

# Optical Encoder



## Description

The Optical Encoder provides a high resolution encoded output using an industry standard ASCII communication protocol. The direct read mechanical odometer is permanently sealed and magnetically driven. With no battery and frictionless LED optical technology, the Optical Encoder provides a long and accurate service life for all AMR and AMI applications.

### Application:

The Optical Encoder is designed for use with RG3 Positive Displacement water meters. The Optical Encoder provides connectivity with RG3 Tesla endpoints, RG3 approved touch modules, and other RG3 approved AMR and AMI technology solutions.

### Mounting:

The Optical Encoder in its shroud assembly uses a bayonet mount compatible with RG3 5/8" and 1" Positive Displacement water meters. The bayonet mount allows positioning of the register in any of four orientations for direct reading convenience. The Optical Encoder can be removed from the meter without disrupting water service.

### Operation:

The Optical Encoder uses LED light paths to determine the exact position of each number wheel. Readings obtained by an AMR or AMI device are retrieved directly from the position of the encoder's odometer.

### Magnetic Drive Communication:

Reliable and dependable register coupling is provided through a direct-drive, high-strength magnetic field, through the meter body to the wetted magnet.

### Connections:

The Optical Encoder provides 3 wire communication to AMR and AMI devices. Inline RG3 or Nicor connectors are available for easy connection and installation. Optionally, the encoder can be purchased with flying lead bare wire for field splice connection or fully prewired and potted to an AMR or AMI device.

### Tamper Resistant Features:

The Optical Encoder is secured to the meter with a tamper resistant Torx screw. It can be installed at the factory or in the field.

### Construction:

The hermetically sealed, IP68 rated Optical Encoder assembly is constructed of a strengthened glass lens top and a corrosion-resistant metal bottom. The encoder gearing is self-lubricating thermoplastic to minimize friction and provide long, reliable life. The shroud assembly is constructed of nylon plastic for UV resistance and strength.

### Temperature:

The operating range of the Optical Encoder is 14° to 158° F.

### Standards:

The Optical Encoder exceeds all applicable requirements of AWWA Standard C707.



2912 South Access Rd.  
Longview, TX 75602  
PH: 903-753-3456  
Fax: 903-753-5678  
RG3METER.COM



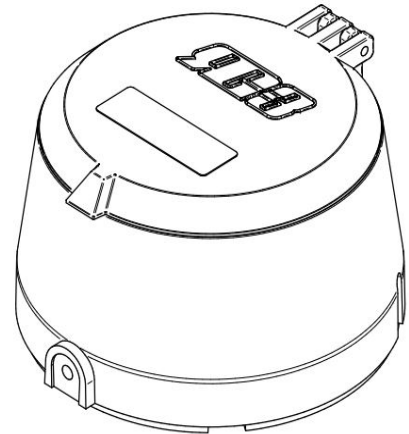
OpticalEncoder-0000080123

# Optical Encoder

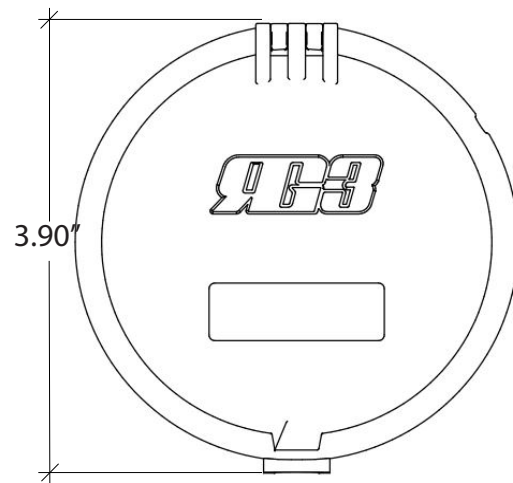
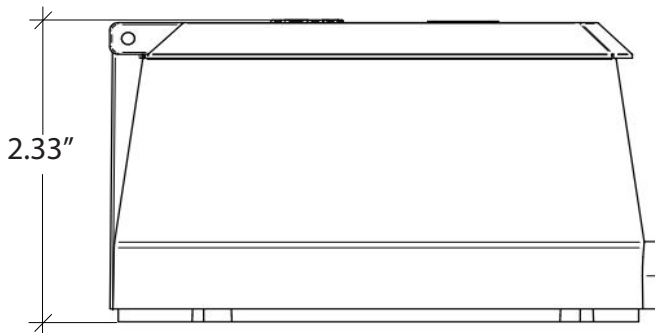


## SPECIFICATIONS:

Encoder Type	Direct read, permanently sealed, magnetic drive, absolute encoder
Unit of Measure	U.S. Gallons or Cubic Feet
Test Circle	360° circle with ten divisions
Number Wheels	8 digits
Weight	10 ounces
Humidity	0 to 100% condensing
Temperature	14° to 158° F
Signal Output	Industry standard ASCII Format
Electronic Resolution	8-dial resolution for AMR and AMI
Signal Type	3-wire for AMR and AMI (red=power, black=ground, green=data)
Power Source	External – No internal battery



## DIMENSIONS:



2912 South Access Rd.  
Longview, TX 75602  
PH: 903-753-3456  
Fax: 903-753-5678  
RG3METER.COM



OpticalEncoder-0000080123