



Badger Meter

How to Read an Encoder

HR-E LCD Encoder and

E-Series® Ultrasonic Meters with High Resolution Protocol

The HR-E LCD encoder has a 9-digit Liquid Crystal Display (LCD) to show consumption, flow and alarm information. The display automatically toggles between 9-digit and 6-digit consumption, rate of flow and meter model.

VISUAL READING DISPLAYS

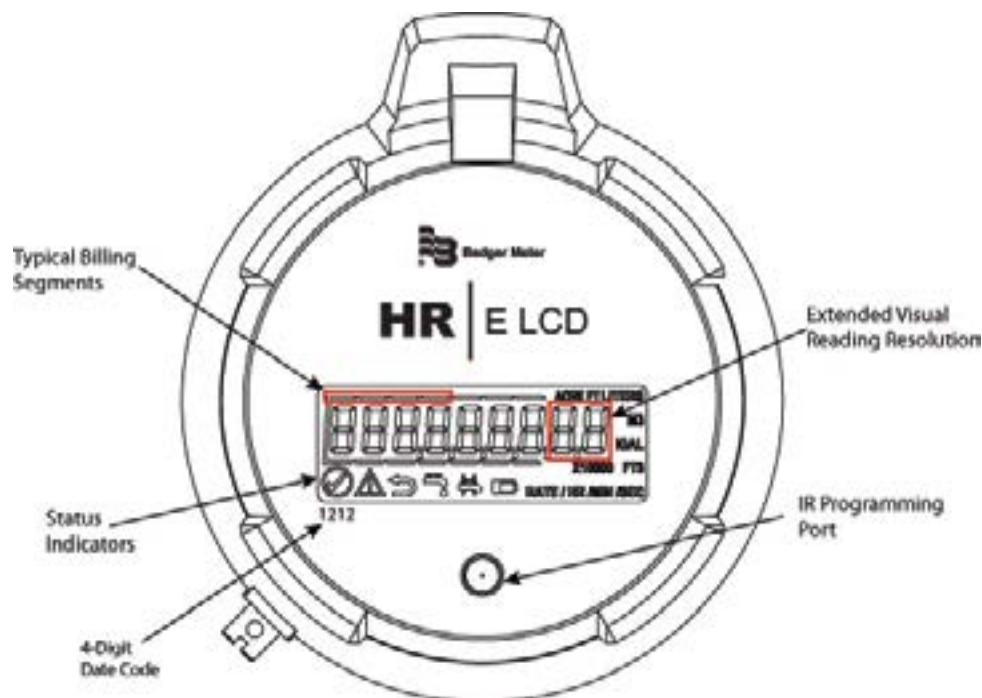
- The 9-digit display provides your utility with the finest reading resolution.
- The 6-digit display represents the equivalent of the moveable number wheels on a 6-dial mechanical encoder.
- Depending on the meter model, size, and unit of measure, a multiplier value may also be shown. Multiply the displayed value by the multiplier value to calculate the reading to the nearest gallon, cubic foot, or cubic meter. Ex: 123456 with factor of x10, equals 1234560.

UTILITY BILLING STANDARDS FOR METER READING

Typical 6-wheel odometer registration is designed with white and black number wheels for local readability with the white number wheels corresponding to the “typical” utility standard meter reading units:

- Gallons – reading to the nearest 1000 gallons
- Cubic Feet – reading to the nearest 100 ft³
- Cubic Meters – reading to the nearest 1 m³

The HR-E LCD encoder is designed with segmented lines above the numeric dials. The segmented lines above the numbers on the LCD display represent what the white number wheels do for the mechanical encoders—the typical utility standard meter reading.



GALLONS

Typical Billing Unit of 1000 Gallons

9-DIGIT VISUAL DISPLAY

6-DIGIT VISUAL DISPLAY

Recordall Disc LP, M25, M35, M40, M55, M70, Recordall CSM 2, 3, 4, 6 inch Low Side, E-Series 5/8...1 inch (9-digit display only)

Meter reading to the nearest?
100th gallon = 1234567.89
10th gallon = 1234567.8
1 gallon = 1234567
10 gallons = 123456
100 gallons = 12345
Typical Billing Units → 1000 gallons = 1234

Meter reading to the nearest?
1 gallon = 1234560
10 gallons = 123456
100 gallons = 12345
Typical Billing Units → 1000 gallons = 1234

Recordall Disc M120 & M170, Recordall TSM 1-1/2, 2, 3 & 4 inch, Recordall CSM 2, 3 & 4 inch High Side, Recordall Combo 8 inch Low Side, E-Series 1-1/2...4 inch (9-digit display only)

Meter reading to the nearest?
10th gallon = 12345678.9
1 gallon = 12345678
10 gallons = 1234567
100 gallons = 123456
Typical Billing Units → 1000 gallons = 12345

Meter reading to the nearest?
1 gallon = 12345600
10 gallons = 1234560
100 gallons = 123456
Typical Billing Units → 1000 gallons = 12345

Recordall TSM 6, 8 & 10 inch, Recordall CSM 6 inch High Side, Recordall Combo 8 inch High Side E-Series 6...8 inch (9-digit display only)

Meter reading to the nearest?
1 gallon = 123456789
10 gallons = 12345678
100 gallons = 1234567
Typical Billing Units → 1000 gallons = 123456

Meter reading to the nearest?
1 gallon = 123456000
10 gallons = 12345600
100 gallons = 1234560
Typical Billing Units → 1000 gallons = 123456

Recordall TSM 12, 16 and 20 inch

Meter reading to the nearest?
1 gallon = 1234567890
10 gallons = 123456789
100 gallons = 12345678
1000 gallons = 1234567
10000 gallons = 123456
Typical Billing Units → 10000 gallons = 123456

Meter reading to the nearest?
1 gallon = 1234560000
10 gallons = 123456000
100 gallons = 12345600
1000 gallons = 1234560
10000 gallons = 123456
Typical Billing Units → 10000 gallons = 123456

CUBIC FEET

Typical Billing Unit of 100 Cubic Feet

9-DIGIT VISUAL DISPLAY

6-DIGIT VISUAL DISPLAY

Recordall Disc LP, M25, M35, M40, M55, M70, Recordall CSM 2, 3, 4, 6 inch Low Side, E-Series 5/8...1 inch (9-digit display only)

Meter reading to the nearest?
1000th ft³ = 123456.789
100th ft³ = 123456.78
10th ft³ = 123456.7
1 ft³ = 123456
10 ft³ = 12345
Typical Billing Units → 100 ft³ = 1234

Meter reading to the nearest?
1 ft³ = 123456
10 ft³ = 12345
100 ft³ = 1234
Typical Billing Units → 100 ft³ = 1234

Recordall Disc M120 & M170, Recordall TSM 1-1/2, 2, 3 & 4 inch, Recordall CSM 2, 3 & 4 inch High Side, Recordall Combo 8 inch Low Side, E-Series 1-1/2...4 inch (9-digit display only)

Meter reading to the nearest?
100th ft³ = 1234567.89
10th ft³ = 1234567.8
1 ft³ = 1234567
10 ft³ = 123456
Typical Billing Units → 100 ft³ = 12345

Meter reading to the nearest?
1 ft³ = 1234560
10 ft³ = 123456
100 ft³ = 12345
Typical Billing Units → 100 ft³ = 12345

Recordall TSM 6, 8 & 10 inch, Recordall CSM 6 inch High Side, Recordall Combo 8 inch High Side E-Series 6...8 inch (9-digit display only)

Meter reading to the nearest?
10th ft³ = 12345678.9
1 ft³ = 12345678
10 ft³ = 1234567
100 ft³ = 123456
Typical Billing Units → 100 ft³ = 123456

Meter reading to the nearest?
1 ft³ = 12345600
10 ft³ = 1234560
100 ft³ = 123456
Typical Billing Units → 100 ft³ = 123456

Recordall TSM 12, 16 and 20 inch

Meter reading to the nearest?
1 ft³ = 123456789
10 ft³ = 12345678
100 ft³ = 1234567
Typical Billing Units → 100 ft³ = 1234567

Meter reading to the nearest?
1 ft³ = 123456000
10 ft³ = 12345600
100 ft³ = 1234560
Typical Billing Units → 100 ft³ = 1234560

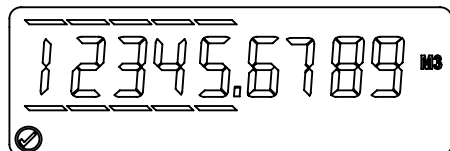
CUBIC METERS

Typical Billing Unit of 1 Cubic Meter

9-DIGIT VISUAL DISPLAY

6-DIGIT VISUAL DISPLAY

Recordall Disc LP, M25, M35, M40, M55, M70, Recordall CSM 2, 3, 4, 6 inch Low Side, E-Series 5/8...1 inch (9-digit display only)

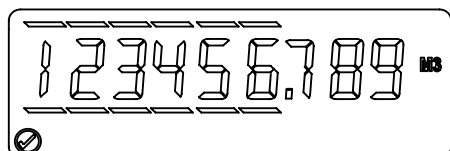


Meter reading to the nearest?
 10000th m³ = 12345.6789
 1000th m³ = 12345.678
 100th m³ = 12345.67
 10th m³ = 12345.6
 Typical Billing Units → 1 m³ = 12345
 10 m³ = 1234

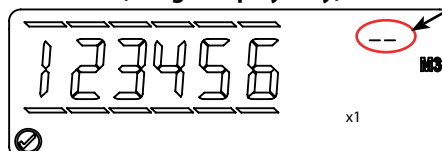


Meter reading to the nearest?
 10th m³ = 123456
 Typical Billing Units → 1 m³ = 12345
 10 m³ = 1234

Recordall Disc M120 & M170, Recordall TSM 1-1/2, 2, 3 & 4 inch, Recordall CSM 2, 3 & 4 inch High Side, Recordall Combo 8 inch Low Side, E-Series E-Series 1-1/2...4 inch (9-digit display only)



Meter reading to the nearest?
 1000th m³ = 1234567.89
 100th m³ = 1234567.8
 10th m³ = 1234567
 Typical Billing Units → 1 m³ = 123456
 10 m³ = 12345



Meter reading to the nearest?
 Typical Billing Units → 1 m³ = 123456
 10 m³ = 12345

Recordall TSM 6, 8 & 10 inch, Recordall CSM 6 inch High Side, Recordall Combo 8 inch High Side E-Series 6...8 inch (9-digit display only)

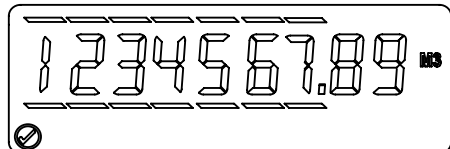


Meter reading to the nearest?
 100th m³ = 1234567.89
 10th m³ = 1234567.8
 Typical Billing Units → 1 m³ = 1234567
 10 m³ = 123456



Meter reading to the nearest?
 Typical Billing Units → 1 m³ = 1234560
 10 m³ = 123456

Recordall TSM 12, 16 and 20 inch



Meter reading to the nearest?
 100th m³ = 1234567.89
 10th m³ = 1234567.8
 Typical Billing Units → 1 m³ = 1234567
 10 m³ = 123456



Meter reading to the nearest?
 Typical Billing Units → 1 m³ = 1234560
 10 m³ = 123456

SMART WATER IS BADGER METER

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