

FEATURES

- Available for all RTD Types
- Linearizes Platinum RTDs
- 3-Wire Lead Compensation Standard (4-wire available)
- Quick-Check Red/Green Output LEDs
- Unpluggable Terminal Strip
- AC or DC Power Options



DESCRIPTION

JH5400 Series RTD Input Transmitters provide an isolated DC output proportional to temperature as measured by a resistance thermometer (RTD). Model JH5400 specifically designates 100 ohm platinum RTD input: additional model numbers are reserved for other RTD types.

Standard three-wire input circuitry compensates for lead wire resistance: a 4-wire input option is available. Platinum RTDs are linearized to provide true temperature indication. (Other types may or may not be: contact us to discuss your specific requirements.) A low-drift input amplifier helps assure accurate readings under varying ambient conditions.

Available options include AC and DC power choices and reverse-acting transmitter (decreasing output with increasing input).

HOW TO ORDER

Model Numbers:

Specify Model JH5400 for use with 100 ohm platinum RTDs. Other model numbers will be assigned upon request for other RTD types. Contact factory for non-RTD resistance inputs.

Power:

Add suffix A (for example, JH5400A) for AC power, D for DC power. Specify 115Vac, 230Vac, 12Vdc or 24Vdc.

RTD Type:

Model JH5400: 100 ohm

platinum. Others as determined by assigned model number.

Input Range:

Specify any input range allowed by the "Input Capabilities" spec (see back).

Output Range:

Specify any DC voltage or current range allowed by the "Output Capabilities" spec (see back).

4-Wire RTD:

Specify Option 4W.

Reverse-Acting Transmitter:

Decreasing output with increasing input. Change last digit of the model number to 1 (for example, JH5401A).

Loop-Powered Output:

4/20mA "current sink" output stage for connection to devices whose inputs provide 24Vdc loop excitation. Change last digit of the model number to 2 (for example, JH5402A).

Urethane Coating:

Specify Option U.

INSTALLATION

JH5400 Series transmitters snap onto 35mm DIN rail. Connections are made to the front-panel terminals. The terminal strip unplugs to facilitate calibrating or replacing the transmitter.

CONNECTIONS

Connections to the 8 terminals (top to bottom) are:

- 1: RTD.
- 2: RTD (same end of RTD as terminal 1). When connecting to 2-wire RTD, jumper terminals 1 and 2.
- 3: RTD (opposite end)
- 4: Standard - no connection.
Option 4W - 4th wire of RTD (same end as terminal 3).
- 5: Output plus.
- 6: Output minus.
- 7: Power (AC or, if DC power option, DC plus).
- 8: Power (AC or, if DC power option, DC minus).

QUICK-CHECK LEDs

Red-green Quick-Check LEDs give a quick indication of the relative output. Red is brighter at the low end, green at high, while at mid-scale both are approximately equal. Red-only indicates offscale low while green-only indicates offscale high.

SPECIFICATIONS

RTD Type:

Any RTD from 10 to 2,000 ohms.

(Model JH5400 for 100 ohm platinum, other models JH54x0 for other types. Contact factory. Specify RTD type, resistance & slope.)

Input Connection:

3-wire connection is standard. Specify Option 4W for 4-wire RTD.

Input Capabilities:

Minimum span 10 deg. C (18 deg. F) or 1 ohm, whichever is greater. Any range up to maximum covered by RTD. Offset ranges are allowed.

Voltage Output Capabilities:

1 volt minimum output span, -10 to +15V absolute limit. Offset ranges are allowed. Maximum output load, 10mA (1Kohm at 10V output).

Current Output Capabilities:

1mA minimum output span, 0 to +25mA absolute limit. Positive offsets are allowed, negative outputs are not. Output drive capability, 24V (1,200 ohms max. at 20mA output).

Endpoint Accuracy:

+/-0.1% of span or 0.02 ohms, whichever is greater.

Adjustability:

Zero and span each are adjustable approx. +/-15% of span.

Linearity:

Platinum RTDs are linearized. Copper is inherently linear. Contact factory for information on others.

Response Time:

Under 100 milliseconds.

Isolation:

3-way (Power/Input/Output)
1,500Vac rms (2,100V peak).

Operating Temperature:

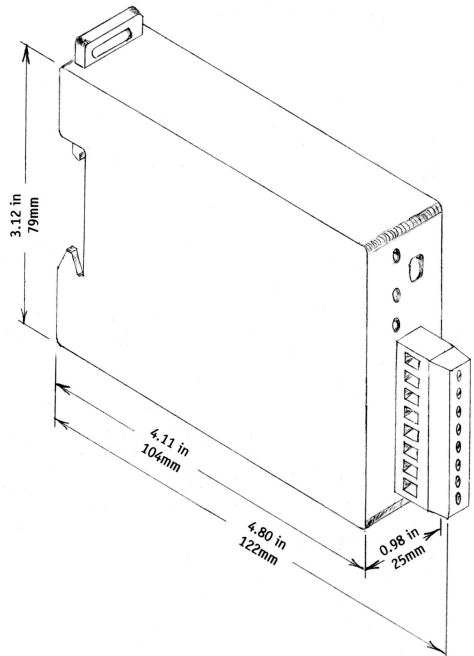
-10 to +60°C (14 to 140°F).

Temperature Stability:

+/- (0.02% of span plus 0.002°C) per °C, or better.

Power Requirements:

AC, 115 or 230Vrms, 50/60Hz,
2.5V-A. DC, 12 or 24V, 2.5W.



JH TECHNOLOGY, INC.

SARASOTA, FL USA
(800) 808-0300

www.jhtechnology.com
e-mail: jhtek@jhtechnology.com