

## **JH5100 SERIES ADD/SUBTRACT TRANSMITTERS DIN-RAIL MOUNT, FIXED RANGE**



**JH5110:  $(A+B)/2$**

**JH5120:  $(A+B+C)/3$**

**JH5130:  $(A-B)$**

- Voltage or Current Inputs and Outputs
- Quick-Check Red/Green Output LEDs
- Nonstandard Ranges Available
- High Speed "Option HS" Available
- DIN-Rail Mount, 1 Inch Wide
- Unpluggable Terminal Strip
- AC or DC Power Options

**[JH5110/JH5120/JH5130](#)**  
**[PDF](#)**

### DATA SHEET

### JH5110/JH5120/JH5130

### PDF

### MANUAL

Also see:

[JH5140/JH5150](#) for Multiply/Divide functions

[JH5160/JH5170](#) for Square/Square Root functions

JH5100 Series Add/Subtract Transmitters respond to the sum or difference of 2 or 3 DC inputs and provide a proportional, isolated DC output. The model numbers listed above reflect a variety of 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%.

Nonstandard calibrations are available, including unequal weighting, dissimilar input ranges and input-to-output offsets. [Contact us](#) with your requirements.

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.

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 available on special order.

Voltage or current inputs and outputs may be chosen: the input and output ranges need not be

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

## ORDERING INFORMATION

<b>Model Number:</b>	<input type="text"/>	<b>Select from the list above</b>
<b>Input Range:</b>	<input type="text"/>	<b>Specify any DC voltage or current</b>
<b>Output Range:</b>	<input type="text"/>	<b>Specify any DC voltage or current</b>
<b>Power:</b>	<input type="text"/>	<b>Specify 115Vac, 230Vac, 12VDC</b>
<b>Reverse-Acting Transmitter:</b>	<input type="text" value="Decreasing output with increasing input"/>	<b>Change the last digit</b>
<b>Loop-Powered Output:</b>	<input type="text" value="4/20mA 'current sink'"/>	<b>output stage for connection</b>
<b>High Speed Response:</b>	<input type="text"/>	

**Approximately 1 msec** (See Specifications). Specify Option HS.

<b>Urethane Coating:</b>	<input type="text"/>	<b>Specify Option U.</b>
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## INSTALLATION AND CONNECTIONS

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 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).

## DETAILED SPECIFICATIONS

<b>Voltage Input Capabilities:</b>
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**100mV minimum span, +/-20V maximum input. Offset ranges are allowed. (Input Impedance: 200kΩ)**

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## Current Input Capabilities:

1mA minimum span, +/-100mA maximum input. Offset ranges are allowed.

## Voltage Output Capabilities:

1 volt minimum output span, -10 to +15V absolute limit. Offset ranges are allowed. Maximum output

## Current Output Capabilities:

1mA minimum output span, 0 to +25mA absolute limit. Positive offsets are allowed, negative out

Accuracy (factory calibration) :□

+/-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: Approximately 95% complete in 1 msec. Frequen

Isolation: □

3-way (Power/Input/Output) 1,500Vac rms (2,100V peak). (The inputs are not isolated from each o

Guaranteed Operating Temperature: □

-10 to +60 deg. C (14 to 140 deg. F).

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**Temperature Stability:**

**+/-0.02% of span per deg. C, or better.**

**Power Requirements:**

**AC, 115 or 230Vrms, 50/60Hz, 2.5V-A. DC, 12 or 24V, 2.5W.**