

## INSTALLATION

JH5000 Series transmitters snap 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: Input plus.
- 2: Input minus.
- 3: No connection.
- 4: No connection.
- 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

The Model JH5070 is factory-set to the range ordered. To check or readjust calibration, proceed as follows:

Connect a precision DC millivolt source to the input. 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

### DC Input Model Numbers:

JH5000: DC Voltage Inputs, 1V or Greater

JH5030: DC 4/20mA Input

JH5040: 4/20mA Input with Loop Excitation Supply

JH5050: 4-20mA Input/4-20mA Output Isolator

JH5060: DC Current Inputs (except 4/20mA)

JH5070: DC Millivolt Inputs, less than 1V

JH5080: User-Rangeable DC Transmitter

### Power:

115Vac, 230Vac, 12Vdc or 24Vdc. Designated by suffix A (JH5070A) for AC power, D for DC power.

### Reverse-Acting Transmitter:

Decreasing output with increasing input. Change last digit of the model number to 1 (JH5071).

### 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 (JH5072).

### 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

### Input Capabilities:

4mV minimum span, 1V maximum span. (Specify Model JH5000 for spans greater than 1V). Offset ranges are allowed. (Input Impedance: 200Kohms or greater.)

### 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).

### Accuracy:

+/-0.1% of span or 10 microvolts, whichever is greater.

### Adjustability:

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

### Linearity:

+/-0.05% of span or better.

### 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).

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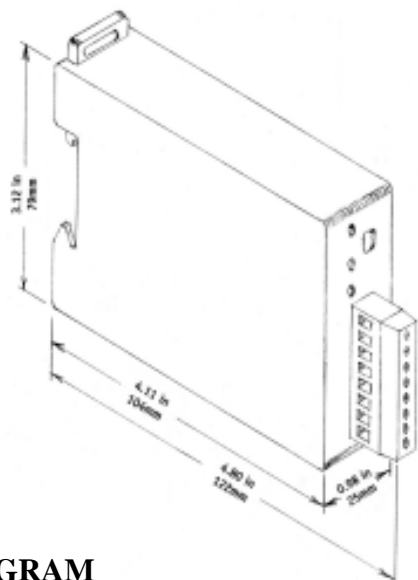
## Specifications (continued)

### Temperature Stability:

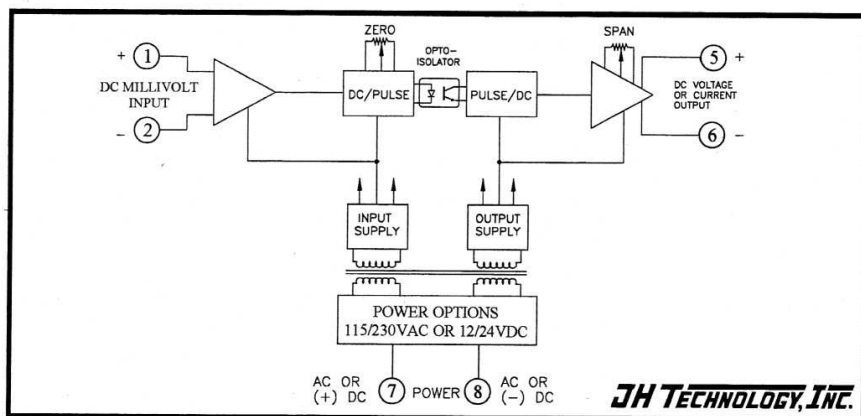
+/- (0.02% of span plus 1.3 microvolts) per °C, or better.

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

## DIMENSIONAL DRAWING



## BLOCK DIAGRAM



## SEVEN-YEAR WARRANTY

The JH5070 will be replaced free if it fails due to defects in materials or workmanship within seven years of the date shipped.

8/2010



## DC INPUT DIN-RAIL TRANSMITTER

For millivolt input ranges (less than 1 volt)

Model JH5070 DIN-Rail Transmitter provides an isolated DC output proportional to a DC millivolt input. It is useful for amplifying sensors and other low-level signals, for eliminating ground loops and noise problems and for converting millivolts to higher-level voltages or currents.

The one-inch-wide case snaps onto DIN rail and the terminal strip unplugs for ease of replacement. The JH5070 is a fixed-range device, precisely calibrated to your range at the factory. A user-rangeable transmitter is available (Model JH5080).

The standard JH5070 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.

Model JH5070 incorporates a low-drift input amplifier for accurate measurements under varying ambient conditions. Available options include AC and DC power choices and reverse-acting transmitter (decreasing output with increasing input).

## **JH TECHNOLOGY, INC.**

Sarasota, FL USA

(800) 808-0300 or (941) 927-0300

Fax: (941) 925-8774

[www.jhtechnology.com](http://www.jhtechnology.com)