

DESCRIPTION

APPLICATIONS: The Absolute Digital Encoder (ADE) is designed for use with all Recordall® Disc, Turbo, Compound and Fire Service Meters to provide connectivity with ORION®, Badger® ERT®, Badger Touch, and Badger Meter, Inc. approved AMR technology solutions.

RESOLUTION: Digital output from the ADE includes the option of either 4, 5 or 6 dial resolution.

MOUNTING: The ADE in its shroud assembly uses a bayonet mount compatible with all Recordall disc, turbo, compound and fire series meters. A Torx® seal screw is provided to allow positioning of the register for the most convenient reading and to secure the register to the meter body in a tamper resistant mode. The ADE can be removed from the meter without disrupting water service.

MAGNETIC DRIVE: Direct drive high-strength magnetic coupling through the meter body to the wetted magnet provides reliable and dependable register coupling.

SEALED REGISTER: The ADE local register consists of a six-digit straight-reading mechanical odometer totalizer (located in the 12 o'clock position), a 360° test circle with sweep hand, and a flow finder to detect leaks. The register gearing is self-lubricating thermoplastic to minimize friction and provide long, reliable life. Permanent sealing eliminates moisture, dirt, and other contaminants. (The leak rate of the seal is less than 10⁻⁶ cc/sec as tested by a helium mass spectrometer.)

TAMPER-PROOF FEATURES: Customer removal of the ADE can be prevented by using a tamper resistant Torx seal screw. Torx seal screws are provided as standard accessories with the ADE. Optional tamper detection seal wire screws are also available.

CONSTRUCTION: The housing of the ADE is constructed of a strengthened glass lens top and a copper alloy metal bottom. Internal construction materials are thermoplastic for long-life and high reliability. The integrity of the adhesive seal joining the glass top to the metal base provide unmatched protection in water meter applications. A corrosion and tamper resistant Torx seal screw is provided to secure the ADE to the meter. The shroud assembly is thermoplastic.

TEMPERATURE: The operating range of the ADE is -20° C to 49° C (-5°F to 120°F). The water meter should not be subjected to temperatures below freezing.

MOISTURE: The ADE achieves true water resistance due to the adhesive technology used in the sealing process. Leak rates less than 10⁻⁶ cc/sec. as tested by a helium mass spectrometer, are comparable to a true hermetic seal. Due to this unique sealing process, the ADE exceeds all applicable requirements of AWWA Standard C707 regarding moisture intrusion. Register fogging and condensation are no longer an issue.

WIRE CONNECTIONS: The ADE is provided as either a factory prewired assembly or as a register with pre-sized wire harness available for connection in the field. Operation of the ADE is dependent of the wire length limitations of connected MRT equipment.

ELECTRICAL: The electronic circuitry is designed to provide immunity to electrical surges and transients per IEC801-2, IEC801-4 Severity Level 4.



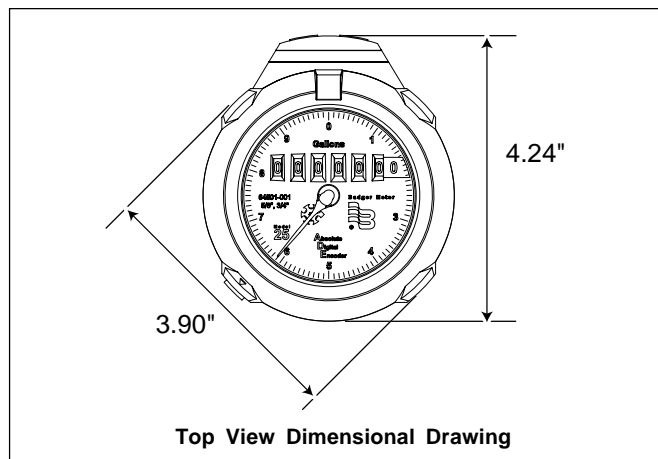
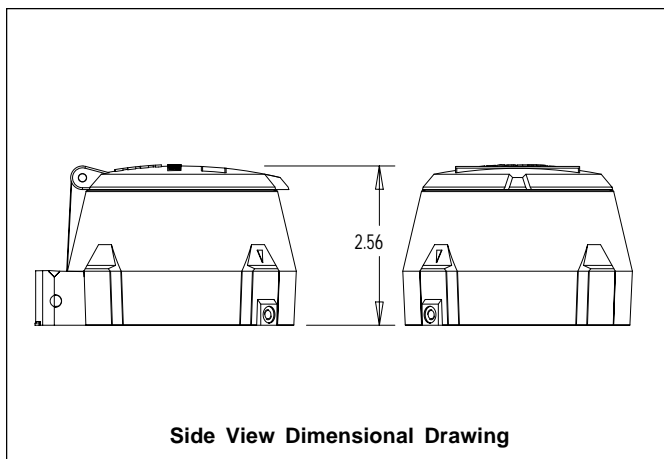
SPECIFICATIONS

Transmitter/Register	Straight reading, permanently sealed, magnetic drive
Unit of Measure	U.S. Gallons, Cubic Feet, Cubic Meters, clearly identified on register face
Number Wheels	Six with 3/16" high numerals font type
Test Circle	360° circle with ten major increments with ten divisions each
Weight	11 Ounces
Humidity	0% to 100% Condensing
Temperature	-20°C to 49°C (-5°F to 120°F)
Signal Output	Industry Standard ASCII Format
Visual Resolution	1/100th of Test Circle
Electronic Resolution	4, 5 or 6 Dial Resolution
Signal Type	Two wire asynchronous for Touch Solutions Three wire synchronous for AMR Solutions
Power Source	External

OPERATING CHARACTERISTICS: The ADE reading is obtained directly from the position of the register's odometer wheel stack utilizing a non-contact frictionless form of absolute encoding. The encoder provides accurate readings by using internal light sources to determine the exact position of the number wheel. This technology eliminates electrical contacts and wipers that could wear out and provides greater long-term performance. No batteries are required to maintain the reading.

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ADE™ is a trademark of Badger Meter, Inc.
TORX® is a registered trademark of Camcar, Division of Textron, Inc.
ERT® is a registered trademark of Itron, Inc.





MEASUREMENT RESOLUTION: The minimum electronic resolution of the ADE is as noted below (6 Dial Reading). To verify the correct resolution for your application, contact Badger Meter Customer Service.

RECORDALL® Disc Series	Size	6 Dial Resolution Gallons	6 Dial Resolution Cubic Feet (Ft³)	6 Dial Resolution Cubic Meters (m³)
M25	5/8"	10	1	0.1
M25	3/4"	10	1	0.1
M35	3/4"	10	1	0.1
M40	1"	10	1	0.1
M70	1"	10	1	0.1
M120	1 1/2"	100	10	1
M170	2"	100	10	1

RECORDALL Turbo Series	6 Dial Resolution Gallons	6 Dial Resolution Cubic Feet (Ft³)	6 Dial Resolution Cubic Meters (m³)
1 1/2"	100	10	1
2"	100	10	1
3"	100	10	1
4"	100	10	1
6"	1000	100	10
8"	1000	100	10
10"	1000	100	10
12"	10000	1000	10
16"	10000	1000	10
20"	10000	10000	10

Fire Service Meters	6 Dial Resolution Gallons	6 Dial Resolution Cubic Feet (Ft³)	6 Dial Resolution Cubic Meters (m³)
3"	100	10	1
4"	100	10	1
6"	1000	100	10
8"	1000	100	10
10"	1000	100	10

RECORDALL Compound Series	6 Dial Resolution Gallons	6 Dial Resolution Cubic Feet (Ft³)	6 Dial Resolution Cubic Meters (m³)
2" High Side (Turbine)	100	10	1
2" Low Side (PD)	10	1	0.1
3" High Side (Turbine)	100	10	1
3" Low Side (PD)	10	1	0.1
4" High Side (Turbine)	100	10	1
4" Low Side (PD)	10	1	0.1
6" High Side (Turbine)	100	10	1
6" Low Side (PD)	10	1	0.1

Resolution stated as individual high and low readings.

CAUTION

The ADE should only be connected to a Badger Meter, Inc. approved product. Connection to an unapproved product will void the ADE warranty.



Please see our website at
www.badgermeter.com
 for specific contacts.

Due to continuous research, product improvements and enhancements, Badger Meter reserves the right to change product or system specifications without notice, except to the extent an outstanding bid obligation exists.



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