



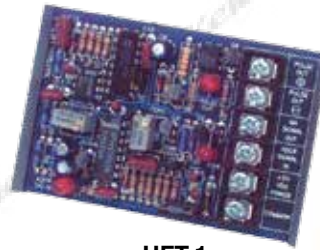
UNIVERSAL FLOW TRANSMITTER UFT-1 SERIES

DESCRIPTION

The **Kele UFT-1 Series universal flow transmitter** is a solid-state, digital signal converter designed to operate with Data Industrial 200 Series flow sensors. Both analog (4-20 mA) and pulse outputs are available. The **UFT-1** may be mounted in an optional NEMA 4X enclosure or with digital display of gpm or totalized flow (in a non-watertight enclosure).

FEATURES

- Analog and pulse outputs
- Optional watertight (NEMA 4X) enclosure
- Optional displays for flow rate and totalization
- Excitation voltage for flow sensors
- LED indication of pulse activity



UFT-1



UFT-1E-1

OPERATION

INSTALLATION AND CALIBRATION

The **UFT-1** transmitter can be mounted in any position. NEMA 4X enclosed models have a watertight seal; when a display option is selected, however, the enclosure becomes non-watertight. Field calibration is not required with the **UFT-1** and flow conversion must be accomplished at the monitoring computer. The information below is provided for making the conversion calculations.

FLOW RATE

Flow (gpm) = ((mA measured - 4 mA) x Maximum gpm)/16 mA.
Maximum gpm is the flow rate at 20 mA output on the transmitter and must be specified at the time the **UFT-1** is ordered for proper calibration.

TOTALIZED FLOW

Totalized gallons = (Flow factor) x (Output divider) x (Total pulses)
For totalized m3, multiply the above by 0.00379.
Output divider = 10 or 100 depending on jumper-selection. Flow factors per pulse are shown in Table 1.

APPLICATION

ANALOG OUTPUT (RATE)

The **UFT-1** analog transmitter converts a Data Industrial digital flow signal into a precalibrated 4-20 mA signal. It must be calibrated for each Data Industrial flow sensor installation. The pipe type, size, and maximum flow rate must be specified at the time of order if 4-20 mA output is to be used.

PULSE OUTPUT (TOTALIZATION)

The **UFT-1** pulse output divides the Data Industrial digital flow signal by a jumper-selectable 10 or 100 to provide a more usable digital pulse. The pulse output is normally used where flow totalization is required. A simple conversion formula (using the flow factors for Data Industrial Flow Sensors on the next page) can convert the digital pulses to totalized gallons.

The pulse output is an optoisolated transistor switch that can be wired to source or sink pulses to totalizer equipment.

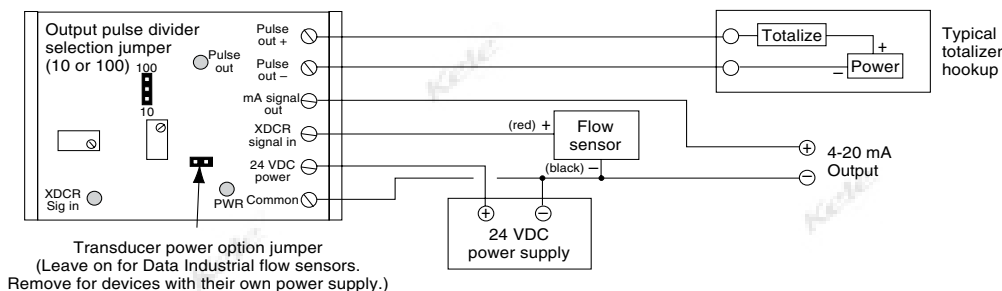
NOTE: The **UFT-1 Series** is not intended for field setup or field calibration.

SPECIFICATIONS

| | |
|-----------------------------------|---|
| Supply Voltage | 24 VDC, 80 mA max |
| Accuracy | ± 0.5% |
| Input Signal | 15 to 150 Hz FS, dry or electric contact |
| Maximum Output Impedance | 750Ω @ 24 VDC |
| Output Signal | Solid state switch |
| UFT-1 | 4-20 mA |
| UFT-1A | 40 VDC @ 200 mA |
| Pulse Output Configuration | Factory configured only; provide pipe size/schedule and maximum flow rate at time |

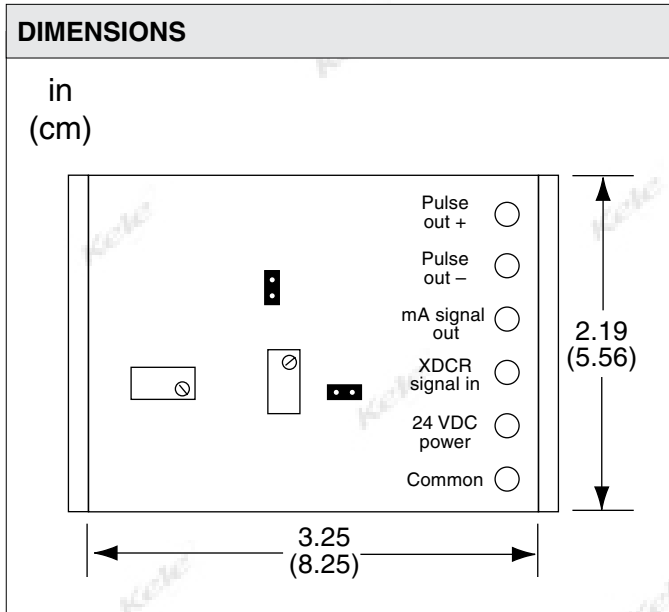
| | |
|------------------------------|-----------------------------|
| Response Time | of order |
| Mounting | 5 seconds from 10% to 90% |
| UFT-1, -1A | Snap track |
| UFT-1E, -1AE | Surface mount, enclosed |
| Operating Temperature | 32° to 140°F (0° to 60°C) |
| Operating Humidity | 5% to 90% RH non-condensing |
| Approvals | RoHS |
| Warranty | 1 year |

WIRING





UNIVERSAL FLOW TRANSMITTER UFT-1 SERIES



FLOW FACTORS FOR DATA INDUSTRIAL FLOW SENSORS

| MODEL | PIPE SIZE in (cm) | FLOW FACTOR | GALLONS/PULSE | |
|------------------|----------------------|----------------|--------------------------|---------------------------|
| | | | JUMPER IN 10 POSITION | JUMPER IN 100 POSITION |
| 228PV-1.5 | 1-1/2 (3.81) | 0.03118 | 0.3118 | 3.118 |
| 228PV-2 | 2 (5.08) | 0.04611 | 0.4611 | 4.611 |
| 228B-2 | 2 (5.08) | 0.04579 | 0.4579 | 4.579 |
| * 228C-2 | 2 (5.08) | 0.04731 | 0.4731 | 4.731 |
| 250B-0.5 | 1/2 (1.27) | 0.005646 | 0.05646 | 0.5646 |
| 250B-0.75 | 3/4 (1.91) | 0.007514 | 0.07514 | 0.7514 |
| 250B-1 | 1 (2.54) | 0.007015 | 0.07015 | 0.7015 |
| 250B-1.25 | 1-1/4 (3.18) | 0.01280 | 0.1280 | 1.280 |
| 250B-1.5 | 1-1/2 (3.81) | 0.01780 | 0.1780 | 1.780 |
| 220B-2.5 | 2-1/2 (6.35) | 0.03800 | 0.3800 | 3.800 |
| 220B | 3 (7.62) | 0.07280 | 0.7280 | 7.280 |
| 220B | 4 (10.16) | 0.1396 | 1.396 | 13.96 |
| 220B | 5 (12.7) | 0.2457 | 2.457 | 24.57 |
| 220B | 6 (15.24) | 0.3611 | 3.611 | 36.11 |
| 220B | 8 (20.32) | 0.6710 | 6.710 | 67.10 |
| 220B | 10 (25.40) | 1.080 | 10.80 | 108.0 |
| 220B | 12 (30.48) | 1.630 | 16.30 | 163.0 |
| 220B | 14 (35.56) | 1.944 | 19.44 | 194.4 |
| 220B | 16 (40.64) | 2.502 | 25.02 | 250.2 |
| 220B | 18 (45.72) | 3.158 | 31.58 | 315.8 |

Notes

- Flow factors for a Model 225 and 226 are the same as Model 220.
- Flow factor for Model 228S is the same as 228C.
- PV Series is sized for schedule 80 PVC pipe. All other series are sized for schedule 40 black iron pipe.

ORDERING INFORMATION

| MODEL | DESCRIPTION |
|----------------|---|
| UFT-1 | Universal flow transmitter pulse output only |
| UFT-1A | Universal flow transmitter with pulse and calibrated 4-20 mA output* |
| UFT-1E | Universal flow transmitter pulse output in NEMA 4X enclosure |
| UFT-1AE | Universal flow transmitter with pulse and calibrated 4-20 mA output* in NEMA 4X enclosure |
| | DISPLAY OPTION (enclosed models only, enclosure changes to non-watertight) |
| | 1 Flow totalization only |
| | 2 Flow rate only |
| | 3 Flow totalization and flow rate** |

UFT-1 - 1 Example: UFT-1A-E-2 Basic transmitter with calibrated 4-20 mA flow rate output (4 mA = no flow; 20 mA = max flow), enclosed with LCD flow rate indication

* Pipe size, schedule, and maximum flow rate must be specified at time of order.

** When a UFT-1AE3 is ordered the UFT-1A will be in one enclosure and the totalizer and rate display will be in a separate enclosure.

RELATED PRODUCTS

| | |
|-------------------|--|
| 200 Series | Data Industrial impeller type flow sensors with pulse output |
| DCP-1.5-W | Power supply, 24 VAC IN to 24 VDC OUT |