

Intelligent DIN Rail Temperature Transmitter

RTM5001



Output Signal: 4-20 mADC/ HART



Quick Response Time



Working Temperature: (-)40 ~ 85°C



Supply Voltage: 12V ~ 35V

**Product
Datasheet**

ROCKSENSOR AT A GLANCE (ABOUT US)

Rocksensor is one of the global leaders specializing in Process Instrumentation, Research and Development and Designing of Industrial Automation Equipment. We provide highly precise pressure sensors and transmitters, flow metres, level transmitters and temperature transmitters with a prime focus to help our clients efficiently, safely and economically run complex industrial processes.

Rocksensor, headquartered in Switzerland, has its footprint in various geographical regions such as the US, Russia, South Korea, Italy, Germany, Singapore, Malaysia, Morocco, China, Taiwan, Australia, UAE, Brazil and India. Our clients come from some of the major industries such as Oil and Gas, Petrochemicals, Pharmaceuticals, FMCG, Automobiles, Water, Cement, Metal & Mining, and mainly from the Power Industry like Nuclear, Thermal, Hydro, and Solar.

Rocksensor deals in a wide range of highly accurate industrial automation instruments ensuring that even the complex industrial processes happen efficiently.

To fulfill the needs of our clients we make sure that our instruments work in even the harsh environmental conditions offering accurate recordings and communication.

We, at Rocksensor, believe in creating bonds that last a lifetime and create a success story for each and every client. Rocksensor aims to achieve a perfect fit in the global market landscape and establish our footprints across the globe.



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KEY APPLICATION INDUSTRIES

- Oil and Gas sector
- Cement
- Metal
- Pulp and Paper
- Agriculture
- Textiles
- Chemicals
- Power
- Water
- Pharmaceutical
- Fertilizer
- Plastics and HVAC

1. Introduction

Suitable to transmit on-site Thermal Resistance or Thermocouple Signals Temperature Measurement.

2. Salient Features

- Suitable for application with Thermocouples & RTDs
- Reference accuracy up to 0.1%
- Fully Linear DC Current Output
- With in-built Cold-Junction Compensation for Thermocouples
- Magnetically isolated Input and Output
- Suitable for Signal Isolation, Signal Conversion, Signal Distribution and
- Signal Processing
- Compatible with DCS, PLCs, etc.
- Available with Multiple Input-Output Ports
- Configurable through HART

3. Technical Specifications

Inputs	Thermocouples, RTDs, mV, Ohms
Input Range	(-)200 ~ 1800°C/ (-)328 ~ 3272°F
Applicable Field Equipment	Two or Three Wire RTD, Thermocouple Sensor
Output	4-20mADC/ HART (Optional)
Output Load	Max. {(Power Supply, VDC 7.5) / 0.022A Current} Ohms
Power Supply	12 ~ 40VDC; Nominal 24VDC
Power Supply Effect	±0.001% of FS/ V
Power Consumption	One Input - One Output: 1W; Two Input - Two Output: 1.4W
Electrical Isolation	U = 2500VAC
Circuit Limitation	≤22mA
Saturation Current	Low Side: 3.8 mA/ High Side: 20.5 mA
Alarm Current	Either Sensor is damaged or open circuit; Output is 3.6 mA or 22mA (Except Thermocouple)
T_{Ambient}	(-)40 ~ 85°C
T_{storage}	(-)40 ~ 100°C
Relative Humidity	25 ~ 85% RH (IP20)
Installation Method	35mm DIN Rail Installation
Response Time	1s
Electromagnetic Compatibility	In compliance with Industrial Equipment Application Requirement (IEC61326-1)
Dimension(mm)	13x108x121.2 (LxBxH)
MOC & Weight	Polycarbonate (~ 85grams)

Input	Type	Measuring Range	Min. Measuring Range	Span	Accuracy
RTD	Pt100	(-)200 ~ 850°C	20°C	≤100°C	0.2%
				>100°C	0.1%
	Cu50	(-)50 ~ 150°C	20°C	≤100°C	0.2%
				>100°C	0.1%
Thermocouple	B	400 ~ 1800°C	500°C	≤300°C	0.2%
				>300°C	0.1%
	E	(-)100 ~ 1000°C	50°C	≤300°C	0.2%
				>300°C	0.1%
	J	(-)100 ~ 1200°C	50°C	≤300°C	0.2%
				>300°C	0.1%
	K	(-)180 ~ 1372°C	50°C	≤300°C	0.2%
				>300°C	0.1%
	N	(-)180 ~ 1300°C	50°C	≤500°C	0.2%
				>500°C	0.1%
	R	(-)50 ~ 1768°C	500°C	≤500°C	0.2%
				>500°C	0.1%
S	(-)50 ~ 1768°C	500°C	≤500°C	0.2%	
			>500°C	0.1%	
T	(-)200 ~ 400°C	50°C	≤500°C	0.2%	
			>500°C	0.1%	

For Ordering:

1. Select code RTM5001 for DIN Rail Mount type Temperature Transmitter without HART option.
2. Select code RTM5001-H for DIN Rail Mount Type Temperature Transmitter with HART Communication.

4. Dimensions & Wiring Diagram

