

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®, BadgerTouch® and Badger Meter approved AMR technology solutions.

Electronic Resolution: Digital output from the ADE includes the option of either four, five or six dial resolution. Refer to tables on the next page for details.

Mounting: The ADE in its shroud assembly uses a bayonet mount compatible with all Recordall Disc, Turbo, Compound and Fire Series meters. The bayonet mount allows positioning of the register in any of four orientations for visual reading convenience. The ADE can be removed from the meter without disrupting water service.

Magnetic Drive: A direct-drive, high-strength magnetic coupling through the meter body to the wetted magnet provides reliable and dependable register coupling.

Local Indication: The ADE register face features a six-digit mechanical odometer wheel stack, a 360° test circle with sweep hand, and a flow finder to indicate leaks.

Tamper-Resistant Features: Unauthorized removal of the ADE is inhibited by a tamper resistant Torx® seal screw, provided as a standard accessory with the ADE. An optional tamper detection seal wire screw is also available.

Construction: The housing of the ADE is constructed of a strengthened glass lens top and a corrosion-resistant metal bottom. Internal construction materials are thermoplastic for long life and high reliability. The register gearing is self-lubricating thermoplastic to minimize friction and provide long, reliable life. The shroud assembly is thermoplastic.

Temperature: The operating range of the ADE is -40° C to 60° C (-40°F to 140°F). The water meter should not be subjected to temperatures below freezing.

Sealing: The ADE achieves true water resistance due to the adhesive technology used to seal the glass dome to the corrosion resistant metal bottom. 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.

Wire Connections: The ADE is available with either a wire lead, fully potted to prevent moisture intrusion at the connections, or with terminal screws. When provided with a wire lead, the ADE may be pre-wired at the factory to select Badger Meter-approved AMR devices, or may be furnished with a variety of lead wire lengths. Lead wire equipped ADE registers are suitable for installation in all environments,



Specifications

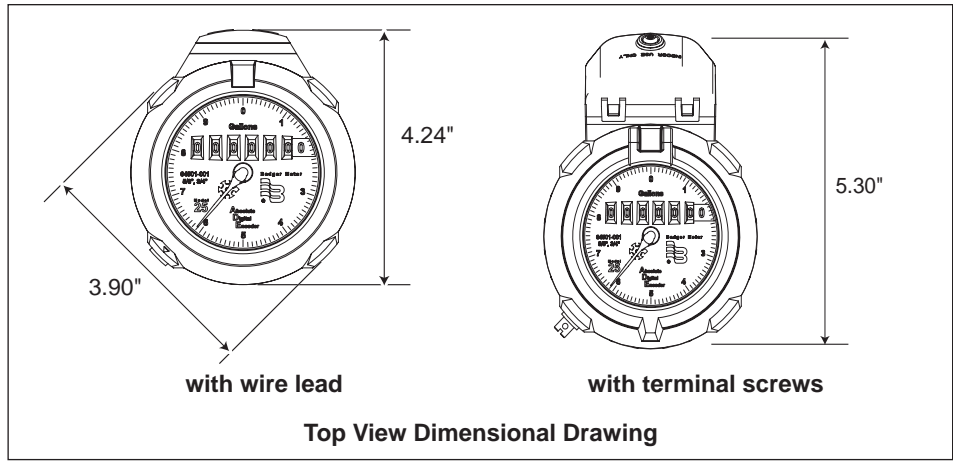
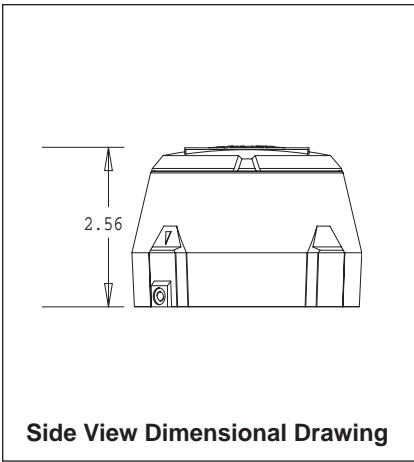
Transmitter/Register	Straight reading, permanently sealed, magnetic drive
Unit of Measure	U.S. Gallons, Cubic Feet, Cubic Meters, clearly identified on register face
Number Wheels	Six with 3/16-inch high numerals
Test Circle	360° circle with ten major increments with ten divisions each
Weight	11 Ounces
Humidity	0% to 100% condensing when equipped with potted lead wire, 0% to 95% non-condensing with screw-terminal wire connections
Temperature	-5° F to 120° F (-20° C to 49° C)
Signal Output	Industry Standard ASCII Format
Visual Resolution	1/100th of Test Circle
Electronic Resolution	Four-, five- or six-dial resolution
Signal Type	Two-wire asynchronous for Touch Solutions
Power Source	External

including continuously submerged water meter pits. The terminal screw version ADE features a tamper-resistant cap over the three-wire terminals. ADE registers with terminal screws are for indoor installation in protected environments, such as residential basements.

Electrical: The electronic circuitry is designed to provide immunity to electrical surges and transients per IEC801-2, IEC801-4 Severity Level 4. Operation of the ADE is dependent on the wire length limitations of connected AMR equipment.

Operating Characteristics: The digital reading obtained by an AMR device is sensed directly from the position of the ADE register's odometer using internal LED light paths to determine the exact position of each number wheel. This technology eliminates electromechanical contacts that could wear out, and provides greater long-term performance.





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
M55	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)	1000	100	10
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.

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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 contractual obligation exists.



Please see our Web site at www.badgermeter.com for specific contacts.



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