

RTDHEAD-JAX19

Temperature Transmitter



Technical Datasheet

The RTDHEAD-JAX19 is a low cost “smart” in head transmitter that accepts PT100 temperature sensors and converts sensor output over a configured range to a standard industrial (4 to 20) mA transmission signal. A simple push button operation allows the user to not only select the desired range and burnout direction but also perform user trim at both (4 & 20) mA points.

The RTDHEAD-JAX19 in head transmitter incorporates the latest digital technology to ensure accurate drift free performance. If required the desired range can be specified at the time of order, removing the need for user configuration. If the range is not specified then the transmitter will be shipped with the default range of (0 to 100) °C set.

Key Features

- Suitable for use with PT100 sensors
- Unique push button configuration without PC
- Push button sensor matching
- 4/20mA output
- High stability
- Programmable burnout



Specifications @20°C

INPUT	Sensor Type	PT100 100R @ 0°C 2 or 3 Wire
	Sensor Range	-200 to +850°C (18 to 390)
	Sensor Connection	Screw Terminal
	Minimum Span*1	25°C
	Linearisation	BS EN 60751 (IEC 751) Standard / JISC 1604
	Measurement Accuracy*2	0.2°C ± 0.05% of reading
	Thermal Drift	0.0025% / °C
	Excitation Current	<200µA
	Lead Resistance Effect	0.002°C / Ω
	Maximum Lead Resistance	20Ω per leg

OUTPUT	Output Type	2 wire (4 to 20) mA current loop
	Output Range	4.0 to 20.0mA
	Output Connection	Screw Terminal
	Maximum Output	21.5mA (in high burnout condition)
	Minimum Output	<3.9mA (in low burnout condition)
	Accuracy	(mA output / 2000) or 5µA (whichever is the greater)
	Loop Voltage Effect	0.2µA / V
	Thermal Drift	1µA / °C
	Maximum Output Load	[(Vsupply-10)/21]KΩ E.g. 700Ω @ 24V

*1 Any span may be selected, full accuracy is only guaranteed for spans greater than the minimum recommended

*2 Basic measurement accuracy includes the effects of calibration, linearisation and repeatability

Push Button Configuration

A single push button and LED indicator allows the user to navigate a three menus, allowing configuration of the transmitter. The menus are as follows:-

Menu 1	Configure Range
Menu 2	Configure burnout direction
Menu 3	Trim output current @ either 4mA or 20mA

General Characteristics

Update Time	500ms
Response Time	1 second
Start Up Time	4 seconds (1 out <4mA during start up)
Warm Up Time	1 minute to full accuracy
Power Supply	10 to 30VDC
Ambient Operating Temperature	-40 to +85°C
Ambient Storage Temperature	-50 to +90°C
Ambient Humidity Range	10 to 90% RH non-condensing
Dimensions	Ø 43mm, 21mm (height)
Weight	31g (encapsulated)

Approvals

EMC - BS EN 61326	Electrical equipment for measurement control and laboratory use
ANNEX A	Immunity test requirements for equipment intended for use in industrial locations
ANNEX F	Test configurations, operational conditions and performance criteria for transducers with integrated or remote signal conditioning
IEC 61000-4-2	Electrostatic discharge
IEC 61000-4-3	EM field
IEC 61000-4-4	Transient burst (output)
IEC 61000-4-5	Surge (output)

NOTE: Sensor input wires to be less than 3 metres to comply.

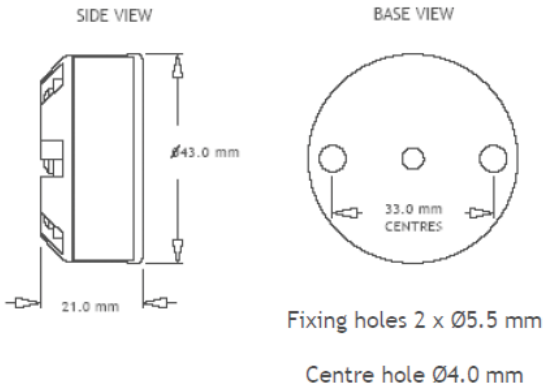
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Dimensions (mm)



Wiring Connections

