

INSTALLATION

Model JH5400 snaps onto 35mm DIN rail. Connections are made to the front-panel terminals. The terminal 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 the RTD as terminal 1.) If connecting to a 2-wire RTD, jumper terminals 1 and 2.
- 3: RTD (opposite end).
- 4: Standard (2- or 3-wire RTD) - 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).

RECALIBRATION

Model JH5400 is factory-set to the range ordered. To check or readjust calibration, proceed as follows.

Connect a precision variable resistance, decade box or RTD simulator to the input. Use a 3-wire connection (or 4-wire if Option 4W) as shown above or in the block diagram. For best accuracy the resistance must be better than 0.1%: in most RTDs $\pm 0.1\%$ corresponds to about $\pm 0.25^\circ\text{C}$ or $\pm 0.5^\circ\text{F}$.

Connect a precision DC voltage or current meter to the output. To maintain factory-calibration accuracy the input and output should be monitored to 4-1/2 digits or better, with an accuracy of 0.05%.

Set the input to the low end of the range. (If reverse-acting, set the input to full scale.) Adjust the *ZERO* adjustment for the proper low-end output.

Set the input to full-scale. (If reverse-acting, set the input to the low end of the range.) Adjust the *SPAN* adjustment for the proper full-scale output.

Repeat until both readings are correct.

AVAILABLE OPTIONS

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 power.

4-Wire RTD: Specify Option 4W

Reverse-Acting Transmitter:

Decreasing output with increasing input. Change last digit of the model number to 1 (JH5401).

Loop-Powered Output:

4/20mA "current sink" output stage for connection to devices whose inputs provide 24Vdc loop excitation. Change the last digit of the model number to 2 (JH5402).

High Speed Response:

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

Urethane Coating: Option U.

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 and slope.)

Input Connection:

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

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.

Response Time:

Standard: Under 100 milliseconds.

Option HS: Approximately 95% complete in 1 millisecond. 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).

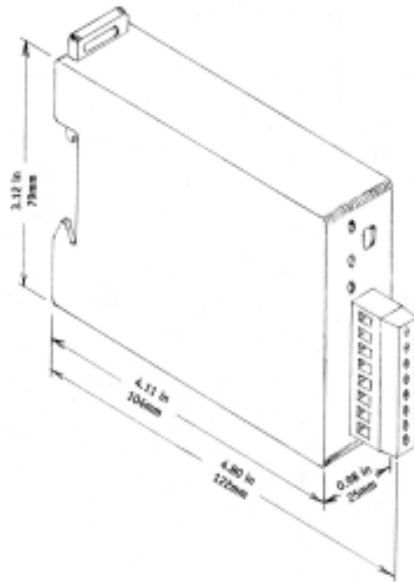
Operating Temperature: -10 to +60°C (14 to 140°F).

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.

DIMENSIONAL DRAWING



JH5400



RTD INPUT DIN-RAIL TRANSMITTER

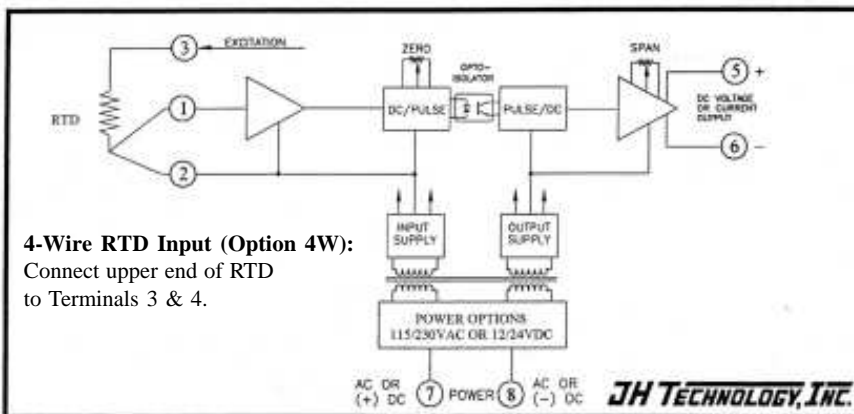
JH5400 Series RTD Input Transmitters provide an isolated DC output proportional to temperature as measured by a resistance thermometer (RTD). Model JH5400 specifically designates 100 ohm platinum RTD input: additional model numbers are reserved for other RTD types.

Standard three-wire input circuitry compensates for lead wire resistance: a 4-wire input option is available. The JH5400 linearizes platinum RTDs to provide true temperature indication. (Other RTD types may or may not be linearized: contact us to discuss your specific requirements.) A low-drift input amplifier helps assure accurate readings under varying ambient conditions.

The standard JH5400 includes 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.

The one-inch-wide case snaps onto DIN rail and its terminals unplug for ease of replacement. Available options include AC and DC power choices and reverse-acting transmitter (decreasing output with increasing input).

BLOCK DIAGRAM



SEVEN-YEAR WARRANTY

The JH5400 will be replaced free if it fails due to defects in materials or workmanship within seven years of the date shipped.

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