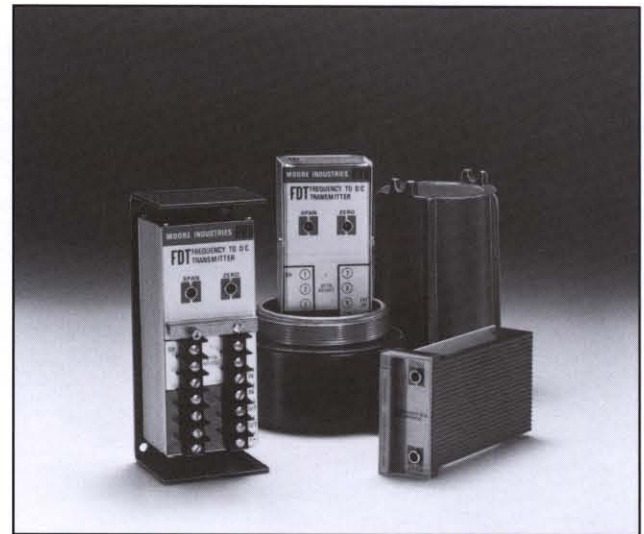


## Description

The highly accurate FDT 4-Wire Frequency-to-Dc Converter accepts varying frequency signals from flow measurement devices such as turbine meters and magnetic pick-up coils. It converts the input to a proportional current or voltage signal more suitable for field transmission and interface with process control systems, readout devices, and other process instrumentation.

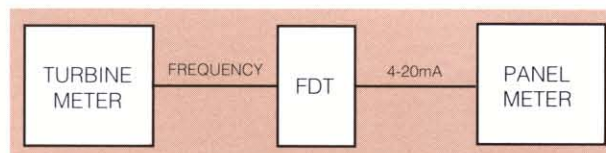
The FDT features high accuracy ( $\pm 0.05\%$  of span) and stability even under adverse field conditions due to its unique quartz crystal time-base design. A frequency divider network offers convenient input range selection.

The FDT is offered with a wide range of valuable input/output configurations and options. For details, see "Options" under the Ordering Specifications section on the back page.



*The FDT's easy-to-install standard housing can be quickly surface-mounted. The plug-in card housing is the ideal choice for high-density installations.*

**Figure 1.** The FDT converts frequency signals to a form more suitable for field transmission.



## Features

- **$\pm 0.05\%$  of span accuracy.** Exceptional accuracy makes the FDT perfect for applications where precise measurements are required.
- **Wide range of inputs and outputs.** The FDT is ideal for interfacing nearly any frequency-generating flow instrument with devices and systems requiring a current or voltage input.
- **Input/output/power isolation.** Eliminates signals inaccuracies caused by ground loops.
- **RFI/EMI protection.** When ordered with the -RF option, the FDT is resistant to the harmful effects of radio frequency and electromagnetic interference.

### Certifications

 **CSA**, General Locations; Explosion-proof, Division I, Class I, Groups C and D

**City of Los Angeles**, General Locations

# FDT

Frequency-to-Dc Transmitter

## Specifications

<b>Characteristics</b>		<b>Performance (continued)</b>	<b>Adjustments</b>
<b>Performance</b>	<b>Calibration Capability:</b> ±0.05% of span (linearity and repeatability) <b>Isolation:</b> Input, output, and power input are transformer isolated with no dc connections between them <b>Common Mode Rejection:</b> exceeds 120dB at 60Hz with a limit of 500V rms <b>Input Impedance:</b> >5 kilohms <b>Input Amplitude:</b> 300mV p/p to 20V p/p (for higher voltages, see -AT option)		
		<b>Ambient Temperature</b>	<b>Weight</b>
		<b>Range:</b> -18°C to +74°C (0°F to +165°F) <b>Effect:</b> ±0.01%/°C (±0.005%/°F)	Approximately 908 grams (2 pounds) for STD housing

## Ordering Specifications

Unit	Input	Output	Power	Options	Housing
FDT	Range in Hz: <b>A1</b> =0.1.56 thru 50 (-LF and -NI options required) <b>A</b> =0 to 50 thru 100 <b>B</b> =0 to 100 thru 200 <b>C</b> =0 to 200 thru 400 <b>D</b> =0 to 400 thru 800 <b>E</b> =0 to 800 thru 1600 <b>F</b> =0 to 1600 thru 3200 <b>G</b> =0 to 3200 thru 6400 <b>H</b> =0 to 6400 thru 12800	<b>Current:</b> <b>1-5MA</b> into 0-4800 ohms <b>4-20MA</b> into 0-1200 ohms <b>10-50MA</b> into 0-480 ohms <b>SC</b> Selectable current output, any of above outputs (not available with EUR housing) <b>Voltage:</b> <b>1-5V</b> into 20 kilohms minimum <b>0-5V</b> into 20 kilohms minimum <b>0-10V</b> into 40 kilohms minimum	<b>24DC</b> , ±10% <b>45DC</b> , ±10% <b>117AC</b> , 50/60Hz, ±10% <b>220AC</b> , 50/60Hz, ±10% <b>240AC</b> , 50/60Hz, ±10%	<b>-AT</b> Input attenuation for high voltage input (specify voltage) <b>-CC</b> Contact closure input (-NI option required) <b>-HI</b> High current output provides 20mA drive capability for 1-5V output <b>-LF</b> For frequencies from 1.56 to 50Hz (eliminates input isolation), specify: <b>-LFA</b> =1.56 thru 3.12Hz F.S. <b>-LFB</b> =3.12 thru 6.25Hz F.S. <b>-LFC</b> =6.25 thru 12.5Hz F.S. <b>-LFD</b> =12.5 thru 25Hz F.S. <b>-LFE</b> =25 thru 50Hz F.S. <b>-NI</b> Non-isolated input (isolation transfer deleted); input amplitude 5V to 20V p/p <b>-PX</b> Pre-amp excitation, 3-wire (-NI option required) <b>-PXI</b> Pre-amp excitation, 2-wire (-NI option required) <b>-RF</b> RFI/EMI protection; Standard housing rates 50 V/m - ABC = ±0.1% F.S. when tested according to SAMA Standard PMC 33.1	<b>AB</b> Standard housing with angle brackets for surface mounting <b>DCM</b> Standard housing with DIN clip for mounting on a DIN standard rail <b>EUR</b> Euro-style plug-in card for mounting in an RMR-EU rack <b>PC</b> Plug-in card for mounting in an RMR or SMR rack <b>UB</b> Standard housing with U-back brackets for surface mounting

**When ordering, specify:** Unit / Input Range / Output / Power / Options [Housing]  
**Model number example:** FDT / F / 4-20MA / 117AC / -NI -PX [STD]



**United States**  
Tel: (818) 894-7111  
FAX: (818) 891-2816

**Australia**  
Tel: (02) 9525-9177  
FAX: (02) 9525-7296

**Belgium**  
Tel: 03/235.35.44  
FAX: 03/271.00.17

**Netherlands**  
Tel: (0)344-617971  
FAX: (0)344-615920

**United Kingdom**  
Tel: 01293 514488  
FAX: 01293 536852

The Interface Solution Experts