ROCKSENSOR™

Head-Mount Temperature Transmitter

RTM5000

- Output Signal: 2-Wire, 4-20mADC Analog
- Accuracy: ±1° C
- Working Temperature: (-)40 ~ 80°C
- Supply Voltage: 12 ~ 40VDC

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.

CE

International Organization for Standardization ISO 9001

Ex ATEX

Safety Integrity Level SIL

IECEx

HART COMMUNICATION PROTOCOL

FIELDCOMM GROUP MEMBER

RoHS

RKS ROCKSENSOR

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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

Isolated intelligent temperature transmitter suitable for measurement of temperature with Thermocouple or Resistance Temperature Detector.

2. Salient Features

- Automatic internal cold junction temperature compensation
- In-built Non-linear circuit correction
- Large measuring range
- Transmission Accuracy up to 0.1%FS (at 20°C)
- Two wire/ 4-20mA Analog Output
- Compatible with Thermocouples and RTDs
- IP65 Weatherproof grade
- Configuration with HART Communication

3. Technical Specifications

Input Signal	Thermocouple, RTD (Universal)
Cold Junction Temperature Compensation Range	(-)20 ~ 60° C
Compensation Accuracy	±1° C or 0.1% of FS; whichever is higher
Output Signal	2-Wire, 4-20 mADC Analog
Power Supply	12 ~ 40 VDC
Power Supply Effect	±0.001% FS/V
Load Resistance	$R_L \leq (U_e\text{-}12)/0.021$
Alarm Output	Lower Limit = 3.8mADC/ Higher Limit = 21mADC
Input Disconnection Alarm Output Current	Configurable
Transmission Accuracy	0.1%FS
Temperature Drift	0.0075%FS/ °C
Response Time	<1s
Insulation Resistance	≥100MΩ at 500VDC
Insulation Strength (between Input & Output)	$1500V_{rms}$ (1 min., no spark)
Degrees Of Protection	IP20
Ambient Temperature	(-)40 ~ 80° C (25 ~ 85% RH)
Storage Temperature	(-)40 ~ 100° C
Condensation	Permissible
Shock Resistance	4g/2 ~ 150 Hz
Installation Angle	No restriction
Installation Type	Head Mount
Electromagnetic Compatibility	As per IEC61326-1
Dimension	Ø44 x 21 mm
Configuration	Through HART
Material	Polycarbonate

Range	Input Type	Measuring Range	Min. Measuring Range
Pt100	RTD	(-)200 ~ 450°C	10°C
Cu50		(-)50 ~ 150°C	10°C
B	Thermocouple	0 ~ 1820°C	500°C
E		(-)270 ~ 1000°C	50°C
J		(-)210 ~ 1200°C	50°C
K		(-)270 ~ 1372°C	50°C
N		(-)270 ~ 1300°C	50°C
R		(-)50 ~ 1768°C	500°C
S		(-)50 ~ 1768°C	500°C
T		(-)270 ~ 400°C	50°C

4. Wiring Diagram