

### FEATURES

- Frequency Ranges from 10Hz to 100kHz
- Outputs from 0/0.5V to -10/+10V, 0/1mA to 0/25mA
- Pullup Resistor and Sensor Excitation Included
- Fully User-Rangeable
- Input/Output Isolation is Standard
- Quick-Check Red/Green Output LEDs
- AC or DC Power Options

### DESCRIPTION

Model JH7580 provides an isolated DC output proportional to the input signal's frequency or pulse rate. It can handle inputs from 50mV to 700V peak-to-peak (see specifications) without recalibration. Input and output ranges are fully user-rangeable. Input/output isolation eliminates ground loops and guards against shock hazards when using high-voltage inputs. A sensitivity adjustment provides optimum tradeoff between sensitivity and noise rejection for each application.

Pin connections allow the selection of two options: a pullup resistor for dry-contact or open collector inputs and a built-in DC excitation supply (approx. 18V) for low-current DC proximity sensors (25mA max).

AC and DC power choices are available. For additional options see fixed-range transmitter Model JH7010.

### HOW TO ORDER

**Model Number:** JH7580

**Power:**

Add suffix -AC for AC power or -DC for DC power. (Example: JH7580-AC.) Specify 115Vac, 230Vac, 12Vdc or 24Vdc.

**Factory Settings:**

The JH7580 is normally shipped tested but uncalibrated. If you would like us to calibrate it to specific input and output range settings simply specify on your order. We'll do it at no extra charge.

**Input Sensitivity:**

Sensitivity is normally set for maximum. If you wish a different setting simply specify on your order. Again, no extra charge.

**Other Options:**

Please refer to Model JH7010 fixed range transmitter for a complete selection of options.



### INSTALLATION

Model JH7580 plugs 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

**Please note:** Model JH7580 uses pins 2 and 4 to offer features not included on some competitive transmitters. **Do not use pins 2 and 4 as tie points in your system.**

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

**Pin 2:** +18V (approx.) sensor excitation voltage output. See specifications.

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

**Pin 4:** Pullup resistor (10Kohms to +5V). Jumper pins 4 and 5 together for use with dry contact or open-collector (NPN) inputs.

**Pin 5:** Frequency input. (For normal inputs use pins 5 & 6.)

**Pin 6:** Input common.

**Pin 7:** Output plus.

**Pin 8:** Output minus.

## AVAILABLE RANGES

**Input:** Any zero-based range from 0/10Hz to 0/100kHz. Expanded-scale inputs are sometimes possible; for example, to create 0/10V output from 40/80Hz input set the transmitter up for 0/80Hz input, -10/+10V output. The output will be 0V at 40 Hz.

**Output:** Standard output ranges include:

|        |          |
|--------|----------|
| 0/1V   | -10/+10V |
| -1/+1V | 0/1mA    |
| 0/2V   | 1/5mA    |
| 0/5V   | 0/10mA   |
| 1/5V   | 0/20mA   |
| 0/10V  | 4/20mA   |

Others are possible.

## SENSITIVITY ADJUSTMENT

The sensitivity trimpot sets the threshold below which the unit will not respond. *Clockwise* provides *maximum* sensitivity (see specs); counterclockwise, minimum.

## 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:

See "Available Ranges", above.

### Input Amplitude:

350V peak (700V pk-pk, 250V rms sine wave) maximum.

### Threshold Adjustment:

25 turn trimpot. *Maximum sensitivity (full clockwise):* 50mV pk-pk for frequencies below 1kHz. Increases with frequency to 1V pk-pk at 100kHz.

*Minimum sensitivity (full counterclockwise):* 8V pk-pk for frequencies below 1kHz. Increases with frequency to 20V pk-pk at 100kHz.

### Input Pullup Resistor:

10Kohms to +5V. Jumper pins 4 and 5 to activate.

### Input Sensor Excitation:

Approx. 18Vdc, unregulated, 25mA max. current. Available at pin 2.

### Output Capabilities:

See "Available Ranges", above.

### Accuracy:

+/-0.1% of span or better, if properly calibrated using precision instruments.

### Adjustability:

Sufficient to achieve all specified input and output ranges.

### Linearity:

+/-0.05% of span or better.

### Isolation:

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

### Operating Temperature:

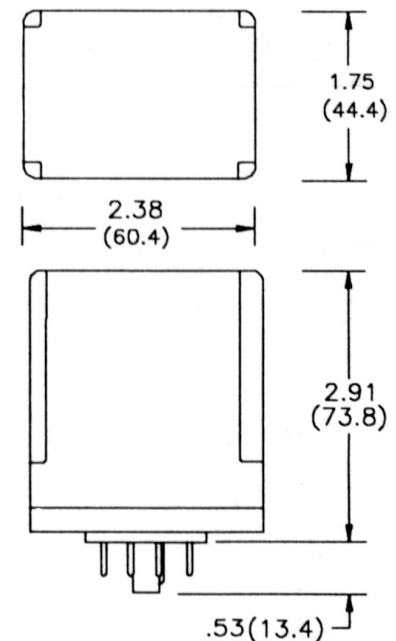
-10 to +60°C (14 to 140°F).

### Temperature Stability:

+/-0.02% of span 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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