

DC INPUT ADD/SUBTRACT TRANSMITTERS PLUG-IN MODULES, FIXED RANGE



Model Numbers:

JH4400I: Output = (A+B+C+D)/4

JH4401I: Output = (A+B+C)/3

JH4402I: Output = (A+B)/2

JH4408I: Output = A-B

- Add up to Four DC Inputs, or subtract
- Quick-Check Red/Green Output LEDs
- Industry Standard Pinouts (11-Pin Socket)
- Input and Output Ranges Need Not be Equal
- AC or DC Power Options

[**JH4400I/JH4401I/ JH4402I/JH4408I**](#)

[**PDF**](#)

[**DATA SHEET**](#)

[**JH4400I/JH4401I/ JH4402I/JH4408I**](#)

[**PDF**](#)

[**MANUAL**](#)

The JH4400 Series offers DC outputs representing 2, 3 or 4-input sums or (A-B) difference. Input and output ranges need not be the same; for example, the inputs could be 0/10Vdc while the output could be 4/20mA. These are fixed-range devices, precisely calibrated to your specified ranges at the factory.

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.

Input/output isolation is standard. (The inputs are not isolated from each other.) Available options include, AC or DC power choices and reverse-action Option RT (decreasing output with increasing inputs).

UNDERSTANDING THE INPUT FUNCTIONS

Standard calibration provides low-end output (0%) when all inputs are at 0%. Full-scale output (100%) occurs when all additive (+) inputs are at 100% and all subtractive (-) inputs are at 0%. Standard calibration assumes the output always will be 0% or higher, never negative. All calculations are on a percent-of-span basis. With 4/20mA, for example, 4mA = 0% and 20mA = 100%. Likewise, for -5/+5V, -5V=0%, 0V=50% and +5V=100%.

Nonstandard setups and calibrations are possible. For example, we have created a number of specials providing unequal input weightings (such as $A+2B+0.5C+0.5D$), and with up to six inputs. Please contact the factory with your requirements.

ORDERING INFORMATION

Model Number:

Select your model number from the list above. Add suffix –AC for AC power

Input Range:

Specify any DC voltage or current range allowed by the "Input Capabilities"

Output Range:

Specify any DC voltage or current range allowed by the "Output Capabilities"

Power:

Specify 115Vac, 230Vac, 12Vdc or 24Vdc.

Reverse-Acting Transmitter (decreasing output with increasing input)

Specify Option RT.

Loop-Powered Output:

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

Urethane Coating:

Specify Option "U"

INSTALLATION AND CONNECTIONS

These transmitters plug into any standard 11-pin circular ("octal") relay socket. JH Technology offers a socket suitable for DIN-rail or surface mounting (see the [Accessories](#) page). Pin connections are:

JH4400-I-Series DC Input Add Subtract Transmitter

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

Pin 2: No connection.

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

Pin 4: A input (plus).

Pin 5: Input common (minus).

Pin 6: B input (plus).

Pin 7: C input, if used (plus).

Pin 8: D input, if used (plus).

Pin 9: Output plus.

Pin 10: Output minus.

Pin 11: No connection.

DETAILED 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)

Voltage Output Capabilities:

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

Current Output Capabilities:

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

Accuracy (factory calibration)

+/-0.1% of span or better.

Adjustability:

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

Linearity:

+/-0.05% of span or better.

Response Time:

Under 100 milliseconds.

Isolation:

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

Guaranteed Operating Temperature:

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

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.