

- 8 DIGIT TOTALIZER
- 4 1/2 DIGIT RATE DISPLAY
- LINEAR OR SQUARE ROOT RESPONSE
- KEYPAD CALIBRATION (NO DIP SWITCHES OR POT ADJUSTMENTS)
- EXPLOSION PROOF
- ISOLATED SCALED PULSE OUTPUT
- PASSWORD PROTECTION (MENU AND TOTAL)



GENERAL DESCRIPTION

Flow rate display and totalization in engineering units is provided by the Model 226, Loop Powered Integrator. The unit accepts a 4 to 20 mA signal, integrates, totals, and displays the instantaneous rate signal with 3 1/2 or 4 1/2 digit display. Operational power is derived from this signal, therefore, no external power is required. An 8 digit total display is updated every 2 seconds with the value maintained for 2 years. 16 bit A to D conversion provides accurate readings for linear or square root response. An isolated scaled pulse output is available for remote totalization.

CALIBRATION

Input scaling is provided by four tactile feedback keypads. This features min/max engineering units setting, 4 to 20 mA self calibration, square root/linear response selection,

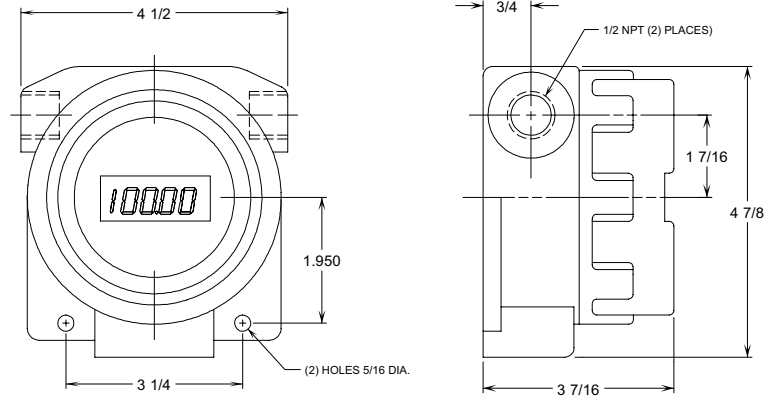
3 1/2 or 4 1/2 digit rate display, decimal point and count rate selection (per second, minute, hour). Numeric password protection prevents unauthorized access to menu.

APPLICATION

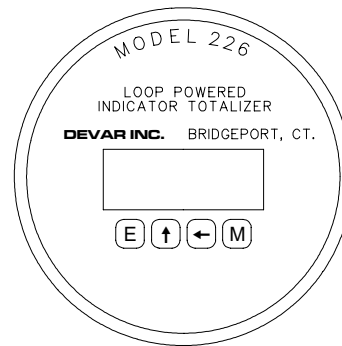
The Model 226 is ideally suited for totalizing and indicating rate of liquid or gas flow. A 4 to 20 mA loop signal from an orifice plate line is proportional to flow after the square root of the signal is calculated. This is easily accomplished via keypad configuration. Flow rate is also indicated via 0.35 inch high 3 1/2 or 4 1/2 digit indication. The 226 is packaged in a Factory Mutual, and CSA Canadian Standards Associations certified Explosion Proof/ NEMA-4 housing and requires only 5.5 VDC loop burden.

SPECIFICATIONS 226

Power:	
Power:	Derived from loop
Internal Battery:	3V 250 mA-H
(memory only)	Lithium (Calc 10 yr. life)
Display:	
Rate Display:	4.5 digits Max. (19999) 0.35" high (Selectable Decimal)
Totalizer Display:	8 digits (99999999) 0.2" high (Updates every 2 sec.) (Low Battery Error Detection)
Under/Over Range Indication:	Display Flashes
Rate Descriptors:	Gal, Lit, FT ³ , m ³ , Blank
Input:	
Standard Input:	4 to 20 mA
Operating Range:	3.8 to 21 mA
Loop Voltage Drop:	6 Volts Maximum
Reverse Polarity Protected	
Over Current Protection to 60 mA	
16 Bit Resolution:	1 sample every 2 seconds
Temperature:	
	14 to 131°F (-10 to 55°C)
	-WT option -22 to 158°F (-30 to 70°C)
Accuracy: (@20°C)	
	0.1% Full Scale, ±1 Count
	Note: For best accuracy use as many digits as possible when setting the "HI" value. If 20 mA = 30, enter 30.00 for "HI" value
Temperature Drift:	
	50 PPM/°C Typical
	200 PPM/°C Worst case
Low Cutoff:	
	Flow Rate below 1% of selected scale (10% square root) will assume the "SET LO" value.
Reset Input:	
	Via front Keypad or remote Dry Contact Closure
Internal Pullup Resistor:	100K Ohm (+3 VDC)
High (Logic 1)::	Open or 3 to 30 VDC
Low (Logic 0):	Less than 0.5VDC
Min ON:	25 mS
CAUTION:	Sustained Contact Closures will shorten Battery Life.
Initialize Input:	
	Momentary jumper on PC board. Set Menu and Calibration to default values. Use only after battery replacement.
Warning:	
	The initialized jumper should not be applied without loop power. This will shorten the battery life and void warranty.
Operation:	
	When running, unit displays the rate and total. Totalizer updates once every 2 seconds. Totalizer can be reset by a contact closure between terminals 3 and 4. Menu can be accessed by pressing the M key. Display flashes when the loop current goes below the LO CAL value or above the HI CAL value or when the battery is low and memory has been lost during a loop power loss.
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 @ 0.9V Drop, 0.1mA @ 0.7V Drop
Pulse Duration:	15 milli-seconds
Pulse Output Rate:	25 CPS Max.
Pulse Output Divider:	User Selectable, +1, +10, +100 or off



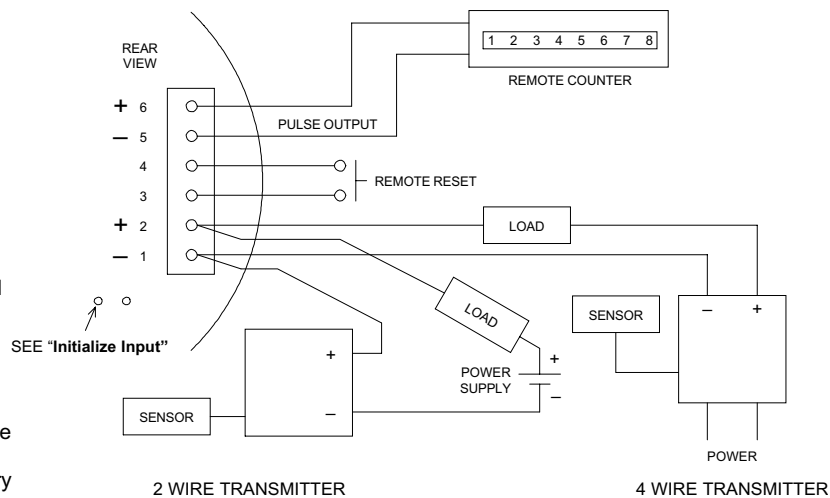
MECHANICAL DIMENSIONS



CAUTION

- This instrument contains static sensitive components.
- Never connect DC power supply across input terminals.

KEYPAD



TYPICAL WIRING

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