

CE-050-02

0-5V Temperature Sensor and Transmitter



- Solid-state, continuous temperature sensing
- High Accuracy PT-1000 (Class B 1/3 DIN) sensing element
- Rapid turn-around (2-3 weeks typical)
- Ratiometric output
- Designed for long-term reliability in harsh environments
- 1000bar fluid pressure designs available
- Factory calibrated (UKAS calibration certificate available)

CE-050-02 is a robust temperature sensor with built in transmitter covering a wide measurement range from -50degC to +170degC in standard form*. The sensor ensures a precise measurement using advanced electronics and high accuracy Class B 1/3 DIN PT-1000, continually providing a ratiometric voltage output over a range of 0.25 to 4.75VDC.

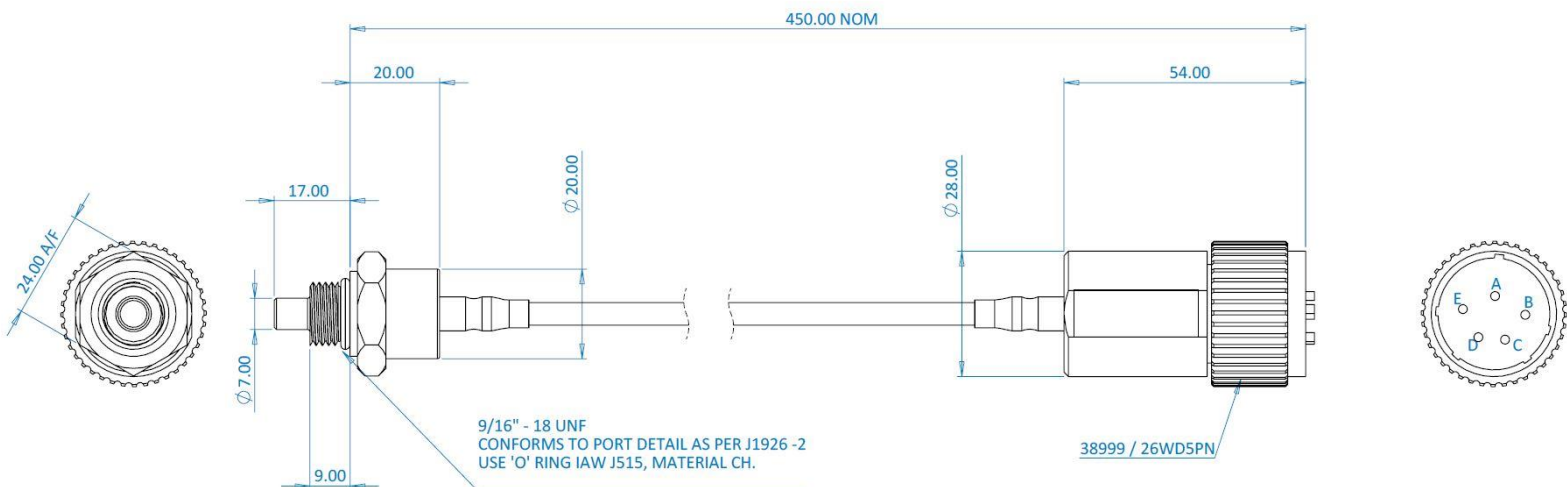
Being fully configurable, the transmitter allows you to modify the output voltage to any probe temperature across its measurement range. The sensors are supplied factory calibrated to your requirements or can be customer configured using a simple GUI if required.

The temperature probe and electronics can be packaged within limitless design configurations offering a range of metric/imperial temperature probe diameters, custom electronic housings and connector/flying wire interfaces to cover your exact requirements.

Please contact Reventec to discuss your requirements, we specialise in small batches from 1-10 pieces, through to volume production (5,000 pieces+).

** High temperature variants up to 250°C available.*

Example Temperature Sensor Dimensions



(Example Shown fitted with MIL connector)
Flying lead options also available.

Temperature Measurement

Accuracy	±1% of reading @20degC ±2% of reading across temperature range
Sensing Element	PT1000 1/3 DIN
Measurement Rate	10Hz
Calibration	UKAS or Traceable calibration available on request

Electrical

Supply Voltage	5VDC ±0.5VDC
Typical Operating Current	<10mA @ +5VDC

Output

Type	Voltage
Typical Output range	0.25 VDC: -50degC 4.75 VDC: +170degC Fully Configurable across 0-5VDC
Resolution	12 bit

Environmental

Environmental protection	IP69K when mated with connector
Probe Pressure Rating	Dependant on design (1000 bar fluid pressure ratings available)
Vibration	Designed to meet: 10Hz to 2000Hz sine sweep @10G (6hrs per each axis)
Shock	Designed to meet: 50G half sine wave for 11ms, 10 times each axis
EMC	Designed to meet: EN61000-6-2:2005 EN61000-6-3:2007/A1:2011
Electronics Operating Temperature	-40°C to +125°C
Probe Operating Temperature	-50°C to +170°C (High temperature variants up to 250°C available)

Mechanical

Construction Material	Stainless Steel 316L (Sensor) Anodised Alloy (Connector & Backshell)
Mass	146g
Sealing Elastomers	Fluorocarbon
Sealing Gasket	Supplied per sensor (Fluorocarbon)

Wiring Specification

Flying Lead	Available on custom design
Jacket Elastomer	PFA
Wire Type	4 core 7/0.2mm silver plated copper PFA twisted cores silver plated copper braid screen PFA jacket

Wiring Definition / Connector

Description	Connection (Refer to Drawing)	Wire Colour
Supply (+)	A	Red
Ground (GND)	B	Black
Signal	C	Yellow
Tx Comms (Transmit)	D	White
Rx Comms (Receive)	E	Green

Configuration Interface

Type	Serial Interface
GUI	Available on request

Accessories

Configuration cable	P/N: 07-003-01
---------------------	----------------

Specifications may be subject to change without prior notice

Product Code: CE-050-02 | Document: CE-050-02DS | Version 1

Reventec Ltd
Downton Business Centre, Downton
Salisbury, Wiltshire, SP5 3HU, UK

Tel: +44 (0)1725 557203
Email: info@reventec.com
Web: www.reventec.com

Registered in England and Wales, #08561556 ©2014 Reventec Ltd