masibus®

Busbar Junction Temperature Measurement in LT Distribution Panel

INPUT: RTD PT100 Sensors with Cable

R Phase Incoming

Y Phase Incoming

B Phase Incoming

R Phase Outgoing

Y Phase Outgoing

B Phase Outgoing

RS485 Modbus RTU Output

Modbus TCP/IP Output

Profibus DP Output

ALARM / TRIP Relay Output to Breaker
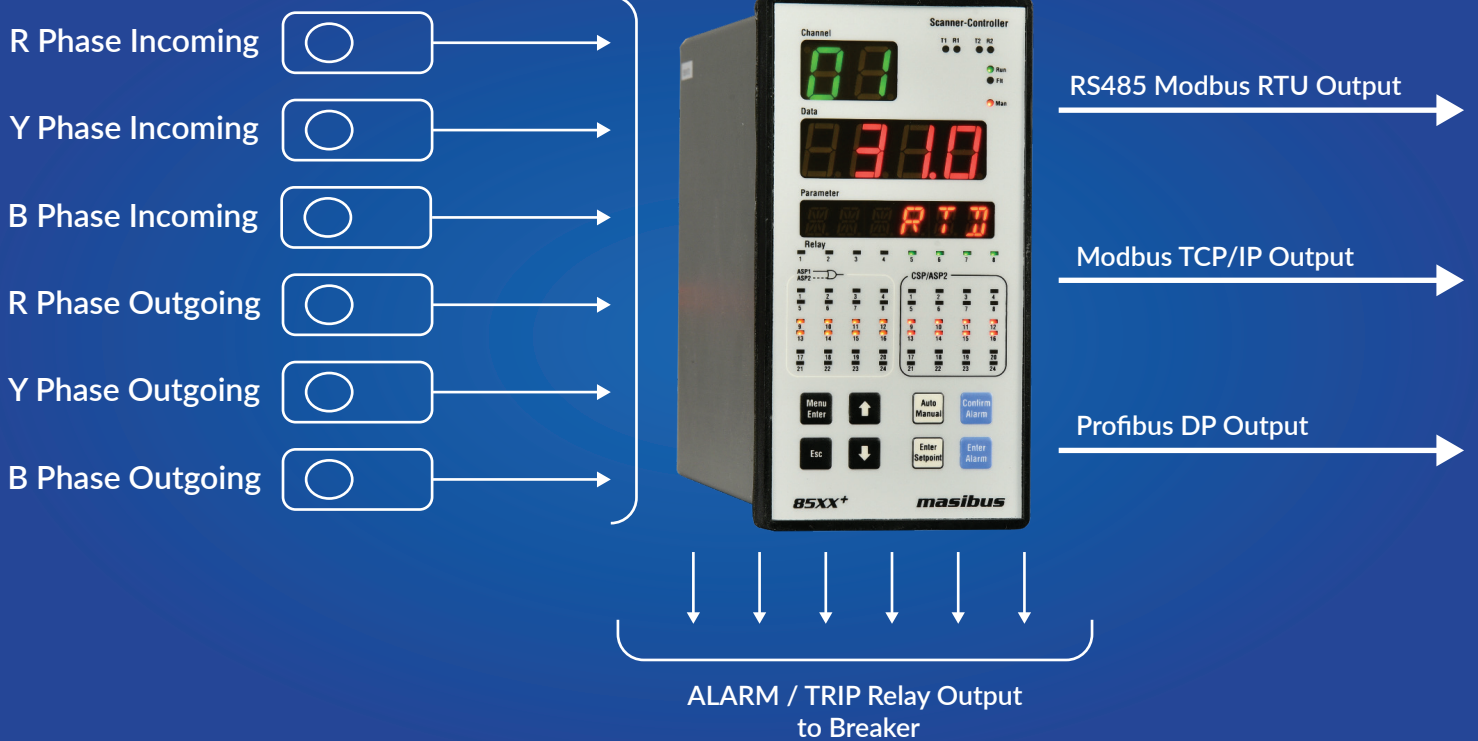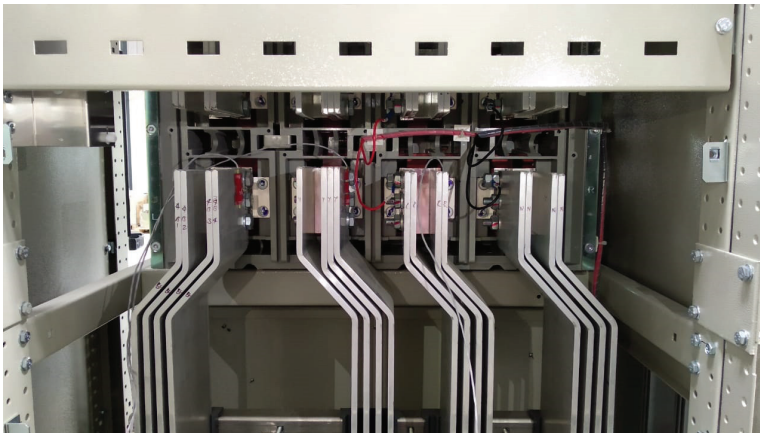
Objective / Requirement

As a part of preventive and predictive maintenance of LT Distribution Panels in commercial and industrial application, it is also very much essential to measure the temperature of the junction of Busbar to understand the health of the panel. Normally, LT distribution panels are field mounted. The Busbar in the panel carries voltage and current that are subjected to continuous wear and tear due to the constantly changing temperature as a result of climate change and variation of load during day and night. As a result, the terminal connection degrades and fails, which can lead to potential fire or explosion risk or damage to the costly equipment like ACB in the panel is evident. This Degradation is gradual and needs continuous temperature monitoring to prevent the losses in terms of downtime and capital.

Solution: Masibus Temperature Monitoring System

- Masibus Temperature Monitoring System includes Masibus Temperature Scanner cum Datalogger Model 85XX+ with LED Alarm Display that accepts Inputs from 8 to 24 channels.
  - Communication port: Modbus (RTU, TCP/IP)/Profibus communication port,
  - Output from 8 to 24 Relay output for alarm and trip signals to ACB
- Masibus' insulated RTD Pt100 sensor with Fiber Glass body with 5mm hole (for bolting in busbar) having sufficient length of cable.
- Optionally, Masibus 8 Channel Field Interfacing Board Model "MAS-AI-U-08-D" to isolate and translate the field signals, eliminate ground loop problems and protect expensive control systems against field faults.

Benefits:

- Increase in the life of the Busbar and its insulation material.
- Avoids Unplanned shut down.
- Masibus Model 85XX⁺ has alarm/trip indication which allows detection with abnormal RTD sensor to prevent burnout and minimize the time required for troubleshooting.
- 85XX⁺ with Data logging option, allows the monitoring of "Temperature Pattern" of the Busbar
- Communication ports in 85XX⁺ Scanner makes the solution future ready to share the real time data with industrial modems for the application of remote monitoring / IoT application.

To Temperature Scanner

RTD connection in Busbar

85XX⁺