

FEATURES

- Available for all RTD Types
- Linearizes Platinum RTDs
- 3-Wire Lead Compensation Standard (4-wire available)
- High Speed Option HS 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.

Standard transmitters include filtering to smooth measurements and minimize noise pickup. When fast response is needed Option HS speeds the response time to approximately 1 millisecond. Other response speeds are readily available on special order.

Other 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).

High Speed Response:

Approximately 1 msec. (see Specifications). Specify Option HS.

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:

Standard: Under 100 milliseconds.

Option HS: Approx. 95% complete in 1msec. Frequency response 3dB down at approx. 600 Hz. Others available on special order.

Isolation:

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

Operating Temperature:

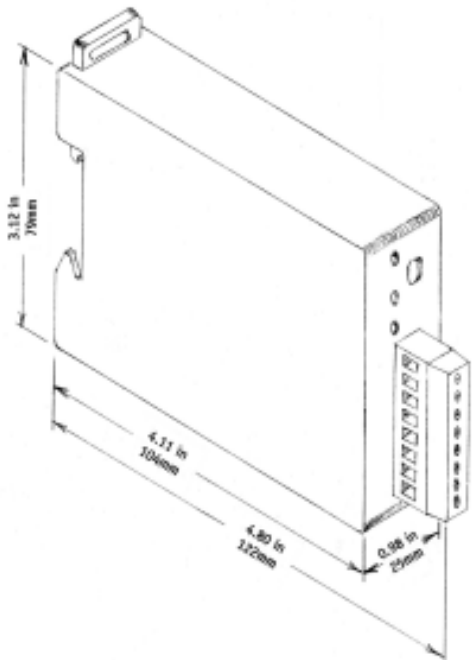
-10 to +60°C (14 to 140°F).

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.



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