GENERAL

Badger's Model ER-9 register is a meter mounted totalizer/rate indicator with scaled pulse output designed for use with all meters in Badger's product line. The ER-9/R is the remote version and can be used with any Badger flow meter that is equipped with a compatible pulse transmitter. A rear adapter plate is provided with the remote version for attachment to a wall or other suitable surface. The ER-9 series register is available with one or two indicators. With two indicators, you can simultaneously see a display of rate-of-flow and totalization. If this is not required, a single indicator will provide both indications by the simple push of a button.

The unit is battery powered with (2) lithium batteries. Optical sensors and other electronic sensors with open collector outputs must be externally powered.

DESCRIPTION

An easy-to-read, 8-digit numeric LCD display is used for the totalizing function. The rate mode is a similar 4-digit display. Step-by-step independent programming of scale factors for the rate and totalization functions allows you to program any meaningful 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 the unit. The front panel reset button can be inhibited.

Backlighting of the display is available by connecting DC power to the unit. When the battery is low, an indicator will appear 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 will operate 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**

● **Backlighting of display available**

● **Front panel totalizer reset switch can be disabled**

● **Reprogramming can be inhibited**

● **Scaled pulse output**

BadgerMeter,Inc.

SPECIFICATIONS

Count Input (Terminal 2):
Type: NPN signal, contact closure
Count Speed: NPN-280Hz max., Contact-95Hz max.
Logic: Low < 1.0 VDC, High > 2.0 VDC,
Minimum Pulse Width: NPN-1.78ms, Contact-5ms
Maximum Input: 28VDC
Impedance: 1 Meg to V BATT

Front Panel Enable Input (Terminal 5):
Type: NPN Signal, Contact Closure; level sensitive
Maximum Input: 28 VDC

Remote Reset Input (Terminal 4):
Type: NPN Signal, Contact Closure; edge sensitive
Frequency Response: 30 Hz (50% duty cycle)
Maximum input: 28 VDC

Output (Terminals 6 & 7):
Type: Isolated Photomos Relay
Load Rating: 0.1 Amp @ 30 VAC/VDC
Transition Time: <5ms

Operating Temperature:
Indicator: 32° F (0° C) to 140° F (60° C)

Power Source:
Type: Dual 3V Lithium batteries (Battery P/N 62576-001)
Expected Life: 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
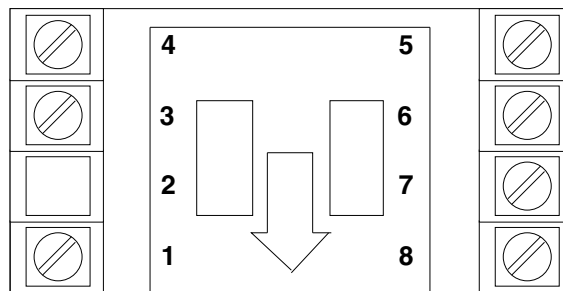approx. 2 weeks prior to end of battery life

Display:
Type: Supertwist LCD for use with or without
backlighting
Number: 8 digits count value, 4 digits (plus dummy zero)
for rate value
Height: 12mm (.472")
Backlighting: Green Illumination over whole
viewable area with a 10 to 28 VDC supply (Terminal 8)

Physical:
Dimensions: 36mm x 72mm, 38mm deep
1.417in x 2.835in, 1.496 in. deep
Mounting: Panel Mount (mounting bracket supplied)
33mm x 68mm (+ 0.3mm) panel cutout
1.299in x 2.677in, (+ 0.012in) 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
   95 Hz max.**
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 - 10 to 28 VDC for backlighting and/or powering
   the output.**

BadgerMeter,Inc.
P.O. Box 245036, Milwaukee, WI 53224-9536
Telephone: (414) 355-0400 / (800) 456-5023
Fax: (414) 355-7499 / (866) 613-9305
www.badgermeter.com