

JH4051I

PLUG-N-PLAY STRAIN GAUGE TRANSMITTER

FEATURES

- Input Spans as low as 0.4mV/V (at 10V excitation)
- Offset and Nonstandard Ranges Available
- Excitation Adjustable from 4 to 12V
- Input/Output Isolation is Standard
- Quick-Check Red/Green Output LEDs
- Industry Standard Pinouts (11-Pin Socket)
- AC or DC Power Options



DESCRIPTION

Model JH4051I supplies DC excitation to a strain gauge or other resistance bridge, amplifies the bridge output and provides a proportional DC voltage or current. A fixed-range device, it is precisely calibrated to your specified range at the factory.

Fully adjustable excitation permits use with bridge resistances as low as 120 ohms while staying within the transmitter's 40mA excitation supply capability. A low-drift input amplifier maintains accuracy under varying ambient conditions.

Input/output isolation is standard. Available options include AC or DC power choices and reverse-action Option RT (decreasing output with increasing input). Bridge applications other than strain gauges are possible: contact the factory with your requirements.

HOW TO ORDER

Model Number: JH4051I

Power:

Add suffix -AC (JH4051I-AC) for AC power or -DC for DC power. Specify 115Vac, 230Vac, 12Vdc or 24Vdc.

Input Range:

Specify range required in millivolts (mV), volts (V) or millivolts per volt (mV/V). For example, with 10V bridge excitation a range of 0/20mV is the same as 0/2 mV/V. See Specifications (on

back) for input capabilities. Off-set input ranges are allowed.

Bridge Excitation:

User-adjustable. Normally factory-set to 10V. For other settings specify any voltage between 4 and 12Vdc. (Note: 40mA maximum load. For 120ohm bridges, specify 4.8V or less.)

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. Specify Option RT.

Loop-Powered Output:

4/20mA "current sink" output stage for connection to devices whose inputs provide 24Vdc loop excitation. Specify Option LPO.

Urethane Coating:

Specify Option U.

INSTALLATION

The JH4051I plugs into any standard 11-pin circular (“octal”) relay socket. JH Technology offers two sockets: DS011 for DIN-rail or surface mounting and ST011 for Snap-Track mounting (see the Accessories page).

CONNECTIONS

Pin 1: Power (AC or, if DC power option, DC plus).

Pin 2: No connection.

Pin 3: Power (AC or, if DC power option, DC minus).

Pin 4: Input plus (bridge output).

Pin 5: Input minus (bridge output).

Pin 6: No connection.

Pin 7: Bridge excitation plus.

Pin 8: Bridge excitation minus.

Pin 9: Output plus.

Pin 10: Output minus.

Pin 11: No connection.

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 (0.4mV/V at 10V excitation). 10V maximum span (1V/V at 10V excitation). Offset ranges are allowed. (Input Impedance: 200kohms.)

Excitation Voltage:

Adjustable from 4 to 12Vdc. 40mA maximum load. Factory set to 10Vdc unless otherwise specified. (Note: 120 ohm bridges limited to 4.8V or less. 350 ohm bridges are ok to 12V.)

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:

Under 100 milliseconds.

Isolation:

Power, 1,500Vac rms (2,100V peak). Input/Output, 1,000Vac rms (1,400V peak).

Operating Temperature:

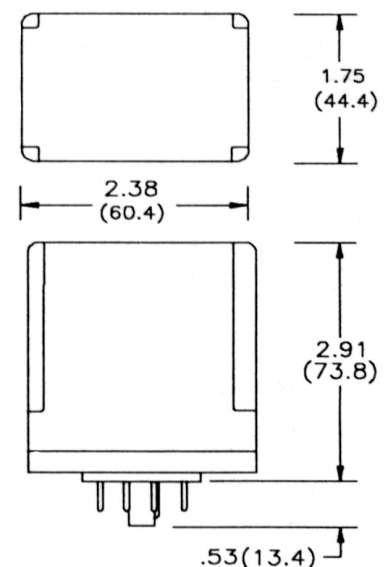
-10 to +60°C (14 to 140°F).

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.



JH TECHNOLOGY, INC.

SARASOTA, FL USA
(800) 808-0300

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