



Technical Brochure: Smart Valve





- Wirelessly connects to ultrasonic meters.
- Converts post-paid ultrasonic meters into smart pre-payment water meter systems.
- Allows remote valve shut-off.
- Provides leak and tamper detection with automated notifications.
- Allows users to view water consumption through the Lesira Portal.

The smart valve is designed for water restriction or for converting post-paid ultrasonic water meter systems into Pre-Paid Water Meter Systems.

FEATURES:

- Installed with ultrasonic meter
- Plastic-bodied IP68 waterproofing enclosure
- Scheduled valve operations can be preloaded to enable water restrictions and flow limits
- 2.3" Graphical LCD Display (Multi-Language support)
- Radio Frequency: 868 MHz
- Long Range Wireless communication (LoRaWAN, SigFox & 4G)
- Can be converted into pre-payment device by pairing with a Lesira Customer Interface Unit (STS Approved)
- Data automatically exports to a municipal billing system or Lesira Portal
- Battery life: 16 years
- 3-Flow modes are electronically switchable
 - Fully closed (Hard Limit)
 - Trickle flow (Soft Limit)
 - Fully open
- Remotely Settable (See settings table below):
 - Daily dispensing limits (Weekday / Weekend, Soft Limit / Notification Limit set as % of Hard Limit)
 - Monthly dispensing limits
 - Notification when dispensing limits are reached or % thereof
- Managed through the Lesira Online Water Meter Management Portal (Lesira Portal)
- Automatic detection and notification of tamperers, leaks & bursts

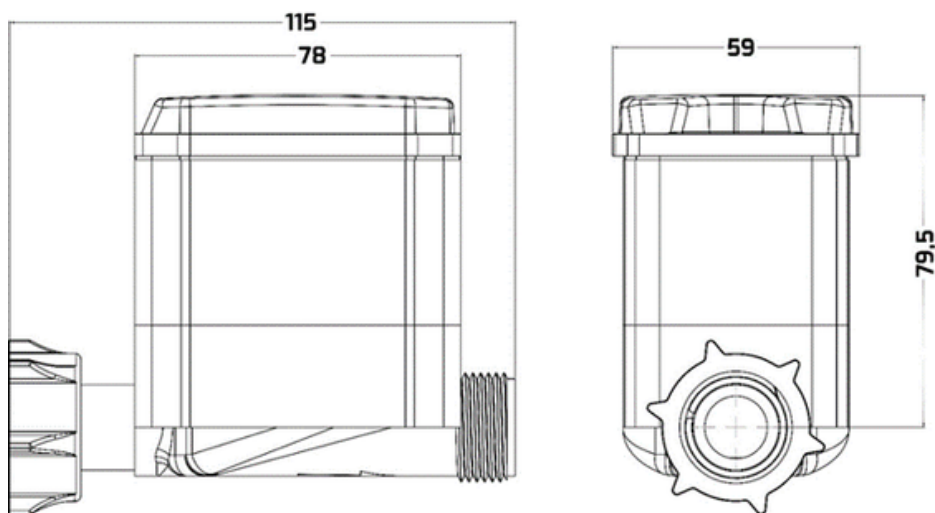
TECHNICAL SPECIFICATIONS

- 15mm / ¾" BSP Connections (Male / Female)
- Maximum admissible pressure: 1.6MPa
- Approved for Vertical & Horizontal Installation
- Waterproof
- NRCS Approval number: SAxxxx (SANS 1529-9) pending

VALVE SETTINGS FOR DAILY OVER LIMIT ACTION

- Notify the user and municipality
- Notify user and municipality & update to new cost structure
- Switch to Trickle
- Shut-off

VALVE DIMENSIONS (EXCL. WIRE PROBE):

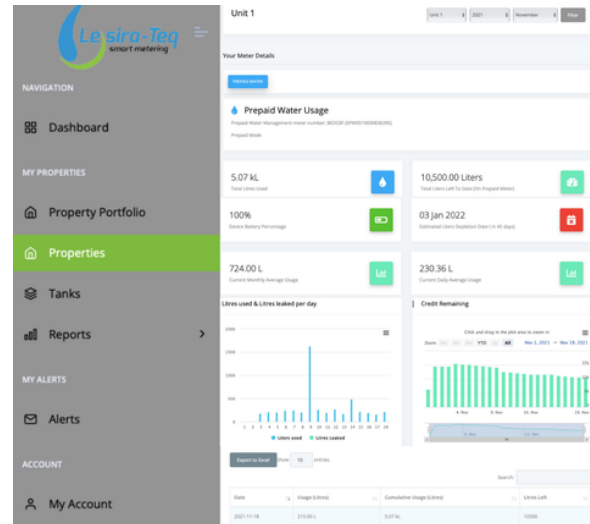


ADVANTAGES TO THE BILLING AGENCY:

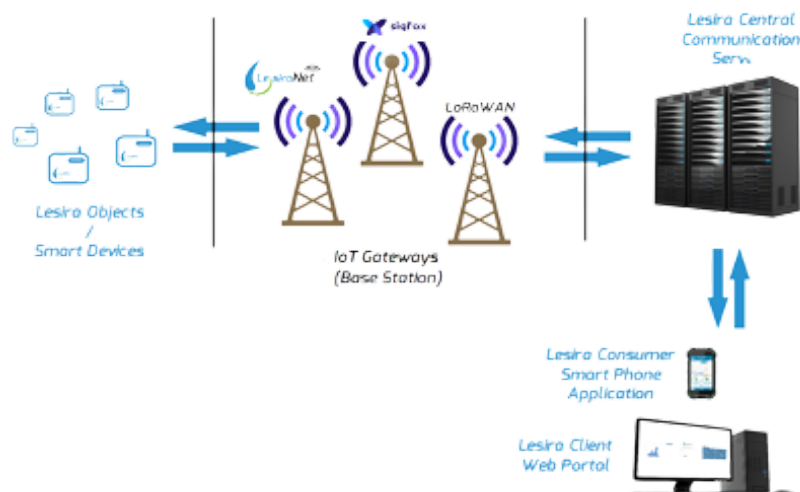
1. Settable meter consumption alerts. Possible leak detection (Automated notification)
 - Burst pipe detection (Automated notification)
 2. Consumer or the Authority has the ability to set daily or monthly consumption limit
 - Over-limit daily / monthly warnings
 - Daily / Monthly Dispensing Limits
 3. Meter bypass detection notification, based on meter information and consumption analysis
 4. Ability to profile time of usage per zone / area / stand .
 5. Automatic generation of consumption report per zone / area / stand
 6. Centralized meter reading:
 - Fixed Network: Flexible meter reading intervals, typically daily, weekly & Monthly
- OR
- Drive-by / walk-by relevant meter data last 5 months billing Totalisers
7. No Fixed Network infrastructure management headaches
 8. All gathered data exportable to billing systems (API or flat file)
 9. Optional Daily / weekly / monthly usage notification in Rand value to consumer via e-mail
 10. Quick and easy installation that will take less than 10 minutes
 11. Audit information available after installation:
 - GPS coordinates for each meter at time of installation
 - Photos of installation, meter serial & totaliser at time of installation
 - Asset management and tracking exportable to Municipal GIS system.
 12. Ability to change valve state remotely (Open / Close)
 13. Remotely settable valve settings:
 - Tariff structure
 - Dispensing structure

ADVANTAGES TO THE USER:

1. Free Lesira Portal that provides the consumer with the user-friendly graphs and tabled information:



2. Powerful first step in smart home management - empowers user to have a better utilities management strategy based on accurate and timeous usage information.
3. Graphical display of usage patterns, e.g. daily usage from device
4. Provides interface to set water saving goals.
5. Automatic leak or excessive water usage warning via e-mail / Lesira Portal
6. Automatic Possible Bypass detection notification via e-mail / Lesira Portal
7. Ability to change valve state (Open / Close)



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