

FPP DU53 Electronic Totalizer/Ratemeter



The DU53 is a combination UP counting rate of flow and reset totalizer. The totalizer has an eight digit display. The front panel reset key can be disabled. A remote-reset terminal is provided. The count scaler and decimal point can be programmed.

The rate totalizer has 4/5 digit LCD display. A programmable rate scaler and decimal point allow for display of rate in any engineering terms.

The DU53 is designed to show both total and process rate. Certain programming and wiring decisions must be made to complete your application.

SPECIFICATIONS

DISPLAY:

- Type: Seven segment LCD
- Display height: 0.43"

PACKAGE:

- Material: Cyclac X-17
- Mounting: Panel mount
- Connections: Screw terminals
- Weight: 2.2 oz

ENVIRONMENTAL:

- Storage Temp: 22°F/ -20°C to 184°F/70°C
- Operating Temp: 58°F/0°C to 157°F/55°C
- Operating Humidity: 60%
- Front Panel Design: NEMA 4X when mounted

TOTALIZER:

- Type: 1/Tau
- Decimal Point: 5 positions, programmable
- Digits: 8
- K-factor: 0.0001 to 100.0000

PERFORMANCE:

- Accuracy: $\pm 0.2\%$
- Count Accuracy: 100% when operated within specs
- Update Time: 0.7 sec.
- Zero Time: 10 sec

POWER:

- Source: 3V lithium battery.
- Battery Life: Approximately 5 years

INPUTS:

DC COMMON (Terminal 1)

Input B (Terminal 2) Low speed input designed for contact closures to DC common

Speed: 0 to 100 Hz

Min Low Time: 3.3 milliseconds

Min High Time: 6.7 milliseconds

Impedance: 101K ohm

Voltage Thresholds: Low 0 to 0.4 VDC

High 2.0 to 28 VDC

Max high 28 VDC

Input A (Terminal 3) High speed input requiring a voltage source such as a current sourcing sensor or a current sinking sensor used with the provided pull up resistors

Speed: 0 to 10 kHz

Min Low Time: 80 microseconds

Min High Time: 20 microseconds

(The above times are with a 0 to 5.0 V swing)

Input Impedance: 2K ohm above 5 VDC

Voltage Thresholds: Low 0 to 1.2 VDC

High 2.0 to 28 VDC

Max high 28 VDC

Reset Input (Terminal 4)

Resets totalizer to zero when connected to DC common

Min Low Time: 0.25 to 1.0 sec (maintained)

The required pulse width varies with count speed, scale factor and number of digits displayed

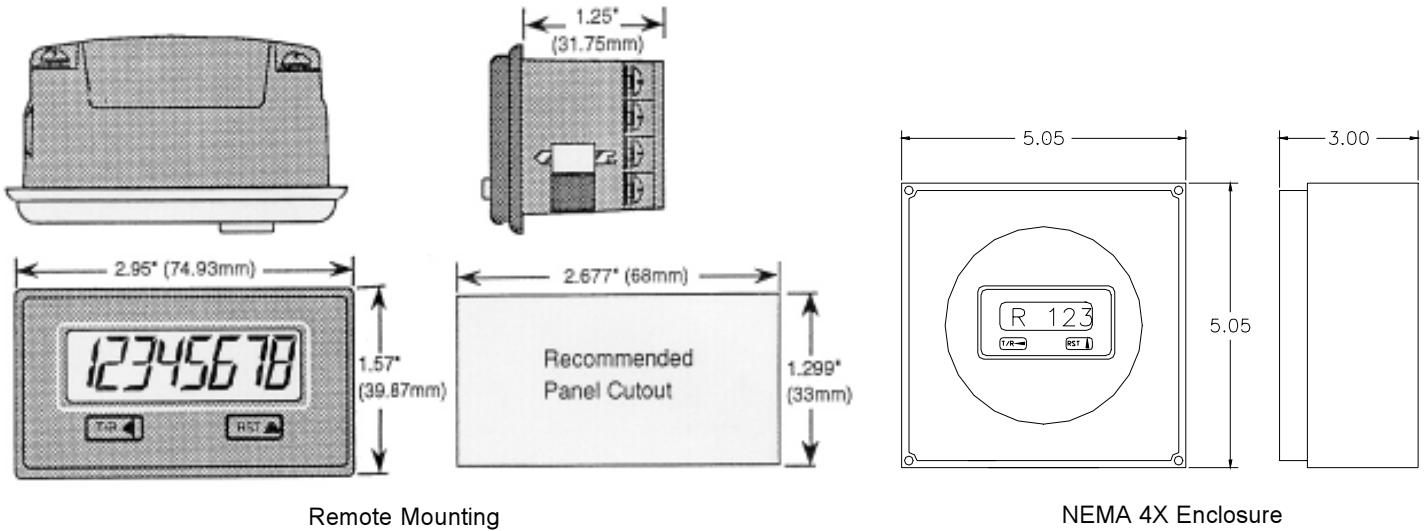
Voltage Thresholds: Low 0 to 0.4 VDC

High 2.0 to 28 VDC

Program Enable Input (Terminal 5)

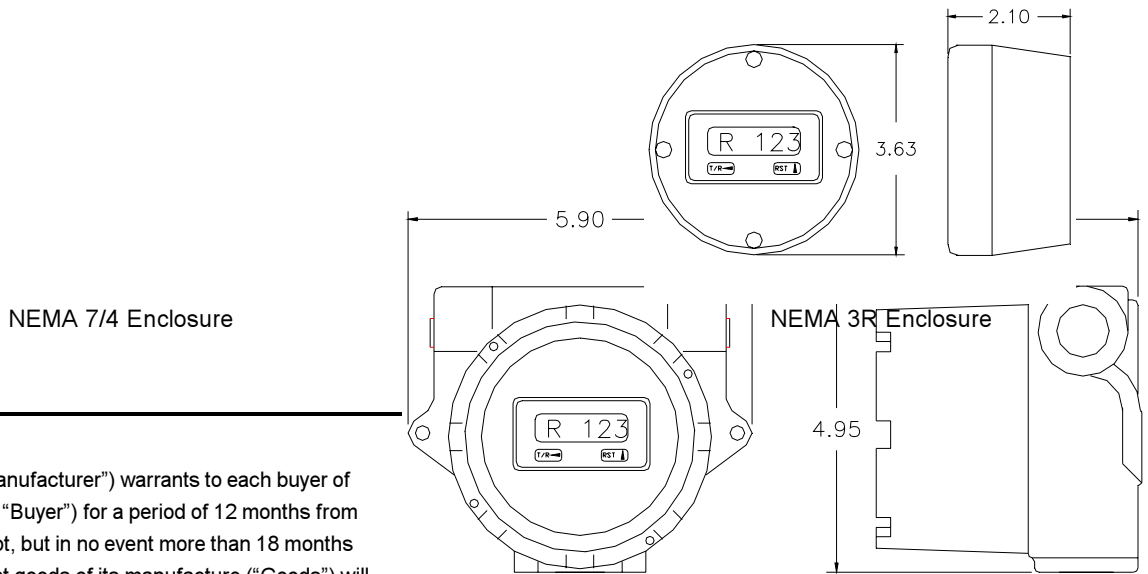
Operation: Level sensitive (maintained)

Enclosure Options (inches)



Remote Mounting

NEMA 4X Enclosure



NEMA 7/4 Enclosure

NEMA 3R Enclosure

Warranty

Tuthill Transfer Systems ("Manufacturer") warrants to each buyer of its FPP Meters products (the "Buyer") for a period of 12 months from date of invoice or sales receipt, but in no event more than 18 months from date of manufacture, that goods of its manufacture ("Goods") will be free from defects of material and workmanship. Manufacturer's sole obligation under the foregoing warranties will be limited to either, at Manufacturers' option, replacing or repairing defective Goods (subject to limitations hereinafter provided) or refunding the purchase price for such Goods theretofore paid by the Buyer, and Buyer's exclusive remedy for breach of any such warranties will be enforcement of such obligations of Manufacturer. If Manufacturer so requests the return of the Goods, the Goods will be redelivered to Manufacturer in accordance with Manufacturer's instructions F.O.B. Factory. The remedies contained herein shall constitute the sole recourse of the Buyer against Manufacturer for breach of warranty. IN NO EVENT SHALL MANUFACTURER'S LIABILITY ON ANY

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