

INSTALLATION

Model JH4003I plugs into any standard 8-pin circular (“octal”) relay socket. JH Technology offers part #DS008 for DIN-rail or surface mounting.

CONNECTIONS

Connections to the 8 socket terminals are:

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: Potentiometer ccw (0% travel).

Pin 5: Potentiometer wiper.

Pin 6: Potentiometer cw (100% travel).

Pin 7: Output plus.

Pin 8: Output minus.

RECALIBRATION

Model JH4003I is factory-set to the range ordered. To check or readjust calibration, proceed as follows:

Connect a precision potentiometer to the input. (If the input range is 0/100% you can calibrate without using a potentiometer per the instructions which follow.) Connect a precision DC voltage or current meter to the output. To maintain factory-calibration accuracy the meter should be 4-1/2 digits or better with an accuracy of 0.05%.

Set the potentiometer to the low end of the range or, for 0%, simply jumper the wiper input to counterclockwise. (If reverse-acting, set the input to full scale or jumper the wiper to clockwise.) Adjust the *ZERO* adjustment for the proper low-end output.

Set the input to full-scale or, for 100%, jumper the wiper input to clockwise. (If reverse-acting, set the input to the low end of the range or jumper the wiper to counterclockwise.) Adjust the *SPAN* adjustment for the proper full-scale output.

Repeat until both readings are correct.

AVAILABLE OPTIONS

Power:

Add suffix -AC (for example, JH4003I-AC) for AC power, -DC for DC power. Specify 115Vac, 230Vac, 12Vdc or 24Vdc.

Input Potentiometer:

It is not necessary to specify the potentiometer’s resistance. The transmitter will work with any potentiometer resistance between 100 ohms and 100Kohms.

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: 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 Potentiometer:

May be any resistance between 100 ohms and 100Kohms. It is not necessary to specify the potentiometer resistance on your order: end-to-end resistance does not affect the calibration.

Input Capabilities:

0/100% travel, or any 10% or wider portion of the travel (for example, 35/45%).

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 better.

Adjustability:

Zero and span each are adjustable approx. +/-15% of span. When ordered for 0-100% travel, the adjustments are set up so as to allow calibration to any 75% or wider portion of the travel (for example, 0-75% or 25-100%).

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).

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

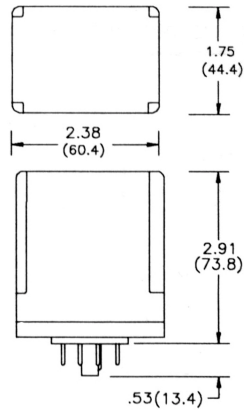
Temperature Stability: +/-0.02% of span per °C, or better

Power Requirements:

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

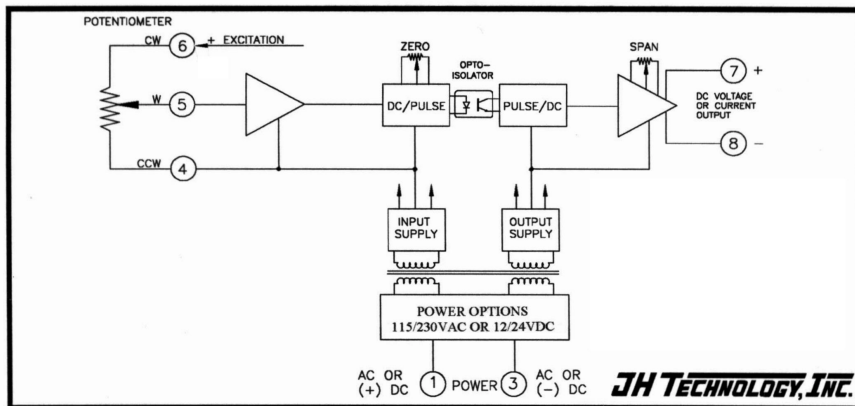
DIMENSIONAL DRAWING

JH4003I



POTENTIOMETER INPUT TRANSMITTER

BLOCK DIAGRAM



Model JH4003I provides a DC output proportional to the position of a potentiometer or slidewire wiper. A fixed-range device, it is precisely calibrated to your specified range at the factory.

Expanded input ranges are available. Standard calibration is 0/100% potentiometer travel, but you may specify any range covering a 10% or wider portion of the travel. Calibration is unaffected by the potentiometer's end-to-end resistance. Red-green LEDs provide a quick indication of the output signal level.

Available options include AC or DC power choices and reverse-action Option RT (decreasing output with increasing input).

SEVEN-YEAR WARRANTY

Model JH4003I 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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