
FDT5110/5120/5130

ADD/SUBTRACT FIELD MOUNT TRANSMITTERS

FEATURES

- NEMA 4X Splashproof Enclosure
- 3-1/2 Digit User-Rangeable Display
- Voltage or Current Inputs and Outputs
- Nonstandard Ranges Available
- Input/Output Isolation Standard
- Urethane-Coated Circuit Boards
- AC or DC Power Options

DESCRIPTION

FDT5100 Series Add/Subtract Transmitters respond to the sum or difference of 2 or 3 DC inputs and provide a proportional, isolated DC output.

Standard calibration provides low-end output (0%) when all inputs are at 0%. On Models FDT5110 and FDT5120 full-scale output (100%) occurs when all inputs are at 100%. On Model FDT5130, 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.

A rugged NEMA 4X splashproof, corrosion-resistant housing protects the transmitter in outdoor and industrial environments. The circuit boards are urethane coated for protection against condensation and contaminants. FDT5100 Series transmitters include a 3-1/2 digit display to provide local process indication.

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

For field mount transmitters without a display select any of our plug-in transmitters plus our ENCL-1 NEMA-4X enclosure.



HOW TO ORDER

Model Numbers:

FDT5110: (A+B)/2
FDT5120: (A+B+C)/3
FDT5130: (A-B)

Power:

Add suffix A (for example, FDT5110A) for AC power, D for DC power. Specify 115Vac, 230Vac, 12Vdc or 24Vdc.

Input Range:

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

Output Range:

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

Display Range:

Specify display reading at low end and at full scale output. See "Display Capabilities" specification on back.

Reverse-Acting Transmitter:

Decreasing output with increasing input. Change the last digit of the model number to 1 (for example, FDT5111A).

Loop-Powered Output:

4/20mA "current sink" output stage for connection to devices whose inputs provide 24Vdc loop excitation. Change the last digit of the model number to 2 (for example, FDT5112A).

Conduit Connection:

Standard: A single 1/2 inch NPT conduit fitting (glass-fiber reinforced nylon) is provided at the bottom of the housing. Other options are possible, including no fitting at all. Contact factory.

INSTALLATION

FDT5000 Series transmitters provide four mounting holes, 0.19 inch/4.8 mm diameter, beneath the cover screws. Remove the cover, mount the transmitter with four screws (#10 or smaller) and reinstall the cover for a NEMA-4X splashproof seal.

CONNECTIONS

Connections are made to 8 terminals within the enclosure:

- 1: Input A (positive).
- 2: Input common (negative).
- 3: Input B (positive).
- 4: Input C (positive - Model FDT5120 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).

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).

Display Capabilities:

Low end and full scale readings may be anywhere between -1999 and +1999 counts. A fixed decimal point may be added in any position. Minimum span (full scale minus low end) is 10 counts. Reverse-acting display is possible (full scale reading downscale from low end). Display may be re-ranged by user.

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:

Under 100 milliseconds.

Isolation:

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

Operating Temperature:

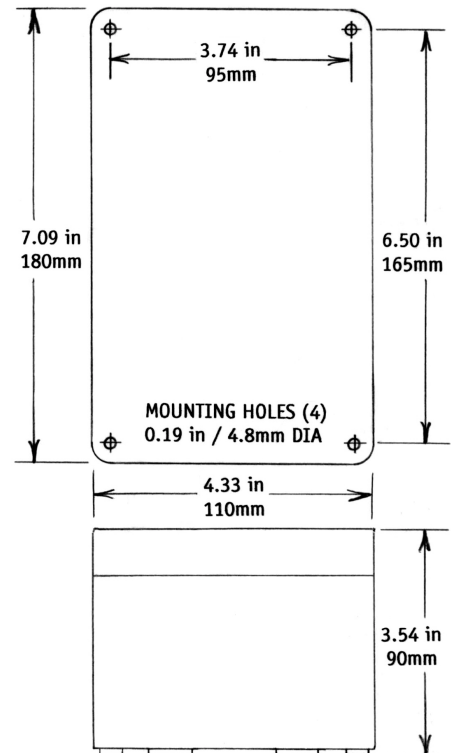
-10 to +60°C (14 to 140°F).

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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