Badger Meter

Industrial Registers

Model ER-9 and ER-9/R (Remote) Digital Resettable Totalizer

DESCRIPTION

The Badger Meter® Model ER-9 register is a meter-mounted totalizer and rate indicator with scaled pulse output designed for use with all meters in the Badger Meter product line.

The ER-9/R is the remote version and can be used with any Badger Meter flow meter that is equipped with a compatible pulse endpoint. A rear adapter plate is provided with the remote version for attachment to a wall or other suitable surface.

The unit is battery powered with two lithium batteries. Optical sensors and other electronic sensors with open collector outputs must be externally powered.

The totalizing function uses an easy-to-read, 8-digit numeric LCD display. The rate mode uses a similar 4-digit display. Step-by-step independent programming of scale factors for the rate and totalization functions allows you to program any engineering unit such as gallons per minute and total gallons. The scaled pulse output has its own independent scaler.

When the indicator is used as a totalizer, the display can be reset to zero from the front panel button or from an external switch wired directly to a rear terminal. The front panel Reset function can be inhibited.

You can backlight the display by connecting a DC power source to the unit.

When the battery is low, an indicator appears on the screen several weeks before the end of the battery life to remind the operator that the battery is in need of replacement. The unit operates off the batteries for a minimum of 6 months when using pulse output. When connected to a DC power source, the back-up battery life is 5 years.

OPERATION

Fluid flowing through the meter causes pulses to be generated by the sensor. Each pulse represents a specific fluid volume.
Example: the Model 25 Disc meter generates 198 pulses for every gallon of fluid passing through the meter. Using a scale factor, the pulse indication on the display will be changed to a meaningful unit of measure.

FEATURES

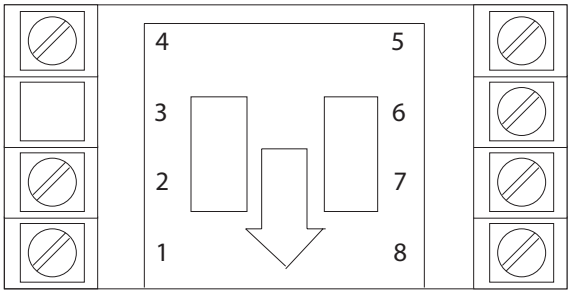
- All solid-state components for long life
- Battery powered
- Low battery indicator
- Corrosion-resistant plastic housing built to NEMA 4X specifications
- Programmable for rate of flow and totalization
- Backlit display available
- Front panel totalizer Reset function can be disabled
- Reprogramming can be inhibited
- Scaled pulse output

SPECIFICATIONS

Count Input (Terminal 2)	
Type	NPN signal, contact closure
Count speed	NPN, 280 Hz maximum, Contact, 95 Hz maximum
Logic	Low < 1.0V DC, High > 2.0V DC
Minimum pulse width	NPN=1.78 µs, Contact=5 ms
Maximum input	28V DC
Impedance	1 Meg to V BATT
Front Panel Program Enable (Terminal 5)	
Type	NPN signal, contact closure; level sensitive
Maximum input	28V DC
Remote Reset Input (Terminal 4)	
Type	NPN signal, contact closure; edge sensitive
Frequency response	30 Hz (50% duty cycle)
Maximum input	28V DC
Output (Terminals 6 & 7)	
Type	Isolated Photomos relay
Load rating	0.1 Amp @ 30V AC/V DC
Transition time	< 5 ms
Operating Temperature	
Indicator	32…140° F (0…60° C)

Power Source	
Type	Dual 3V Lithium battery
Replacement part #	62576-001
Battery life expectancy	5 years typical if using external DC supply 6 months if used alone with 50% duty cycle output
Low power indicator	"Low Bat" flashes on display approx. 2 weeks prior to end of battery life
Display	
Type	Supertwist LCD for use with or without backlighting
Number	8 digits count value, 4 digits (plus dummy zero) for rate value
Height	12 mm (0.472")
Backlighting	Green Illumination over whole viewable area with a 10…28V DC supply (Terminal 8)
Physical	
Dimensions	36 mm × 72 mm, 38 mm deep 1.417" × 2.835", 1.496" deep
Mounting	Panel mount (mounting bracket supplied) 33 mm × 68 mm (+ 0.3 mm) panel cutout 1.299" × 2.677", (+ 0.012") panel cutout
Connections	Up to 8 screw terminals
Weight	Approximately 13 ounces

WIRING TERMINALS



1 DC common
2 Count input – NPN signal 280 Hz max. or dry contact
3 Not Used
4 Remote reset – resets count value when switched to common
5 Front panel program enable – allows access to program mode when connected to common
6 Solid-state relay, pulse output (+)
7 Solid-state relay, pulse output (–)
8 DC supply input, 1…28V DC for backlighting and/or powering the output

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