

# SQUIRT

## Loop Powered Indicator

### Features

- Linear or Square Root Extraction of Input
- 3 <sup>1/2</sup> or 4 <sup>1/2</sup> Digit Rate Display (Selectable)
- 8 Digit Totalizer Display
- Calibration, High and Low Values Fully Programmable Through Keypad
- No Dipswitches or Pots to Adjust
- 16 Bit A/D Resolution
- Isolated Scaled Pulse Output
- Password Protection of Menu and Totalizer

### Description:

Featuring up to 4<sup>1/2</sup> digits of rate and 8 digits of total, the Squirt is a loop powered indicator capable of accepting either linear or square root 4-20 mA inputs. An isolated scaled pulse output is available for hook up to a remote totalizer. Numeric password protection prevents unauthorized access to menu. The easy-to-read menu prompts make the Squirt so easy to program that you will feel comfortable programming it without the use of a manual.

### Specifications:

#### Power:

Loop powered 4-20 mA  
 Internal Battery (Setup & totalizer memory storage only):  
 3 V 250 mA-H Lithium (2 yr. Standby life)

#### Display:

Rate Display: (selectable decimal)  
 3.5 or 4.5 Digits (selectable), 0.35" High, Display updates once every two seconds.

Rate Descriptors: /SEC, /MIN, /HR or "blank"

Totalizer Display: (selectable decimal)

8 Digits (99999999), 0.2" High

Totalizer Descriptors: GAL, LIT, FT3, M3, "blank"

Low Battery Error Detection: "BAT" descriptor

Under/Over range Indication: Flashing display

#### Environmental:

##### OPERATING TEMPERATURE

-4°F (-20°C) to + 158°F (70°C)

Extended Temp: -22°F (-30°C) to + 158°F (70°C)

##### HUMIDITY

0 - 90% Noncondensing

#### Accuracy: (Rate @ 20°C)

0.1% Full Scale Resolution, ±1 count

#### Temperature Drift:

50 ppm/°C Typical

200 ppm/°C Worst Case

**Listing:** CE Compliant



Flow Instruments  
 FIELD INDICATORS

### Inputs:

#### Signal Input:

Full Scale Range: 4 to 20 mA DC  
 Loop Voltage Drop: 6 Volts Maximum  
 Reverse Polarity Protected  
 Over Current Protection to 60 mA  
 16 Bit resolution; 1 sample every 2 seconds  
 Low Cutoff supplied to inhibit indications at low flow rates.

#### Reset Input: (contact closure)

Internal Pullup Resistor: 100 kΩ to +3 VDC  
 High (logic 1): Open or 3-30 VDC  
 Low (logic 0): Less Than .5 VDC  
 Minimum On : 25 msec

### Pulse Output:

The pulse output advances with the least significant digit of the totalizer.

Type: Opto-isolated open collector transistor.

Max. voltage (off state): 30 VDC

Current (on state): 5 mA @ .9 V drop, .1mA @ .7 drop

Pulse Duration: 15 msec

Pulse Output Rate: 25 CPS max.

Pulse output divider: User selectable, +1, +10, +100 or off

### Calibration & Operation:

Input Scaling: Via front keypad

Calibration: Via front keypad

Decimal Point: Via front keypad

Reset Input: Via front keypad or remote dry contact closure

Keypad: 4 tactile feedback keys

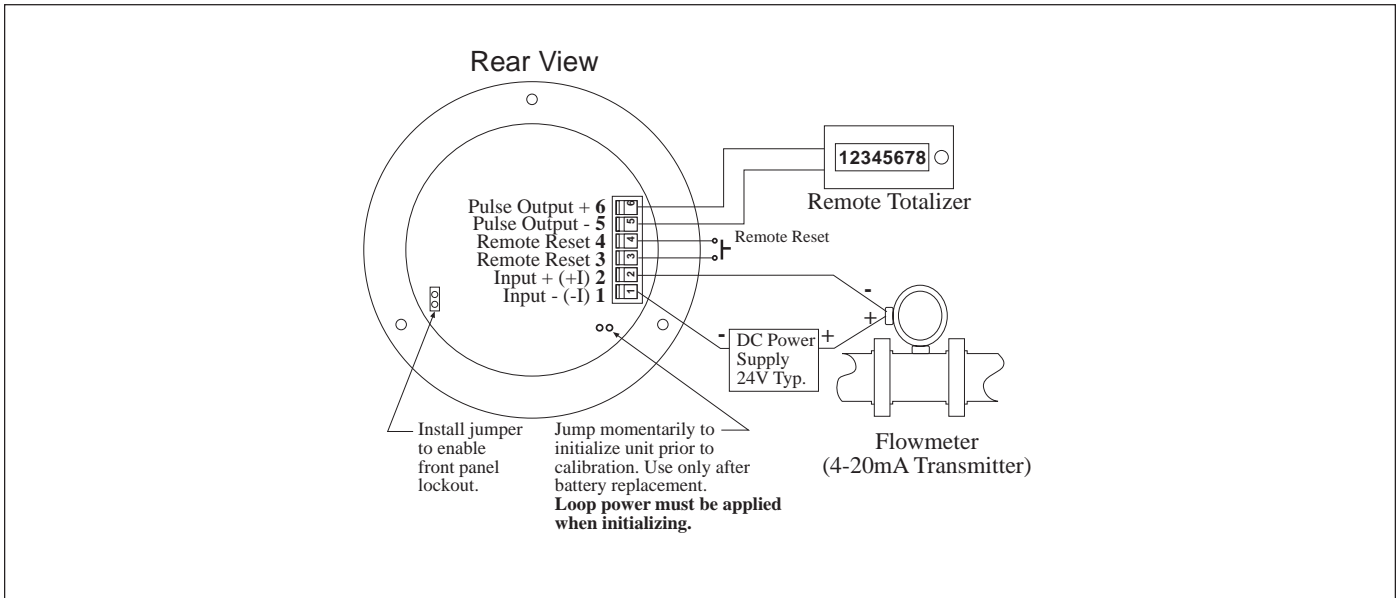
### Mounting:

- |                      |   |
|----------------------|---|
| 0- Circuit Board -   | OEM option (consult factory)  |
| 1- Panel Mount -     | NEMA 4X Clear Front   |
| 2- Wall Mount -      | NEMA 4X Enclosure with Squirt mounted behind clear cover                      |
| 3- Explosion Proof - | Class I, Division I, Groups B, C & D<br>Class II, Division I, Groups E, F & G |
| 5- Wall Mount -      | NEMA 4X with Squirt mounted outside opaque cover                              |

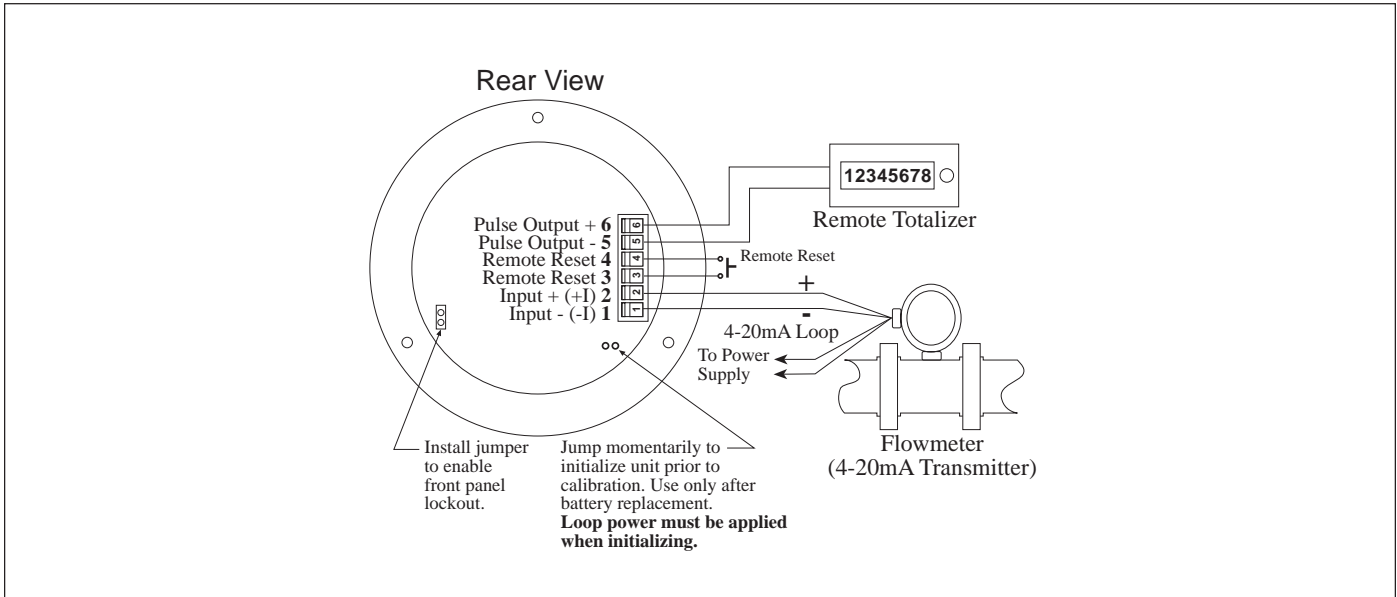
# Wiring:

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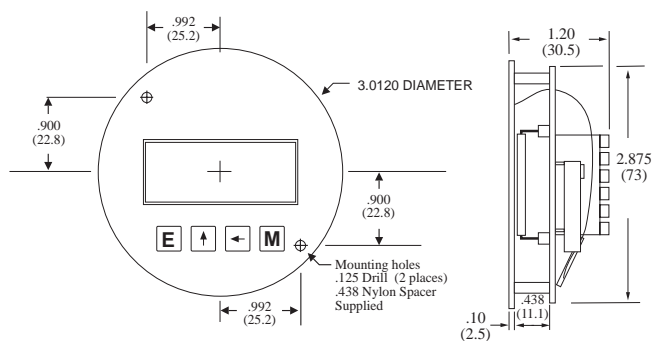
## 2-Wire Transmitter



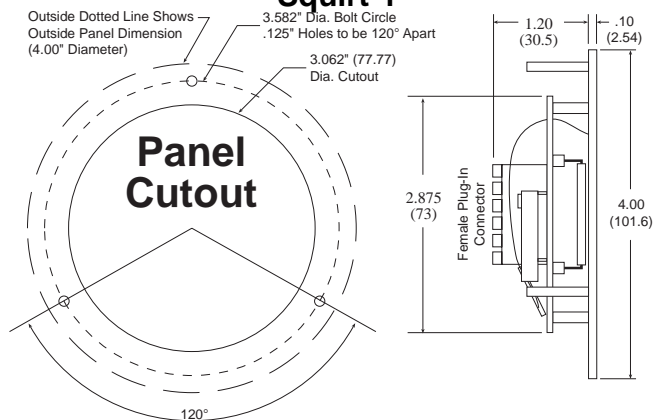
## 4-Wire Transmitter



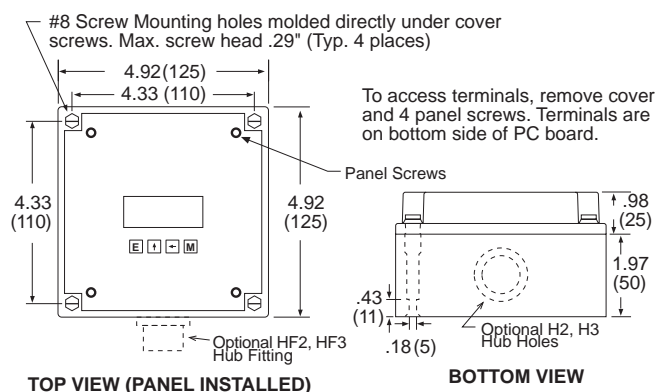
### Squirt-0



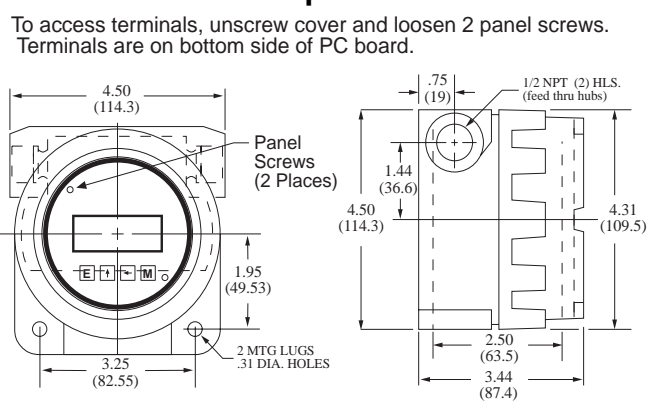
### Squirt-1



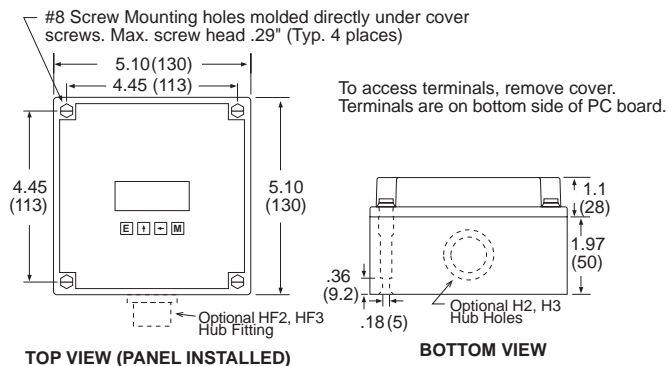
### Squirt-2



### Squirt-3



### Squirt-5



### Ordering Information

**Example:**        **SQUIRT**        **3**        **ET**

SQUIRT \_\_\_\_\_  
 Loop powered; Rate & Total

Mounting: \_\_\_\_\_  
 0 = OEM  
 1 = Panel Mount  
 2 = NEMA 4X Box (Squirt behind clear cover)  
 3 = Explosion Proof Housing  
 5 = NEMA 4X Box (Squirt outside opaque cover)

Options: \_\_\_\_\_  
 ET = Extended Temp.: -22°F to 158°F (-30°C to 70°C)  
 R = External Magnetic Reset  
     for NEMA4X & Explosion Proof Enclosures  
 RX = NEMA7 Explosion Proof Reset Switch  
     for Explosion Proof Enclosure with  
     3/4" straight thread side entry  
 H2 = 0.875" Hole for mounting styles 2 and 5  
 HF2 = 0.5" Female NPT Hub fitting for mounting styles 2 and 5  
 H3 = 1.125" Hole for mounting styles 2 and 5  
 HF3 = 0.75" Female NPT Hub fitting for mounting styles 2 and 5