

The innov8-VNr is a cellular water meter endpoint remote which interfaces with most industry water meters, registers and flowmeters. This remote utilizes the Verizon Wireless™ network to securely and reliably deliver readings, high resolution interval data and diagnostic data to the cloud-based meter data management system (MDMS). Utilities and consumers can access data via the powerful Waterscope® web portal and via email notifications.

The innov8-VNr provides an efficient means to adapt commercial, industrial and institutional meters to a state-of-the-art AMI system. High resolution data and analytics provide immediate insights into the account consumption.



## SPECIFICATIONS

### Operational

#### Cellular Channel

Carrier: Verizon Wireless  
Method: LTE Cat-M  
FCC/IC: License exempt

Secondary: Proprietary InfraRed port

Onboard Storage: 5 min intervals: 227 days  
1 min intervals: 45 days

LCD: 8 digits  
Display: Duplicates meter/register  
Configurable digit underlines  
Units: G, Ft3 or m3

Battery: One (1) 19Ahr non-replaceable  
Type: Lithium Thionyl Chloride  
Lifetime: 10 years nominal

### Physical

Dimensions: 3.6W x 3.6H x 2.5D inches  
w/o antenna 91W x 91W x 63.5D mm

Weight: 0.70 lb (0.31 kg)

Temperature  
Storage: -20° to 140° F (-6° to 60° C)  
Operation: -0° to 140° F (-18° to 60° C)

Humidity: 0 to 100% RH condensing  
Fully submersible (IP-68)

## DESIGN

**Construction:** The innov8-VNr Remote is a compact, fully encapsulated package for all environments. The endpoint has an outer housing which can be attached to interior or exterior walls, posts or internal pits. The unit also has a LCD which duplicates the display of the meter/register read.

**Connections:** The innov8-VNr Remote connects to the water meter or register with a cable consisting of 3 wires with 22AWG solid-core conductors. The cable connection is provided as loose leads (field splice required) or with Nicor Hydroconn® waterproof connectors. Other connectors or methods may be available on a special order basis.

**Antennas:** The innov8-VNR Remote has an antenna port which can accommodate either a local antenna or a remote antenna for extension through walls or outside pits/vaults.

**Activation:** All innov8-VNr units come from the factory activated and provisioned on the Verizon Wireless network. Consumption data on the Waterscope web portal can be accessed within 24 hours of installation.

**Operation:** The innov8-VNr Remote will query the attached meter/register and store consumption every log interval. The unit will also perform on-board measurements diagnostics regularly. Once per day during super off-peak hours (1 to 6am local time), the unit will negotiate a secure channel with the Verizon Wireless tower and transmit a daily packet with the current meter read, the daily interval logs and other diagnostic data. Following the transmission, the unit waits for any commands from the cloud server (such as configuration or data backfill) prior to returning to normal operational mode.

## FUNCTIONALITY

**Configuration:** Configuration can be performed via the local InfraRed (IR) port with Metron's IR bridge. The IR bridge can be coupled via USB to a Win10 computer with the Communicator software or be operated in a standalone mode.

### Configuration Options

- Input Type (see compatibility section)
- Number of encoder digits
- Or pulse resolution
- Measurement units
- Log Interval

Data resolution: Matching meter/register  
Data intervals: Five (5) default or One (1) min  
Data Backfill: Automatic from MDMS

OTA Updates: Available  
Onboard Time: Synced with Verizon  
Security: VPN and encryption  
Contact Metron for info

### Flags/Alerts

#### Diagnostic

- Comm Error (Cut cable / Tamper)
- Low Signal Strength

#### Consumption

- Leak / Threshold Leak / Intermittent Leak
- High Usage / Zero Usage
- Backflow
- Unexpected / Unauthorized Usage
- High/Low Temp
- Watering Event

## DISCLAIMERS

**Transportation:** The innov8-VNR Remote contains a lithium battery and thus is prohibited from shipment by AIR. Please conform with all shipping regulations for lithium batteries.

**Safety:** The innov8-VNR operates with radio frequency (RF) during its cellular communications. Metron can provide a whitepaper covering the potential health effects of smart meters.

**Disposal:** The battery inside the innov8-VNR is not replaceable and removal should never be attempted. The innov8-VNR units should be disposed of in accordance with local regulations.

## COMPATIBILITY

The innov8-VNR is compatible with a wide range of industry registers and electronic meters.

### 3-wire Encoders (4 to 9 dials)

Metron-Farnier: innov8 register  
Hawkeye OER register

Diehl Metering: Hydrus™

Badger: E-Series® Ultrasonic  
HR-E® Mechanical  
HR-E® LCD  
ADE®

Sensus: Omni™  
iPerl®  
ICE®  
ECR-II

Neptune: Mach 10®  
ProRead® / Auto  
E-Coder®

Master Meter: ELinx®  
Octave®

Elster: evoQ4® (ECR)

Kamstrup FlowIQ®

Check with your Metron representative for other meter/register types.

### Pulse (Switch closure)

The innov8-VNR can accept a passive and active pulse output from many flowmeters and older water meters. Due to electrical variations in typical pulse interfaces, customers should consult with Metron prior to the application.

## WARRANTY

Please contact your Metron representative for formal warranty certifications.

## LEGAL

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