SET
SMART EARTH TECHNOLOGIES

SET Systems

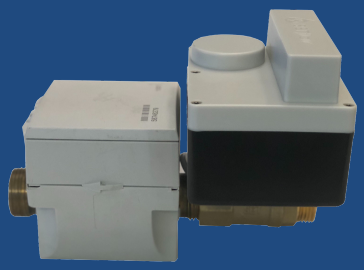
X232 LTE-M CELLULAR AMI REMOTE SMART VALVE

SET's X232 Remote Smart Valve features an extended antenna for optimum connectivity and provides water utilities with a low-cost, secure way of managing customer disconnects and reconnects without an on-site visit. This lowers utility operational costs, reduces on-site worker safety concerns, and improves revenue stability by decreasing unauthorized water consumption and providing an effective means for revenue collection. SET is the only technology provider in the water utility industry to offer a meter-neutral remote shutoff valve that can be selectively deployed at remote or high-turnover accounts.

X232 REMOTE SMART VALVE FEATURES

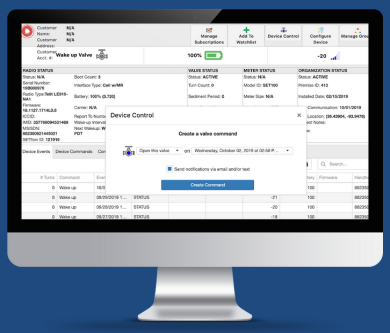
- Sizes ranging from 1/2 inch up to 2 inches to meet a variety of residential, commercial, and industrial applications. Only adds 2.5" to standard lay lengths.
- Valve positions include open, closed and reduced flow and may be controlled remotely from the SET Head End System (HES).
- Unique closed command wake-up boost expedites reconnection
- Direct meter reading and data transmission - eliminates the need for a separate endpoint. Durable chrome plated ball valve shutoff system.
- Meter-neutral and can be utilized with multiple meter brands within the same system.
- Features an extended antenna that accommodates both pit and non-pit settings.

Meter neutral, the SET X232 Remote Smart can be retrofitted to existing meters or installed with new meters - even within the same system.



When coupled with the 5" Diehl Hydrus Ultrasonic Meter for a 3/4" line, the lay length equals the 7.5" standard meter box lay length.

Designed for more than just on/off, the valve control in the SET HES facilitates customer engagement via multiple communication methods regarding scheduled maintenance, outages, and more.



SET Smart Valve Control Screen

UTILITY BENEFITS

In addition to freeing field staff time and driving down operational costs, remote controlled shutoff valves create the opportunity to offer pre-paid water services that automatically shut off when a customer has used up their allocation of purchased water.

This allows for increased flexibility on how customers purchase water services, helps manage unauthorized use in areas of frequent turnover (college towns for example), and allows utility staff to focus on more urgent, higher priority maintenance activities.

- Decrease unauthorized consumption
- Lower Costs/Increased Efficiency: Less truck rolls
- Increased Control: Open, closed, and partial flow
- Value: Valve contains internal cellular endpoint
- Versatile: Valve is meter-neutral

CUSTOMER BENEFITS

End users can remotely schedule water service shutoff when they will be traveling or on vacation. This avoids unauthorized water use or accidental leaks when no one is available to monitor usage. Alternatively, customers can remotely enable water services for winter vacation homes to avoid pipe freezing or automatically shutoff 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 shutoff due to delinquent payment, customers can have service quickly reinstated after making their account current. Customers may 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	Standard includes two-way LTE-M Cellular and Bluetooth 5.0.
Extended Antenna	Standard with each valve, mounts through the lid for pit settings.
Firmware Updates	All endpoints are updated over the air (OTA) from the SET HES by the SET team and require no action on the part of the utility.
Data Security	Remote smart valve transmissions are encrypted using AES 256.
Data Logging	Valves contain an internal endpoint that stores 30 days of hourly meter reads with a first in/first out data management strategy.
Dimensions	5.5 in. (H), 1.75 in. top diameter, 2.75 in. bottom diameter
Valve Operations	Valve positions include open, closed, and reduced flow and may be controlled remotely through the SET MDMS.
Operating Temperature	-20° to 60° C / -40° to 140° F
Battery	Non-replaceable D-Cell Lithium thionyl chloride
Battery Monitor	Remaining battery life is expressed as a percentage of total remaining battery life within the SET HES.

All SET Remote Smart Valves comply with Part 15, Part 22, Part 24, and Part 27 of the FCC Rules. No license required by the utility to operate SET devices.

Smart Earth Technologies - The Future of Water Utility Management
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