

Model ER-8 and ER-8/R (Remote)

Digital Resettable Totalizer and Digital Rate of Flow Indicator

Technical Brief

GENERAL

Badger's Model ER-8 register is a meter mounted totalizer/rate indicator designed for use with all of Badger's meter product lines. The ER-8/R is the remote version and can be used with any Badger flow meter if 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-8 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. 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.

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 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 a couple weeks before the end of the battery life to remind the operator that the battery is in need of replacement.

OPERATION

Flow through the meter causes pulses to be generated by the sensor or transmitter. Each pulse represents a specific volume of fluid. Using the Model 25 Disc meter as an example, 198 pulses are generated every time one gallon of fluid passes through the meter. Entering an appropriate scale factor independently for the rate and totalization modes will result in the pulse indication on the display to be a meaningful unit of measure for each.



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



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 M Ω to battery

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

Power Source:

Type: Single 3V Lithium battery with dual optional
(Battery P/N 62576-001)
Expected Life: 5 years
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 dead zero)
for rate value
Height: 12mm (.472")
Backlighting: Green Illumination over whole
viewable area with a 10 to 28 VDC supply (Terminal 8)

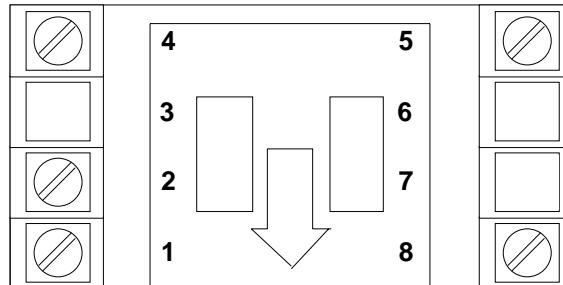
Physical:

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

Operating Temperature:

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

WIRING TERMINALS



1. DC Common
2. Count Input - NPN Signal 280 Hz. or Dry Contact 95 Hz.
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. Not Used
7. Not Used
8. DC Supply Input - 10 to 28 VDC for backlighting.



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