

## FDT5400

Written by Administrator

Monday, 20 June 2011 00:34 - Last Updated Sunday, 21 August 2011 21:29

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## FDT5400 FIELD MOUNT TRANSMITTER RTD INPUT



**FDT5400:** 100 ohm Platinum RTD

**FDT54x0:** reserved for other RTD styles. [Contact](#) factory with your requirements.

- NEMA 4X Splashproof Enclosure
- 3-1/2 Digit Display
- Available for all RTD Types
- Linearizes Platinum RTDs
- 3-Wire Lead Compensation Standard
- Urethane-Coated Circuit Boards
- AC or DC Power Options

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FDT5400 Series RTD Input Transmitters provide an isolated DC output proportional to temperature as measured by a resistance thermometer (RTD). Model FDT5400 specifically designates 100 ohm platinum RTD input: additional model numbers are reserved for other RTD types.

Standard three-wire input circuitry compensates for lead wire resistance: a 4-wire input option is available. Platinum RTDs are linearized to provide true temperature indication. (Other types may or may not be: [contact us](#) to discuss your specific requirements.) A low-drift input amplifier helps assure accurate readings under varying ambient conditions.

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. FDT5400 Series transmitters include a 3-1/2 digit user-rangeable display to provide local process indication in degrees or other engineering units.

Available 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 plug-in transmitter module plus our ENCL-1 NEMA-4X enclosure. (see [Accessories](#) page)

### ORDERING INFORMATION

**Model Number:**

Specify Model FDT5400 [Contact Us](#) for 100 ohm platinum RTD or other RTD inputs. Other model numbers will be assigned up

**Display:**

If not otherwise specified, the display will be calibrated in degrees per your input range. Other calibration

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**Power:**

Add suffix A (for example, FDT5400A) for AC power, D for DC power. Specify 115Vac, 230Vac, 12Vdc or

**RTD Type:**

Model FDT5400: 100 ohm platinum. Others as determined by assigned model number

**Input Range:**

Specify any input range allowed by the "Input Capabilities" spec, below.

**Output Range:**

Specify any DC voltage or current range allowed by the "Output Capabilities" spec, below.

**4-Wire RTD Input:**

Specify Option 4W.

**Reverse-Acting Transmitter** (increasing output with increasing input)

Change last digit of the model number to 1 (for example, FDT5401A).

**Loop-Powered Output:**

4/20mA "current sink" output stage for connection to devices whose inputs provide 24Vdc loop

**Urethane Coating:**

Specify Option U.

**Conduit Opening:**

Standard: None. The enclosure has knockouts. Option NPT: Single 1/2 inch NPT fitting (glass-fiber reinforced).

## **ELECTRICAL CONNECTIONS**

Connections are made to 8 terminals within the enclosure:

**1:** RTD.

**2:** RTD (same end of RTD as terminal 1). When connecting to 2-wire RTD, jumper terminals 1 and 2. **3:** RTD (opposite end)

**4:** Standard - no connection. Option 4W - 4th wire of RTD (same end as terminal 3).

**5:** Output plus.

**6:** Output minus.

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

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

## **DETAILED SPECIFICATIONS**

### **RTD Type:**

Any RTD from 10 to 2,000 ohms. (Model FDT5400 for 100 ohm platinum, other models FDT54x0 for other)

### **Input Connection:**

3-wire connection is standard. Specify Option 4W for 4-wire RTD.

### **Input Capabilities:**

Minimum span 10 deg. C (18 deg. F) or 1 ohm, whichever is greater. Any range up to maximum covered

### **Voltage Output Capabilities:**

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

### **Current Output Capabilities:**

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

**Display Capabilities:**

Low end and full scale readings may be anywhere between -1999 and +1999 counts. A fixed decimal point

**Endpoint Accuracy** (factory calibration) :

+/-0.1% of span or 0.02 ohms, whichever is greater.

**Adjustability:**

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

**Linearity:**

Platinum RTDs are linearized. Copper is inherently linear. Contact factory for information on others.

**Response Time:**

Under 100 milliseconds.

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**Isolation:**

3-way (Power/Input/Output) 1,500Vac rms (2,100V peak).

**Guaranteed Operating Temperature:**

-10 to +60	°	C (14 to 140	°	F).
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**Temperature Stability:**

+/- (0.02% of span plus 0.002	C) per	°	C, or be
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**Power Requirements:**

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