



## OVERVIEW

The electronic register module contains a microprocessor board powered by a lithium battery with an expected life of 5 years depending on use. It can be programmed to batch in pints, quarts, liters, or gallons and will totalize in liters or gallons. A calibration factor and unit of measure are programmed during factory test. Unlike mechanical registers, these units can be electronically recalibrated in the field when necessary. A 6-digit liquid crystal display, accurate to three decimal places, shows the exact amount of fluid that has passed through the meter. The entire register module is protected from normal wear and tear by a rugged, shock resistant housing.

## OPERATION

Industrial oval gear meter has magnets on the gears that cause the reed switches to send pulses to the ILR register as they rotate.

The ILR register is in a sleep mode until it detects these pulses caused by fluid going through the meter. The microprocessor in the register then measures the flow and will display either the batch totalization or the flow rate of the fluid going through the meter on the 6-digit display.

The ILR registers batch totalizer is a 6-digit display with three places of resolution after the decimal point. If the total dispensed exceeds 999.999 then the display will shift and only 2 digits will be displayed after the decimal point, 9999.99 and will continue to shift to the maximum value of 999999. After reaching 999999 the batch totalizer will rollover to 0.000. The batch totalizer is reset to zero when the reset button is depressed.

The ILR also has a resettable totalizer that requires that the total and reset button both be depressed to reset (hold the Total button, then press the Reset button to reset this totalizer while resettable totalize is displayed). This would be used for multiple batch totalization purposes.

The ILR's life time totalizer is 11 digits and will either be in gallons or liters based on the unit of measure selected. Pushing and holding the total button while the life time totalizer is displayed will display the full 11-digit life time totalizer value.

For ILR Series, refer to the Industrial Oval Gear & Registers manual, IOM-189, for installation, operation and additional detailed information.

## APPLICATIONS

The Badger Meter Industrial Line Electronic Registers are used in conjunction with the Industrial Oval Gear meter. The Industrial Oval Gear Meter is designed for a variety of applications including petroleum based fluids, water solutions, and any other liquid compatible with the materials of construction. See the Inline and Flanged Oval Gear Meter Technical Brief (ITB-191) for more information.

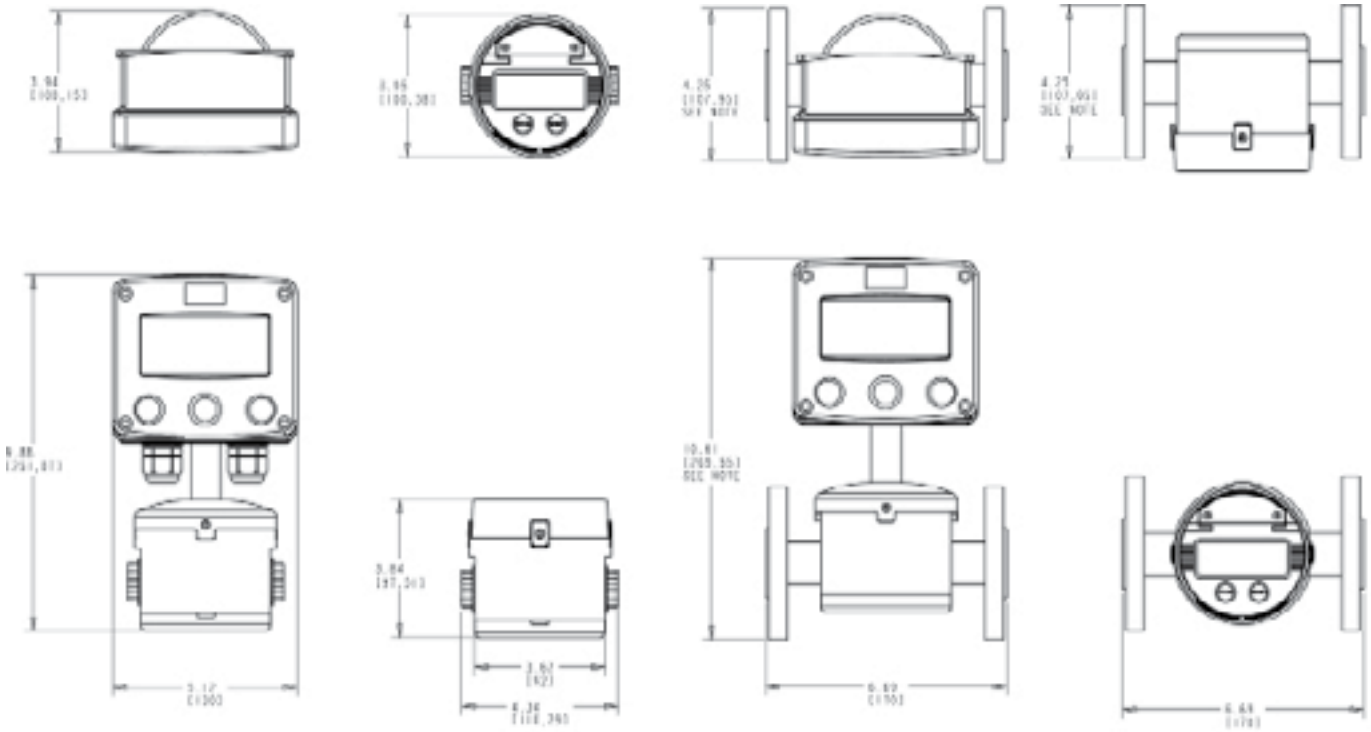
**ITB-192-02 (10-11)**



## BASIC FEATURES

- Large Six Digit LCD Display with three decimal point precision for batch total display
- Batch Total Display in Pints, Quarts, Gallons or Liters selectable from the front of the register
- Non-resettable lifetime Totalization in Gallons or Liters - 11 digits
- Resettable Totalizer - 5 digits
- Display Operation Temperature Range for ILR Series:
  - ILR: -4° F to 140° F (-20°C to +60°C)
  - ER 420: -22°F to +178°F (-30°C to +80°C)
- Low Battery Indicator
- Long life Field replaceable Top load battery
- Calibration factor programmable from front of register
- Calibration Factor saved in non-volatile memory
- Programmable meter pulse rate in pulses per gallon or pulses per liter

## DIMENSIONS



FLANGED DIMENSIONS ARE BASED OFF A 1" STAINLESS STEEL CLASS 150 FLANGE - OD OF FLANGE WILL VARY WITH METER SIZE AND FLANGE CLASS/MATERIAL - SEE LENGTH REMAINS 17mm FOR ALL FLANGED VARIATIONS.

## SPECIFIC REGISTER FEATURES

Register Model	Register Features
ILR 700 Standard Register	<ul style="list-style-type: none"> <li>Improved resolution due to quadrature signals on the reed switch input</li> <li>Register can be mounted in-line or perpendicular to flow</li> <li>Flow rate or totalizer display selectable in the programming menu</li> <li>Selectable unit of measure</li> </ul>
ILR 710 Single Pulse Output	<ul style="list-style-type: none"> <li>Scalable pulse output</li> <li>Ability to set pulse output length</li> </ul>
ILR 720 Dual Pulse Output	<ul style="list-style-type: none"> <li>Quadrature pulse output – Can be used externally to detect direction of flow</li> <li>External Reset Input</li> </ul>
ILR 730 Analog Output	<ul style="list-style-type: none"> <li>Analog 4-20mA output representing the flow rate of the meter</li> <li>Minimum and maximum values can be set for analog output</li> </ul>
NOTE: The ILR 710, 720 and 730 all have the standard features of the ILR 700.	
ILR 740 Transmitter	<ul style="list-style-type: none"> <li>Transmitter (Reed Switch)</li> </ul>
ER 420 Flow rate/Totalizer	Refer to the Technical Brief ITB-174 and the Installation & Operation Manual IOM-160 for additional, detailed information.

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