**OUTSTANDING FEATURES**

- HART® Field Communication Protocol.
- 5 Digit Rate, 8 Digit Totalizer LCD display with configurable decimal point location.
- 8 Digit, Non-resettable Grand Total display.
- Pulse Input supports turbine as well as many other pulse generating flowmeters.
- 4-20mA Analog Output.
- Up to 20 Point Linearization.
- Optional Scaled Pulse Output representing an increment of volume for each pulse.
- Two Optional Alarm Outputs configurable for Rate and Total.
- Magnetically operated reed switch for Total reset.
- Internal battery backup.
- Configuration and Grand Total stored in non-volatile memory. Grand Total saved once per minute.

**GENERAL DESCRIPTION**

Featuring 5 digits of rate and 8 digits of total, the HRT1 is a loop powered indicator capable of accepting magnetic pickup, DC pulse or switch closure inputs. The HRT1 uses the 4-20mA loop to provide power when this output is used and to provide the HART® communication link.

**SPECIFICATIONS**

**GENERAL**

**TOTAL DISPLAY:**
8 Digits 0.26" high. Resettable.

Total Units: GAL, LIT, FT3, M3, BBL & “blank”.

**GRAND TOTAL:**
8 Digits 0.26" high, Non-resettable. Value stored once per minute in non-volatile memory. Grand Total is displayed for 15 seconds after pressing the > button.

**RATE DISPLAY:**
5 Digits 0.5” High, Display updates once every two seconds.

Rate Units: /SEC, /MIN, /HR, &, /DAY.

K-factor: The pulses per unit of Total (e.g. pulses/ gallon) are configurable in the range 0.001 to 99,999,999.

**Linearization:** Up to 20 points.

**Decimal Points:** Configurable for 0, .0, .00 or .000 for rate and total.

**Accuracy:** Total: ±1 count, Rate: ±0.01%

**INPUTS**

**Magnetic Pickup:**
Frequency Range: 0.2 Hz to 5000 Hz.
Signal Level: 30 mV<sub>p-p</sub> to 30V<sub>p-p</sub>.

**Opto-Isolated DC Pulse:**
Frequency Range: 0 Hz to 5000 Hz.
Signal Type: DC Pulse.
High (Logic 1): 4 to 30 VDC
Low (Logic 0): <1 VDC
Min Pulse Width: 0.1 msec
Contact Closure:
Frequency Range: 0 to 5000 Hz.
Signal Type: Contact closure, Sig+
Terminals to DC common.
Internal Pull-up: 220 KΩ to +3.3 VDC
Reset:
Signal Type: Contact closure, Reset
Terminal to DC common.
Min On: 25 msec
Internal Pull-Up: 100KΩ to +3.3 VDC
External Magnet: Activates internal reed switch.

DC POWER/LOOP POWERED
Voltage: 8 to 30 VDC.
Current: <24 mA
Loop Burden: 8 VDC maximum
Supply Backup: (1) C-size Lithium battery.
Battery Life: 6 years typical.
Protection: Reverse polarity protected.

ANALOG OUTPUT
Scale: 4-20mA follows rate.
Accuracy: 0.02% of Full Scale @ 20°C.
Temperature drift: 40 ppm/°C.
Update Time: 2.0 seconds.
Connection: Two wire.

PULSE OUTPUT
Type: 0-5 TTL, 0-Supply Voltage, open collector (30 VDC, 100mA)

ALARM 1 AND ALARM 2
Type: 0-5V TTL, 0-Supply voltage, open collector (30 VDC, 100 mA)
Function: Rate or Total.

PHYSICAL
Operating Temperature:
-4°F (-20°C) to +158°F (70°C)
Humidity: 0 - 90% Non-condensing
Packaging: NEMA 4X, Panel mount or Explosion-proof
Dimensions for NEMA 4X enclosure:
4.33” (110 mm) wide x 4.33” (110 mm) long x 4.33” (110 mm) tall.