



# RTU Based IR Temperature Monitoring System

## Model: PP-RTU-IR

### Features

- Non-contact temperature measurement between 0°C and 150°C
- Support real-time data update
- Especially applicable at metal surfaces during rolling or live busbar joint temperature measurement
- Support maximum up to 60 nos. of IR sensors and 15 nos. of power meters connectivity
- Modbus RTU/TCP protocol sharing to third-party
- Maximum, delta, average temperature and temperature rise measurement (max. 4 parameters per 1 display screen)
- Current and temperature profile logging
- Programmable for temperature and arithmetic calculation
- Timestamp event record up to second
- Build-in WEB server
- 5MB memory and 10MB option

### Introduction

The RTU based Infrared temperature monitoring system is an integrated system for non-contact temperature measurement of metal and glass surface. With the 7550RTU integrated solution, the temperature data can be decoded, calculated, mapped and shared to third-party via Modbus protocol for monitoring and analysis such as SCADA/ BMS/ CCMA/ PMS, etc.

The temperature data can be logged at the same time and stored into the RTU memory for a period of time in case that the TCP network or third party system server has failure.

It is an integrated temperature measurement system. The real-time data from different IR sensors can be displayed on the LCD screen of RTU from each switchboard panel. From the point of electrical power safety, maintenance people can easily check the busbar junctions and ambient temperature without opening the cabinet cover.

### Specification

#### 7550 RTU

- Modbus Mastering  
Support industrial Modbus protocol including both Modbus RTU and TCP protocol
- Memory: 5MB standard or 10MB option
- Programmable
- Display: FSTN LCD
- Resolution: 320 x 240 pixels (1/4 VGA)
- Temperature: -20 to 70 degree C
- Backlight: LED
- Dimension: 192mm x 192mm x 174mm (LxWxD)
- Support sensors and meters: Max. 60 temperature sensors and 15 nos of 3-phase metering circuits.
- Display trend log: 60 pages
- Build-in WEB pages
- Alarming: programmable set point alarming to dry contact, email and event display on RTU screen

#### Infra-Red sensor

- Temperature measurement range: 0 - 150 degree C (+/1 2% full scale)
- Response time: 250 ms
- Field-of-View (FOV): 8:1
- Sensor dimension: 13.6mm diameter x 36mm in length
- Convertor dimension: 18mm diameter x 96mm in length
- Housing: stainless steel
- Power supply: 24VDC, less than 0.5A
- Signal cable: STP x 2 pairs (RS485 2 wires and DC power supply plus shielding)
- Communications
  - RS485 Modbus Protocol.
  - Device ID can be defined by command code via RS485
  - RS485 communication bus can support up to 1000M with 32 devices maximum per RS485 loop.
  - Baud Rate: 9600bps

### Solutions & Applications

- Switchboard temperature and condition monitoring
- Motor and moving part temperature monitoring
- Metal surface temperature monitoring during rolling, hardening and soldering, etc.
- HVAC temperature monitoring



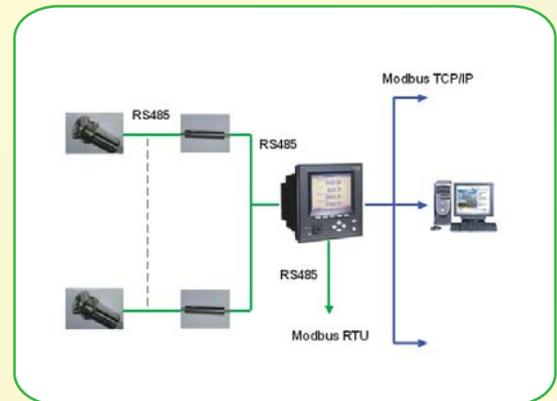
7550RTU



Infrared Sensor



Sensor signal converter



System architecture

### Order Information:

- PP-RTU-IR-220-24-xx (1RTU powered by 220VAC and xx IR sensor powered by 24VDC)

where xx - represents the order number of IR sensors (max 60 per RTU)