



Smart Water Meter: Technical Brochure





- Smart Automatic Meter Reading and Billing
- Centralized Automatic Data Collection
- Remote valve operation
- View water consumption through the Portal



HALF METER



STRAIGHT MANIFOLD



WALL MOUNT



PILLAR BOX

This is a fully integrated multi-functional mode Smart Water Meter. A System with wireless transmission of meter consumption information. It uses IoT networks such as LoRaWAN, Sigfox, and 4G for consumption monitoring. Consumption reports can be viewed through the Portal or via AMR Drive-by for manual meter reading and information reports.

FEATURES:

- Fully Integrated Multi-Functional Mode Smart Water Meter which can be operated as a Post-paid, Pre-paid and Dispenser Unit (fixed daily/weekly/monthly water allocations)
- Long Range Wireless communication via IoT Networks (Sigfox, LoraWAN, 4G).
- AMR Drive-by / Walk-by Capability
- Remote Commands:
 - Meter Mode Change (Prepaid, post-paid and dispenser)
 - Valve Open / Close
 - Credit Loading (Prepaid mode only)
 - Set Consumption Limits
- Remote Settable Alerts
 - Credit Setting
 - Consumption Setting
- Automatic Detection & Notification via WhatsApp, SMS or Email of:
 - Credit Loading (Prepaid mode only)
 - Low Credit (Prepaid mode only)
 - Credit Runout (Prepaid mode only)
 - Leaks
 - Bursts
 - Tamperers (Magnetic and Bypass)
 - Battery low
- Data automatically exports to a municipal billing system / or Portal
- Consumption managed through the Portal
- Battery-powered (10-15 years) and is field replaceable.
- STS Volumetric and Monetary Credit Display
- 2 Settable Low Credit Warnings (Prepaid mode only)
- Emergency Credit Advanced activation with a settable Limit and repayment option (Billing Feature or vending option) (Prepaid mode only)
- Field Software upgradable via Radio
- Portal Vending (vending Option)

	Class C	DN 20
Nominal Flow [Qp]:	1.5 m3/h	2.5 m3/h
Minimum Flow [Qmin]:	15 L/h	0.025 m3/h
Max Flow [Qs]:	3.0 m3/h	3.0 m3/h
Minimum Operating Pressure:	0.3 Bar	0.3 kPa
Maximum Operating Pressure:	14 Bar	1400 kPa
Pressure Class:	P150	P450

BILLING FEATURES:

- Free Basic water settable daily or monthly
- Tariff steps are determined on the meter in real time.
- Meter resets the cost structure at the start of each month or day.
- Meter can go into debt (Depending on Operational mode)
- Lifeline water options:-
 - Volume only
 - Days only
 - Set volume per day for the number of days (most popular)

TECHNICAL SPECIFICATION

- Built-in non-return Valve with inlet Filter
- Built-in Shut-off Valve (Pillar Box & Wall Mount Configurations)
- 2.4" Screen – Large font, user-friendly Graphical Interface
- Battery life: 10-15 years
- Multi-jet / Ultrasonic
- Accuracy: Class C / R200
- Minimum operating pressure: 0,3 Bar
- Frequency 868 / 434MHz
- Working temperature range: Our meter is classified as T50 designed to measure cold potable water and can withstand temperatures between to 0.1°C. and 50°C.

METER COMPLIANCE:

- NRCS Approval: SANS 1529-1 for Accuracy and SANS 1529-9 for Prepayment
- Type Approval No. Meter Size 15mm: SA1320-AA11
- Type Approval No. Meter Size 20mm: SA1320-AA12
- SANAS Calibration and Verification Lab No. LTF0327
- IEC 61000-4-2, IEC 61000-4-3
- STS502: IEC 62055-41, IEC 62055-51 (CIU)

VENDING OPTIONS:

- STS Approved 20 digit credit loading
- Credit loading via Portal
- Credit loading via Mobile Money e.g. MoMo, M-PESA, etc.

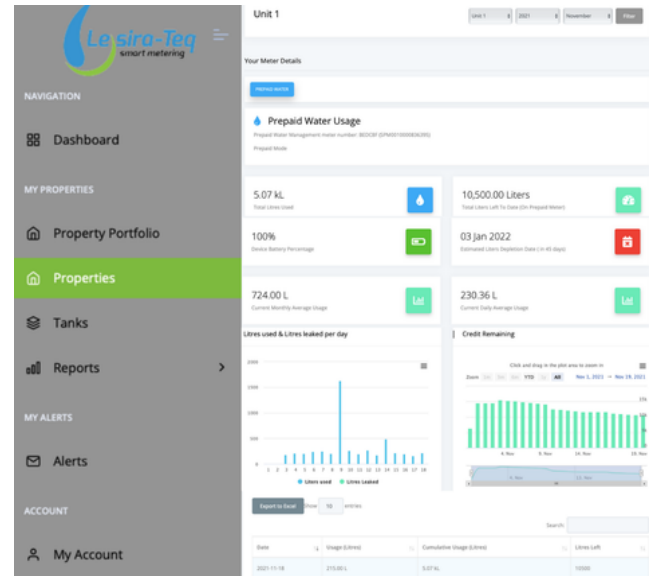


ADVANTAGES TO THE BILLING AGENCY:

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. All gathered data exportable to billing systems (API)
8. Weekly / Monthly usage notification to consumers via WhatsApp, SMS or e-mail
9. Quick and easy installation that will take less than 10 minutes
10. 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
11. Ability to change valve state remotely (Open / Close)
12. Remotely settable settings:
 - Tariff Structure
 - Meter Operational Mode

ADVANTAGES TO THE USER:

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



2. Powerful first step in smart home management - empowers users to have a better utility management strategy based on accurate and timely 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 WhatsApp, SMS, e-mail / Lesira Portal
6. Automatic Possible Bypass detection notification via WhatsApp, SMS, e-mail / Lesira Portal
7. Ability to lock and unlock meter

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Value Through Connectivity