

## ZENNER VL-9M Remote Reader for Water Meters with Encoded Output

**APPLICATIONS:** This unit is used whenever a water meter is not easily accessed. Whether the meter is mounted in a ceiling, a pit, or an inaccessible room, these units give remote access to the meter reading.

**CONSTRUCTION:** Size is 4.6" X 4.3" X 2" thick (11.7cm X 10.9cm X 5.1cm thick) Weight 9oz (254g). Environmentally sealed to keep unit waterproof and to ensure no internal fogging. Operating temperature is -22 to 176 °F (-30 to 80 °C)

**WIRING:** Recommended cable is a 3 conductor 24 gauge stranded wire with shielding. Maximum distance between the meter and remote reader is 2000 ft.

**BATTERY:** The VL-9M has an internal 3.6 Volt Lithium Battery. It has a calculated life of 10 years.

**PROTOCOLS:** Sensus, Neptune, and Kent protocols are supported by the VL-9M. Most meter manufacturers use one of these three protocols for communication.

**METER CONNECTIVITY:** ZENNER, Invensys, Neptune, AMCO/Kent, Schlumberger, Badger ADE, Badger HRE, Elster, Master Meter, Most Meters with an Absolute Encoder Register.

### FEATURES:

- Environmentally sealed
- Connects to M.I.U.
- Large easy to read Display
- "TAP" switch to get current meter reading
- 8 digit meter readings
- 12 digit meter ID
- Alpha numeric
- 5 year limited warranty
- Solution for confined spaces
- Convenient cost effective solution for inaccessible meters, i.e., Shopping Malls, etc.



## OPERATION:

The VL-9M is activated by striking the gold disc, making an acoustic vibration. You can use your fingernail, coin, key, or even the tip of your screwdriver. The VL-9M has an 8-digit 14-segment alphanumeric display capable of displaying both letters and numbers. More than 8 digits can be displayed by showing part of a value, then the rest of it. Characters may be alphanumeric (letters or numbers). All letters will be shown as capital letters. Other displayable characters include the decimal point, the space, and the dash ("-"). Any un-displayable character or error character (such as a question mark) will be shown as a dash.

When displaying a meter reading, the letters "RD" will appear at the far left taking 2 display digits. Meter readings of 6 digits or less will appear at the same time, right-justified, and will be displayed for 10 seconds. For a meter reading of more than 6 digits, the "RD" label will appear by itself for 2 seconds, the complete meter reading (up to 8 digits) will appear for 10 seconds. The meter/register ID will appear next. For an ID of 8 or fewer characters, the label "ID" will appear for 2 seconds, then the ID will appear for 10 seconds. For an ID of more than 8 (up to 12) characters, the label "ID" and the most significant characters (up to 4) will appear for 5 seconds, then the rest of the ID will appear for 10 seconds.

## ERROR MESSAGES:

The display will indicate one of the following messages if an error is encountered:

Message	Description
CHECK WIRING	No meter register appears to be connected--verify that the register wires are all connected correctly.
UNKNOWN REGISTER	Some type of response was obtained, but not from a supported register type. Verify that the connected meter is a supported type.
FRAMING ERROR	The data was corrupted: a STOP bit did not occur where it should have. Check the integrity of cable connections.
PARITY ERROR	An incorrect parity error check bit was received. Check the integrity of cable connections.

## WIRING DIAGRAM:

