
JH5110/5120/5130

ADD/SUBTRACT DIN-RAIL TRANSMITTERS

FEATURES

- Voltage or Current Inputs and Outputs
- Nonstandard Ranges Available
- Input/Output Isolation Standard
- High Speed Option HS Available
- Quick-Check Red/Green Output LEDs
- Unpluggable Terminal Strip
- AC or DC Power Options



DESCRIPTION

JH5100 Series Add/Subtract Transmitters respond to the sum or difference of 2 or 3 DC inputs and provide a proportional, isolated DC output. Input and output ranges need not be the same; for example, the inputs could be 0/10Vdc while the output could be 4/20mA. The model numbers listed below reflect three different input functions but all share the same basic circuitry, features and specifications.

Standard calibration provides low-end output (0%) when all inputs are at 0%. On Models JH5110 and JH5120 full-scale output (100%) occurs when all inputs are at 100%. On Model JH5130, full-scale output occurs when input A is at 100% and input B at 0%. Voltage or current inputs and outputs may be chosen: the input and output ranges need not be the same. Nonstandard calibrations are available, including unequal weighting, dissimilar input ranges and input-to-output offsets. Contact us with your requirements.

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.

Other options include AC and DC power choices and reverse-acting transmitter (decreasing output with increasing input).

HOW TO ORDER

Model Numbers:

JH5110: (A+B)/2
JH5120: (A+B+C)/3
JH5130: (A-B)

Output Range:

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

whose inputs provide 24Vdc loop excitation. Change the last digit of the model number to 2 (for example, JH5112A).

Power:

Add suffix A (for example, JH5110A) for AC power, D for DC power. Specify 115Vac, 230Vac, 12Vdc or 24Vdc.

Reverse-Acting Transmitter:

Decreasing output with increasing input. Change the last digit of the model number to 1 (for example, JH5111A).

High Speed Response:

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

Input Range:

Specify any DC voltage or current range allowed by the "Input Capabilities" spec (see back).

Loop-Powered Output:

4/20mA "current sink" output stage for connection to devices

Urethane Coating:

Specify Option U.

INSTALLATION

JH5100 Series 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: Input A (positive).
- 2: Input common (negative).
- 3: Input B (positive).
- 4: Input C (positive - Model JH5120 only).
- 5: Output positive.
- 6: Output negative.
- 7: Power (AC or, if DC power option, DC plus).
- 8: Power (AC or, if DC power option, DC minus).

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

Voltage Input Capabilities:

100mV minimum span, +/-20V maximum input. Offset ranges are allowed. (Input Impedance: 200kohms or greater.)

Current Input Capabilities:

1mA minimum span, +/-100mA maximum input. Offset ranges are allowed. (Input Resistance: Varies with input range. Contact factory for details. 62 ohms for 4/20mA input.)

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.

Adjustability:

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

Linearity:

+/-0.05% of span or better.

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). (The inputs are not isolated from each other.)

Operating Temperature:

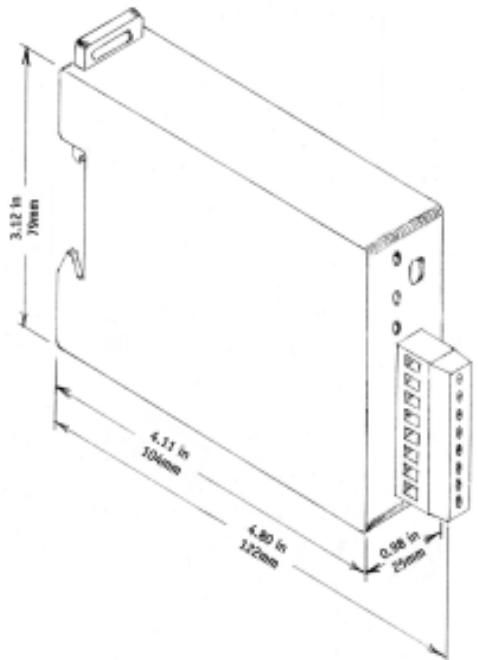
-10 to +60°C (14 to 140°F).

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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