

FEATURES

- Available for All Thermocouple Types
- Linearized Option Available
- Input/Output Isolation is Standard
- In-The-Terminal Cold Junction Compensation
- Jumper-Selectable Upscale/Downscale Burnout
- Quick-Check Red/Green Output LEDs
- AC or DC Power Options



DESCRIPTION

Models JH4130 provides a DC voltage or current proportional to millivolts produced by a thermocouple. Model JH4130L adds linearization to compensate for thermocouple nonlinearity, producing an output truly proportional to temperature. Both are fixed-range devices, precisely calibrated to your specified ranges at the factory.

The cold junction compensation sensor is encapsulated into the input terminal for maximum accuracy. A low-drift input amplifier maintains accuracy under varying ambient conditions. Input/output isolation to is standard to avoid errors due to ground loops or electrical leakages.

An internal jumper allows upscale or downscale indication upon thermocouple burnout (factory set for upscale unless otherwise specified on your order). Available options include thermocouple linearization (Model JH4130L), AC or DC power choices and reverse-action Option RT (decreasing output with increasing input).

HOW TO ORDER

Model Numbers:

JH4130: Input/Output Isolated.
JH4130L: Isolated & Linearized.

Power:

Add suffix –AC for AC power or –DC for DC power. (Example: JH4130L-AC.) Specify 115Vac, 230Vac, 12Vdc or 24Vdc.

Thermocouple Type:

Select type J, K, T, E, R, S, B or N. Contact factory for others.

Input Range:

Specify range required in °C or °F. See Specifications for input capabilities.

Output Range:

Specify any DC voltage or current range allowed by the “Output Capabilities” spec (see back).

T/C Burnout Indication:

Specify upscale (offscale high) or downscale (offscale low) burnout indication. Will be set for upscale if

not specified on your order.

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

These transmitters plug into any standard 8-pin circular (“octal”) relay socket. JH Technology offers part # DS008 for DIN-rail or surface mounting (see the Accessories page).

CONNECTIONS

Input: The thermocouple connects to a small terminal block (which also includes cold junction compensation) on the side of the module. (Note: on most thermocouples, red is minus.) The remaining pin connections 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: No connection.

Pin 5: No connection.

Pin 6: No connection.

Pin 7: Output plus.

Pin 8: Output minus.

BURNOUT INDICATION

Upscale burnout indication drives the output offscale high if the thermocouple breaks or burns out. Downscale drives it offscale low. Burnout indication may be changed by moving an internal jumper.

Factory set to upscale unless otherwise specified.

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:

Any input span 4mV or higher. Offset ranges are allowed.

Input Thermocouple Type:

Any standard thermocouple type (J, K, T, E, R, S, B, N). Others possible – contact factory.

T/C Burnout Indication:

Jumper-selectable upscale (offscale high) or downscale (offscale low). Factory-set for upscale unless otherwise specified.

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, +/-0.2°C or +/-20 microvolts, whichever is greatest.

Adjustability:

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

Response Time:

Under 100 milliseconds.

Isolation:

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

Operating Temperature:

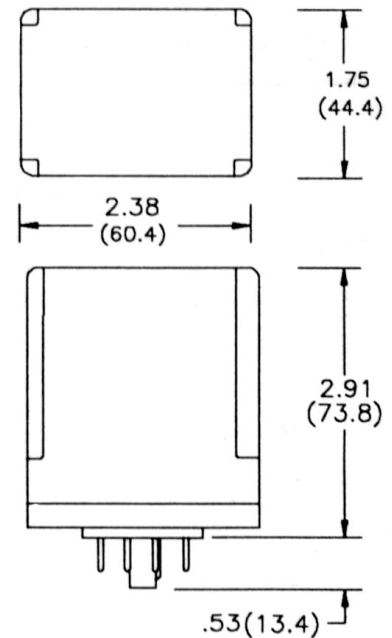
-10 to +60°C (14 to 140°F).

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.



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