

100C LTE-M AMI REMOTE SMART VALVE WITH METER

The SETflow™ 100C remote smart valve internal endpoint is an innovative two-way radio that operates over existing cellular networks, providing water utilities with meter reading and sensor data, and with multiple read and transmit options. The valve function provides water utilities with a low-cost and secure way of managing customer disconnects and reconnects that traditionally required on-site visits, all helping to lower utility operational costs and reducing on-site worker safety concerns.

Control: Turning water services on or off for new or delinquent customers is a time consuming process for field staff which takes resources away from urgent maintenance projects and adds costs to water operations. By implementing remote shut-off valves over existing cellular networks, utility staff reduce truck rolls, decrease unauthorized water consumption, and improve revenue collection. SET is the only technology provider in the water utility industry to offer a meter-neutral shut-off valve that may be selectively deployed at desired accounts.

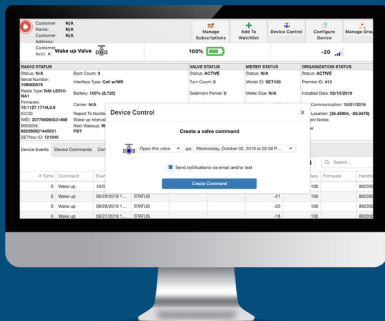
Excellent coverage: Our cellular radios use LTE-M network technology, which is specifically designed for low power, machine-to-machine communication. Both Verizon and AT&T have deployed national LTE-M networks and offer broad territory coverage across major urban areas.

Zero infrastructure maintenance: The use of existing cellular networks avoids the need for the utility to invest in and maintain proprietary communication network infrastructure. The utility benefits from the infrastructure investment made by Verizon and AT&T without additional cost.

Fits standard meter boxes: When combined with a 5" meter, the SETflow™ 100C AMI remote smart valve only has a 7.5" lay length - compatible with standard meter boxes, typically negating the need for any plumbing.

No ongoing fees: All fees proposed in the SETflow platform quote are inclusive of a system lifetime cellular network connectivity subscription. Software services are also provided for the life of the system without ongoing maintenance or subscription fees. Price certainty for the life of the system is a valuable asset for budget planning.

Included service: All SETflow systems include SET's award winning Meter Data Management System (MDMS), the SETflow Field Mobile Application, and the SETflow Customer Portal. Additionally, SET has the SETflow University Program that is delivered remotely, and support services.



SETflow MDMS Remote Smart Valve Control Screen

100C AMI REMOTE SMART VALVE FEATURES

- A durable chrome plated ball valve shutoff system.
- The lithium battery provides up to 20 years of remote valve control and is contained within a potted solution, providing IP68 protection from water intrusion.
- The minimal mechanical functions of the SETflow Smart Valve allows for quick installation by adding only 2 inches to standard lay lengths.
- Sizes ranging from 1/2 inch up to 2 inches to meet a variety of residential, commercial, and industrial applications.
- The valve may also be configured for full meter reading and data transmission capabilities, eliminating the need for a discreet endpoint.
- Valve positions include open, closed and reduced flow and controlled remotely from the SETflow MDMS.

CUSTOMER BENEFITS

- End-users can remotely schedule water service shut-off when they will be traveling or on vacation. This avoids unauthorized water use or accidental leaks when no one is available to monitor water use. Alternatively, customers can remotely enable water services for winter vacation homes to avoid pipe freezing or automatically shut-off water if pipes inadvertently burst.
- This not only helps protect property from costly water damage, but it also increases customer satisfaction of their water services. In the event of a shut-off due to delinquent payment, customers can have service quickly reinstated after making their account current. Customers also receive a text communication notifying them that water service is slated to resume and to turn off any open faucets or valves in their homes to avoid flooding events.

TECHNICAL SPECIFICATIONS

Communication Type	Two-Way LTE-M LPWA Cellular, WiFi, and Bluetooth 5.0
Transmit Interval	Various - endpoints can transmit as frequently as every 10 minutes, up to once monthly. The transmit interval will contain all readings based upon the selected reading. <i>Note: Battery warranty will be affected by choosing transmit intervals less than once daily.</i>
Reading Interval	Various - 5 min, 30 min, 60 min, 4hr, 8hr, 12hr, 24hr, 1wk, 2wk, 4wk. All endpoints are remotely configurable
Data Logging	Endpoints store 60 days of hourly meter reads.
Valve Operations	Valve positions include open/closed/reduced flow (<1 gpm) and may be controlled remotely through the SETflow MDMS.
Valve Dimensions	5.5 in. (H), 1.75 in. top diameter, 2.75 in. bottom diameter
Valve Dimensions With Meter	5.5 in. (H), only 7.5 in. lay length
Data Security	Transmissions are encrypted using AES 256.
Firmware Updates	All endpoint updates from the SETflow™ MDMS or Field Mobile application.
Cellular Network Providers	US Territories - Verizon / AT&T, Bahamas – Aliv / BTC, UAE - Orange Providenciales – Digicel Mexico – Claro
Battery/Battery Monitor	Non-replaceable D-Cell Lithium thionyl chloride, life expressed as percentage of total remaining battery life within the SETflow™ MDMS.
Operating Temperature	-20° to 60° C / -40° to 140°F

License Requirements: All SETflow™ Remote Smart Valves comply with Part 15, Part 22, Part 24, and Part 27 of the FCC Rules. No license is required by the utility to operate the SETflow™ endpoints or management system.

Smart Earth Technologies, LLC - The Future of Water Utility Management
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