

### FEATURES

- Available for All Thermocouple Types
- Linearized Option Available
- Automatic Cold-Junction Compensation
- Input/Output Isolated
- High Speed Option HS Available
- Unpluggable Terminal Strip
- AC or DC Power Options



### DESCRIPTION

Model JH5200 provides a DC voltage or current proportional to millivolts produced by a thermocouple. Model JH5210 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 is standard to avoid errors due to ground loops or electrical leakages.

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.

Available options include AC and DC power choices, reverse-acting transmitter (decreasing output with increasing input) and downscale burnout indication (upscale is standard).

### HOW TO ORDER

**Model Numbers:** JH5200, standard.  
JH5210, linearized.

**Power:**

Add suffix A (for example JH5200A) for AC power, D for DC power. Specify 115Vac, 230Vac, 12Vdc or 24Vdc.

**Thermocouple Type:**

Specify any standard thermocouple type (E, J, K, T, R, S, B or N), or contact factory for others.

**Input Range:**

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

**Burnout Indication:**

Upscale burnout indication is standard. (Output goes high if thermocouple input opens.) If downscale indication is required, specify “Downscale Burnout” on your order.

**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, JH5201A).

**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, JH5202A).

**High Speed Response:**

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

**Urethane Coating:**

Specify Option U.

## INSTALLATION

These 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: Thermocouple plus.
- 2: Thermocouple minus. (Note: On most thermocouples, red is 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).

## BURNOUT INDICATION

Upscale burnout indication (standard) drives the output offscale high if the thermocouple breaks or burns out. Downscale (optional) drives it low. Upscale is provided unless otherwise specified on your order.

## 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 Thermocouple:

Available for types E, J, K, T, R, S, B or N. Contact factory for others.

### Input Capabilities:

Any span 4mV or higher. (4mV equals 100°C for type K thermocouple.) Offset ranges are allowed.

### 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:

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:

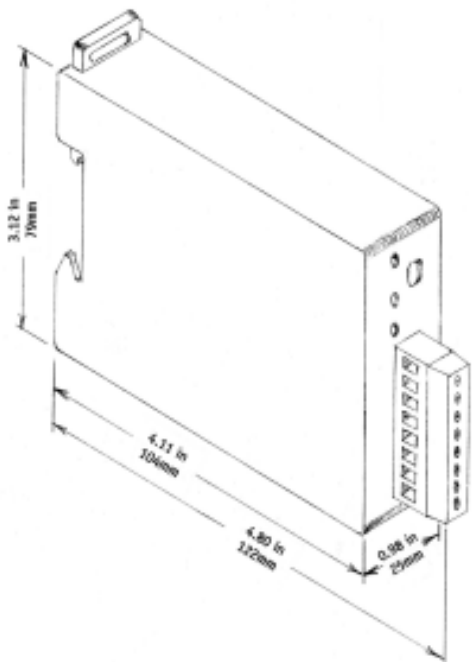
-10 to +60°C (14 to 140°F).

### 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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# **JH TECHNOLOGY, INC.**

SARASOTA, FL USA

(800) 808-0300

www.jhtechnology.com

e-mail: jhtek@jhtechnology.com