil by natural air convection.
- (Non-Mineral) Oil Natural Air Natural (KNAN) – The core and coils are cooled by surrounding in synthetic oil. Heat transfer of oil by natural air convection.
- Oil Natural Air Forced (ONAF) – Cooled by surrounding in oil. Forced air circulation using pumps, fans and blowers.
- Oil Forced Air Forced (OFAF) – Forced oil and air circulation using fans and blowers.
- Oil Natural Water Forced (ONWF) – Cooled by surrounding in oil. Forced water circulation using heat exchanges.
- Oil Forced Water Forced (OFWF) – Forced oil and water circulation using oil-to-water heat exchanges.



•Cast Resin Dry Type Transformer (CRT)–

that uses epoxy resin to encapsulate its primary and secondary windings. This protects the windings from moisture, dust, corrosion, and other environmental factors that can affect their insulation and performance.

A CRT is available in ratings from 25 kVA to 12,500 kVA

•Vacuum Pressure Impregnated Transformer (VPI)

that uses class H polyester resin to impregnate its windings under vacuum and pressure. This eliminates any air gaps or voids in the insulation, enhancing its mechanical strength, dielectric strength, and thermal stability.

A VPI is available in ratings from 5 kVA to 30 MVA

INSTRUMENT TRANSFORMER

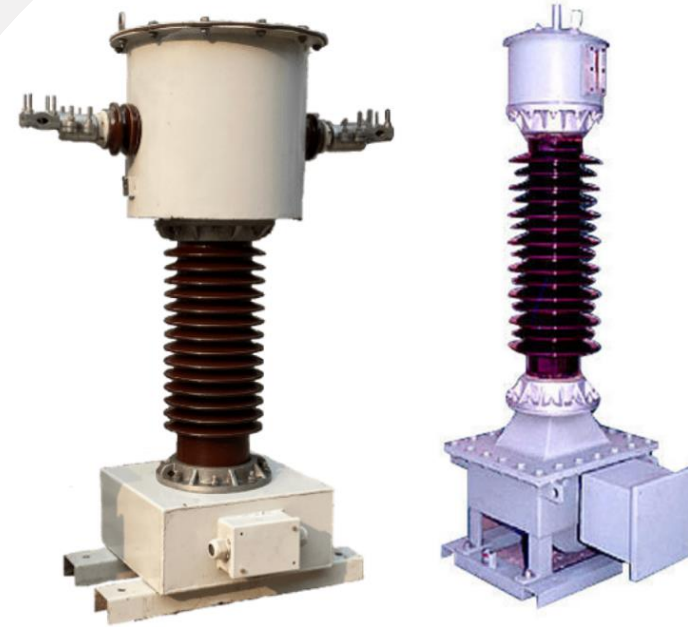
- **Current Transformer**
- **Potential Transformer**

Current Transformer (C.T.) :

Current transformer steps down current to a known ratio using a primary thick wire connected in series with a line, and a secondary fine wire for measuring instruments and relaying a constant fraction of the line's current.

Potential Transformer (P.T.) :

A potential transformer steps down voltage to a known ratio using a primary winding with numerous fine wire turns and a secondary winding with few turns for measuring instruments. It relays a known fraction of the line voltage.



CT

PT

BUS-BAR

The choice depends upon various factors such as system voltage, position of sub-station, degree of reliability, cost etc.

- (i) Single Bus-bar System
- (ii) Single Bus-bar System With Sectionalization
- (iii) Main And Transfer Bus-bar System



LIGHTNING ARRESTER

Lightning arresters help prevent lightning damage to the apparatus because of high voltages. The lightning arrester provides a low-impedance road all the way to the ground for the lightning's current. It then restores to a normal operating condition.

These are :

Electrolytic arresters, Rod Gap Arresters, Expulsion-type lightning arresters, Valve-type lightning arresters, Metal-Oxide Lightning arresters, Oxide film arresters, Sphere-Gap Arresters, Horn-Gap Arresters, Multiple gap arresters, Impulse protective gap, Thyrite lightning arrester, and Auto valve arrester.

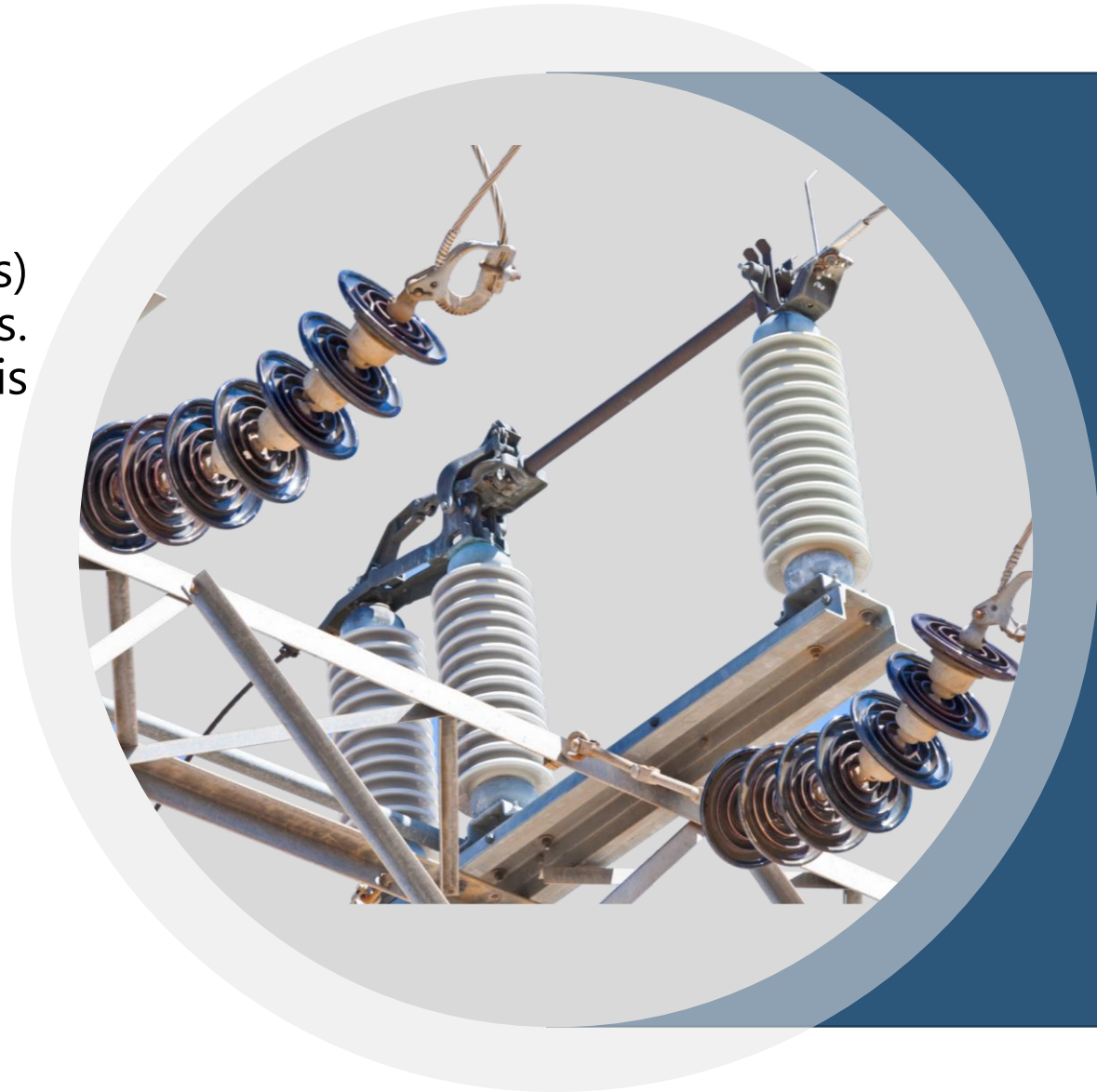


INSULATORS

They support the conductors (or bus-bars) and confine the current to the conductors. The most commonly used material is porcelain.

There are several types of insulators:

- Pin Type
- Suspension Type
- Post Insulator etc.



CIRCUIT BREAKER

We can provide a wide range of makes and types in the majority of insulating materials.

- **LT Switchgear**

 - MCB

 - MCCB

 - ACB

- **HT Switchgear**

 - VCB

 - SF6

 - OCB

 - HRC Fuse



PANEL BOARD

We can provide a wide range of makes and types Panel Board.

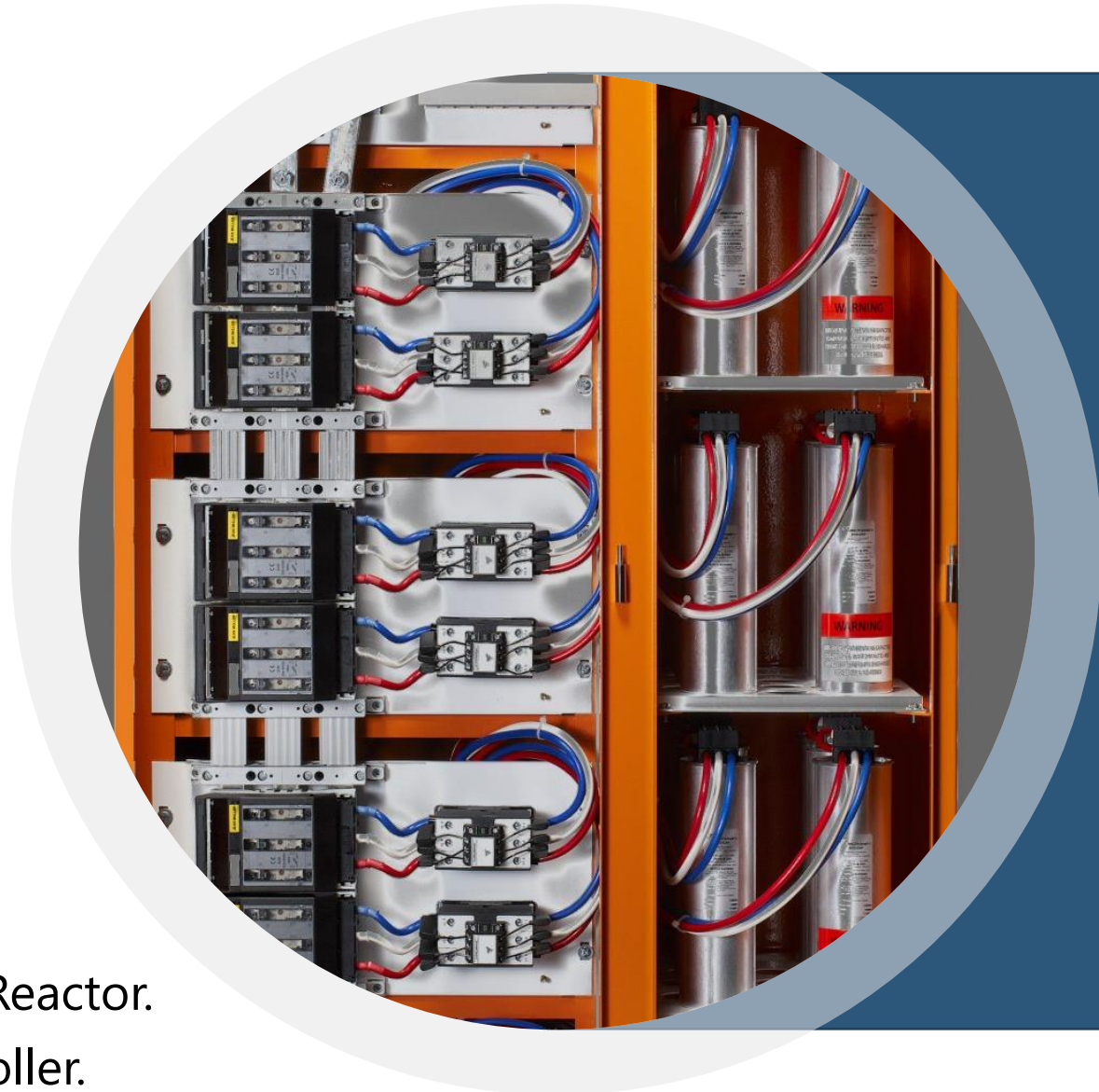
- Control Panel Boards.
- LT Panel Board.
- Change Over Panel Boards.
- MCC Panel Board.
- Energy Meter Panel Board.
- Double Door Control Panel Board.
- Meter Panel Board.
- Power Distribution Boards.

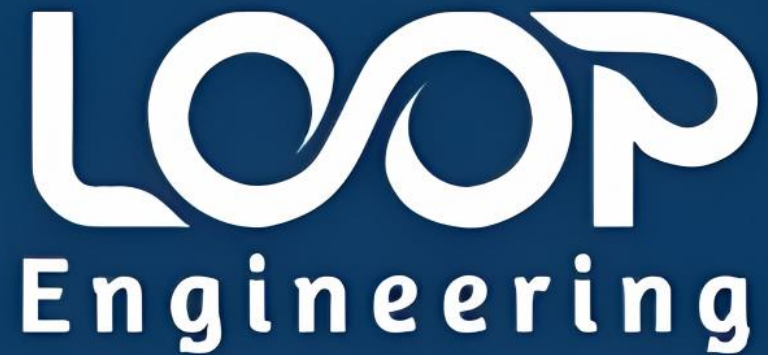


POWER FACTOR CORRECTION (PFC)

Power factor correction (PFC) aims to improve power factor, and therefore power quality. It reduces the load on the electrical distribution system, increases energy efficiency and reduces electricity costs. It also decreases the likelihood of instability and failure of equipment.

- Intelligent Ventilation
- Tailor-made Design.
- IEC 60831-1 & -2 Complied
- High Life Expectancy.
- Harmonic Management By Filter Or Reactor.
- Wide Range Of The Advanced Controller.
- Up To 2400kvar





THANK YOU

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