

### FEATURES

- Available for All Thermocouple Types
- Input Ranges as low as 2mV
- Low-Drift Input Amplifier
- In-The-Terminal Cold Junction Compensation
- Fits Standard Connection Heads
- -40 to +80 Degree C Operation
- DIN Rail Mounting Available



### DESCRIPTION

The Model JH220 2-wire transmitter provides a 4/20mA current loop output proportional to the input from a thermocouple. A fixed-range device, it is precisely calibrated to your specified input range at the factory. (For a rangeable 2-wire thermocouple transmitter see Model JH225.) Span may be as low as 2 millivolts (approximately 50 deg C for type K thermocouple). Cold junction compensation is located in the terminal block for optimum accuracy. Conformal coating protects the circuitry against condensation and corrosion in industrial atmospheres. Upscale burnout indication is standard.

The JH220 is a loop-powered device. Connected in series between a 24Vdc supply and readout instruments, it receives its power from the 4/20mA output loop. A built-in LED indicates loop current: dim at 4mA, bright at 20. The JH220 does not provide input/output isolation.

Its small 1-3/4 inch diameter allows the transmitter to fit most standard thermocouple-type connection heads. It also may be surface mounted. A DIN rail mounting clip option is available.

### HOW TO ORDER

**Model Number:** JH220.

**Thermocouple Type:**

Specify type J, K, T, E, R, S, B or N, or contact factory for others.

**Input Range:**

Specify any range corresponding to 2mV or higher span. (2mV equals approx. 50 deg. C for type K thermocouples.)

**T/C Burnout Indication:**

(Always upscale – offscale high.)

**Output Range:**

(Always 4/20mAdc.)

**Power:**

(Always dc loop powered.)

**DIN-Rail Mounting:**

Change model number to Model JH220-DIN. (See “Installation and Connections” on back.)

Note: Urethane coating is standard.

### OEM PRODUCTS

JH Technology 2-wire thermocouple and RTD transmitters can be made available with solder-jumper pads for range selection. Contact the factory for details.

## INSTALLATION

The 1-3/4 inch diameter JH220 is designed to fit many standard thermocouple-type connection heads. It may also be mounted to any surface using two #8 (or smaller) screws. An optional DIN-rail mounting clip (specify Model JH220-DIN) allows the transmitter to be snapped onto DIN rail. Width is 1-3/4 inches.

## CONNECTIONS

Connections are made to the transmitter's terminal strip. Connections are:

**“+” Terminal:** Output/Power Loop. Receives current from (+) DC supply.

**“-” Terminal:** Output/Power Loop. Passes on current to the next series loop device, or to the (-) supply.

**Terminal A:** Thermocouple plus.

**Terminal B:** No connection – compensator is encapsulated in this position.

**Terminal C:** Thermocouple minus. (On most thermocouples, the red wire is minus.)

## SPECIFICATIONS

### Input Capabilities:

Any input span 2mV or higher. Offset ranges are allowed.

### Thermocouple Type:

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

### T/C Burnout Indication:

Output goes offscale high (above 20mA).

### Output:

4/20mA, 2-wire (loop-powered) output.

### Endpoint Accuracy:

+/-0.1% of span or 10 microvolts, whichever is greater.

### Adjustability:

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

### Linearity:

Linear with millivolts. Does not linearize the thermocouple.

### Response Time:

Under 100 milliseconds.

### Operating Temperature:

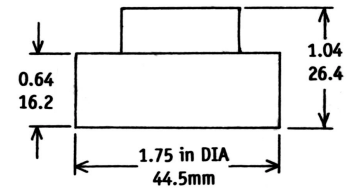
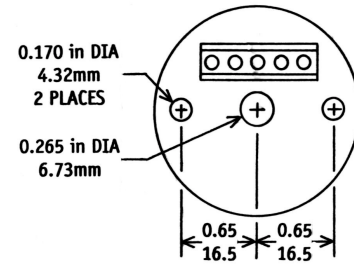
-40 to +80 deg. C (-40 to +176 deg. F).

### Temperature Stability:

+/- (0.02% of span plus 1 microvolt) per deg. C, or better.

### Power Requirements:

DC loop-powered. Requires at least 12Vdc at the transmitter's output terminals. 36Vdc maximum.



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