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# JH5000/30/60/70

## DC INPUT DIN-RAIL TRANSMITTERS

### FEATURES

- Input Ranges from 4mV to 250Volts, 1mA to 5 Amps
- Nonstandard Ranges Available
- Input/Output Isolation Standard
- High Speed Option HS Available
- Quick-Check Red/Green Output LEDs
- Unpluggable Terminal Strip
- AC or DC Power Options



### DESCRIPTION

JH5000 Series DIN-Rail Transmitters provide an isolated DC output proportional to a DC voltage or current input. They are useful for amplifying, reducing, scaling or offsetting signals, for eliminating ground loops and noise problems and for converting currents to voltages or vice-versa. The model numbers listed below reflect a variety of input choices but all share the same basic circuitry, features and specifications.

The one-inch-wide case snaps onto DIN rail, and the terminal strip unplugs for ease of replacement. This page covers factory calibrated fixed-range devices. A user-rangeable rangeable transmitter is available: see Model JH5080.

Models JH5060 and JH5070 incorporate a low-drift amplifier for millivolt-level inputs. All models use stable, proven circuitry for accurate measurements 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 or DC power and reverse-acting transmitter (decreasing output with increasing input).

### HOW TO ORDER

#### Model Numbers:

- JH5000: DC Voltage Inputs, 1V or Greater
- JH5030: DC 4/20mA Input
- JH5060: DC Current Inputs (except 4/20mA)
- JH5070: DC Millivolt Inputs, less than 1V

Also see separate pages for:

- JH5040: 4/20mA Input with Loop Excitation Supply
- JH5050: 4-20mA Input/Output Isolator
- JH5080: User-Rangeable DC Transmitter

#### Power:

Add suffix A (for example, JH5000A) for AC power, D for DC power. Specify 115Vac, 230Vac, 12Vdc or 24Vdc.

#### Input Range:

Specify any DC voltage or current 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).

#### Reverse-Acting Transmitter:

Decreasing output with increasing

input. Change last digit of the model number to 1 (for example, JH5001A).

#### 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 (for example, JH5002A).

#### High Speed Response:

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

#### Urethane Coating:

Specify Option U.

## INSTALLATION

JH5000 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: 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).

## 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, Model JH5000:

1V minimum span, +/-250V maximum input. Offset ranges are allowed. (Input Impedance: 200kohms or greater.)

### Input Range, Model JH5030:

4/20mA dc. (62 ohms input resistance. 1.25V drop at full scale.)

### Input Capabilities, Model JH5060:

1mA minimum span, +/-5 Amps maximum input. Offset ranges are allowed. (Input voltage drop typically 0.1V at full scale.)

### Input Capabilities, Model JH5070:

4mV minimum span, 1V maximum span (specify 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: 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:

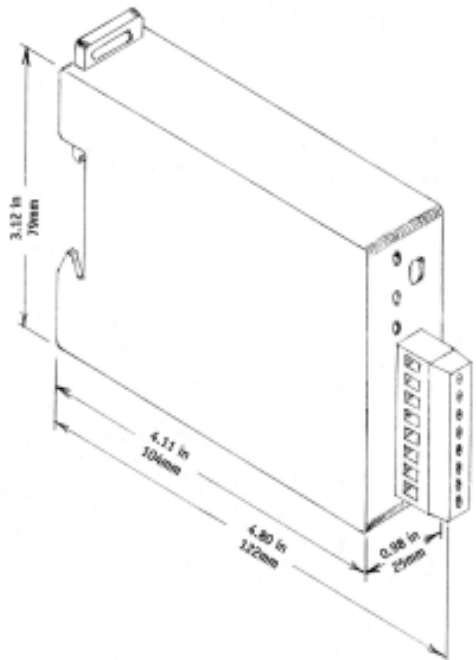
-10 to +60°C (14 to 140°F).

### Temperature Stability:

+/- (0.02% of span plus 1.3 microvolts) 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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