IOMod 4RTD
industrial 4 temperature sensors module

IOMod 4RTD is a stand-alone Modbus RTU, IEC 60870-5-101, and IEC60870-5-103 temperature sensor device, designed for accurate indoor temperature measurement across a wide range. with high accuracy and repeatability even after frequent heating and cooling cycles. Equipped with 4 temperature measuring channels to enable temperature reading with default configuration.

IOMOD 4RTD is ideal for data acquisition, observation, and process monitoring where precision over a broad temperature spectrum is crucial, it finds applications in industries like plastics processing and microelectronics.

Compatible with Modbus RTU, IEC 60870-5-101, or IEC60870-5-103 protocols, it can integrate seamlessly into SCADA systems.

When paired with a WCC Lite gateway, it enables remote monitoring and control of temperature readings over Ethernet LANs or 3G/4G(LTE)/GSM/GPRS networks, facilitating alarm management and data logging on CloudIndustries.eu platform.

Applications

- Power Grid
- Solar energy projects
- Wind energy projects
- Hydro energy projects
- Energy storage applications
- Factory resources supervision
- Substation automation projects

Technical documentation

Ordering

Features

- Temperature measurement of 0.5°C accuracy for all operating conditions
- Temperature sensing range: from -200 to 800 °C using platinum RTD sensors
- Modbus, IEC60870-5-103, IEC60870-5-101 communication over RS485 physical layer
- Selectable PT100 or PT1000 temperature RTD sensor and connection type (2, 3 or 4 wires) for each channel
- Configuration over USB console
- Drag and Drop firmware upgrade over USB mass storage
- LED indications for power, USB connection, sensor and temperature fault conditions for all channels
- Easy connection with WCC Lite gateway and CloudIndustries.eu platform

Measurement values and functions

Analog inputs	4 RTD (PT100 / PT1000)
Input supports sensors	PT100 and PT1000 temperature RTD sensor
Input connection	2, 3 or 4 wires connection
Temperature measurement range	-200 to 800 °C using platinum RTD sensors
Accuracy	0.5°C accuracy for all operating conditions

Interface and communication

RS485 interface	ANSI/TIA/EIA-485-A-1998
Communication protocols	– Modbus RTU Slave; – IEC 60870-5-101 Slave; – IEC 60870-5-103 Slave.
Baudrate	600 – 115200 baud
Parity	None, Even, Odd
Terminating resistors	120 Ohm (configurable)

USB interface

Type	Mini USB
Use	Configuration/Firmware upgrade

Power supply

Auxiliary power supply	9-33VDC (full range)
Power consumption	40mA @ 12VDC, 20mA @ 24 VDC
Insulation voltage	3 kV

Operating conditions

Operating temperature	-40°C … 85°C
Storage temperature	-40°C … 85°C
Relative humidity	max. 95 % (non condensing)
Protection class	IP20

Dimensions and installation instructions

Case height x width x depth	119 x 17.5 x 101 mm
Installation type	DIN Rail mounting

Order Code

IOMOD-4RTD	4xChannel PT100,PT1000 input module with IEC 60870-5-103, IEC 60870-5-101, or Modbus RTU Slave protocol