



Technical Brochure: Water Management Unit



- Smart Automatic Meter Reading & Billing
- Centralized Automatic Data Collection
- Converts mechanical meters to Smart AMR meters
- View Water Consumption through the [Lesira Portal](#) and [Lesira App™](#) for Smartphones





Smart battery powered retrofittable AMR device for pulse output water meters. Featuring wireless transmission of Meter Consumption Information via IoT networks, SigFox, LoRaWAN and LesiraNet, for consumption monitoring & reports viewed through the [Lesira App™](#), and the [Lesira Portal™](#).

Water Management Unit: (WMU)

Saving water. Saving lives.

FEATURES:

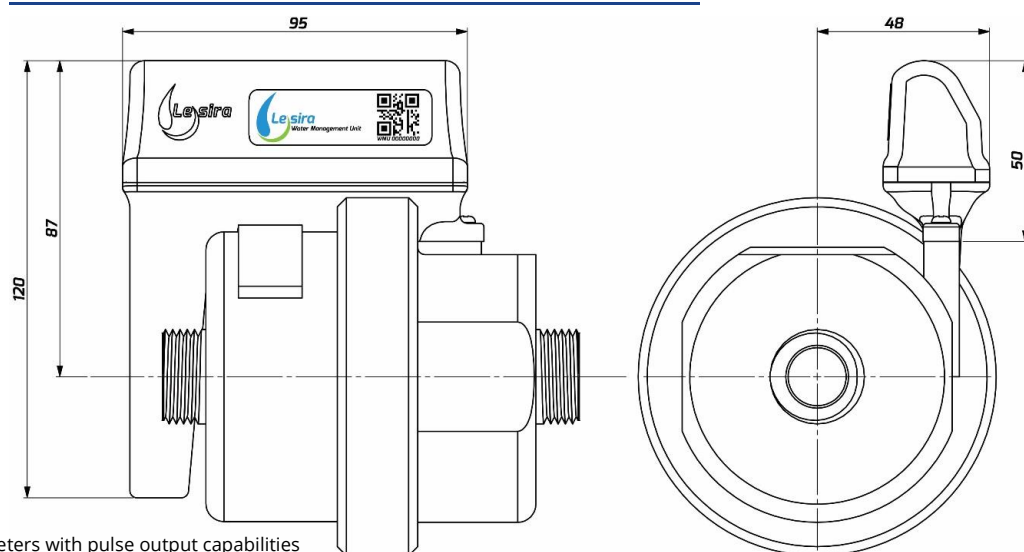
- Converts mechanical meters to Smart AMR meters ¹
- Long Range Wireless communication via IoT Networks. (LesiraNet, SigFox, LoRaWAN)  
- Radio Frequency: 868 MHz
- Automatic Detection & Notification of Tamperers & Leaks ²
- Data automatically exports to municipal billing system and / or Lesira App™ ²
- Managed through the Lesira Online Water Meter Management Portal (Lesira Portal)
- Battery life: 10 years ²
- Waterproof
- Less than 10 minutes to install
- Free Lesira App™ available on Google Play & on the App Store for iPhone ¹
- Various Mounting options:
 - Piston meter mounting
 - Panel Mount
 - Wall Mount
 - Ground Level
 - Above Ground Pillar Box



PRODUCT CODE TABLE:

PRODUCT CODE	DESCRIPTION
WMU-L	Water Management Unit, LoRa
WMU-S	Water Management Unit, SigFox

DIMENSIONS OF WMU INSTALLED ON PISTON METER:



WMU Retrofitted to a piston meter with ORDER CODE: CPP-15

¹ Meters with pulse output capabilities

² See DATA-MAN section of brochure

³ Dependent on usage profile and communications schedule

HEAD OFFICE CONTACT DETAILS:

523 Stanza Bopape Street
Arcadia
Pretoria, 0083
South Africa

Telephone: +27 12 440 9885

Fax: +27 12 440 9751

Email: info@lesira.co.za

Web: www.lesira.co.za



SACAS
ISO 9001:2008

Data Management Service: (WMU)



Saving water. Saving lives.

ADVANTAGES TO THE BILLING AGENCY:

1. Settable meter consumption alerts Possible leak detection. (Automated notification) ¹
 - a. Burst pipe detection (Automated notification)
2. Consumer / Authority ability to set daily/monthly consumption limit
 - a. Over-limit daily / monthly warnings ¹
3. Meter bypass detection notification, based on meter information and consumption analysis
4. Ability to profile time of usage per zone / area / stand ¹
5. Automatic generation of consumption report per zone / area / stand
6. Centralized meter reading:
 - a. Fixed Network: Flexible meter reading intervals, typically daily, weekly & Monthly ¹
OR
 - b. Drive-by / walk-by: relevant meter data last 4 months billing totalisers ²
7. No Fixed Network infrastructure management headaches
8. All gathered data exportable to billing systems (API or flatfile)
9. Optional Daily / weekly / monthly usage notification in Rand value to consumer via e-mail ¹
10. Quick and easy installation (less than 10 minutes).
Lesira Smart Device Installation Mobile App required.
11. Audit information available ¹ 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

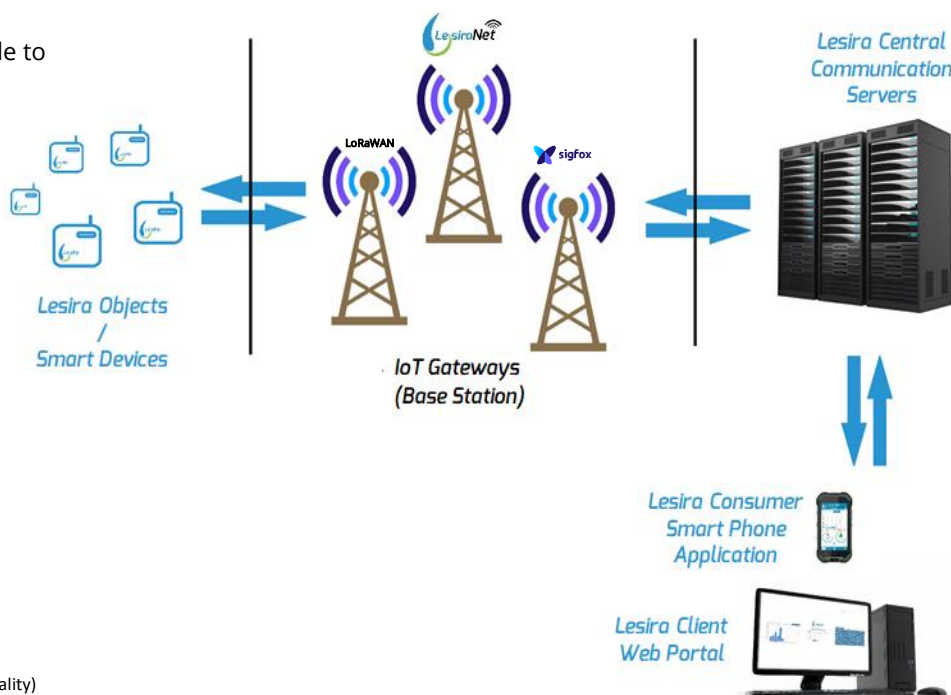
ADVANTAGES TO THE USER:

1. Free *Lesira App™* available for the major mobile platforms, that provides the consumer with the user-friendly graphs & tabled information:

Overview	Hourly	Daily	Weekly	Monthly
				
Current usage	50,939 ℓ	R 949.19		
Est. month-end usage	92,876 ℓ	R 2027.01		
Possible leak	96 ℓ	R 2.39		
Est. month-end leak	23,651 ℓ	R 319.51		
Avg. usage /day	2,996 ℓ	R 67.57		
Tariff Price (Step: 7)		24.83 R/kl		



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 App™* ¹
6. Automatic Possible Bypass detection notification via e-mail / *Lesira App™*.



¹ See Terms and Conditions

² Only units with 2FSK functionality (LoRa & LesiraNet units has this functionality)

³ If the Lesira Installation Application is used

HEAD OFFICE CONTACT DETAILS:

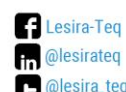
523 Stanza Bopape Street
Arcadia
Pretoria, 0083
South Africa

Telephone: +27 12 440 9885

Fax: +27 12 440 9751

Email: info@lesira.co.za

Web: www.lesira.co.za



SACAS
ISO 9001:2008



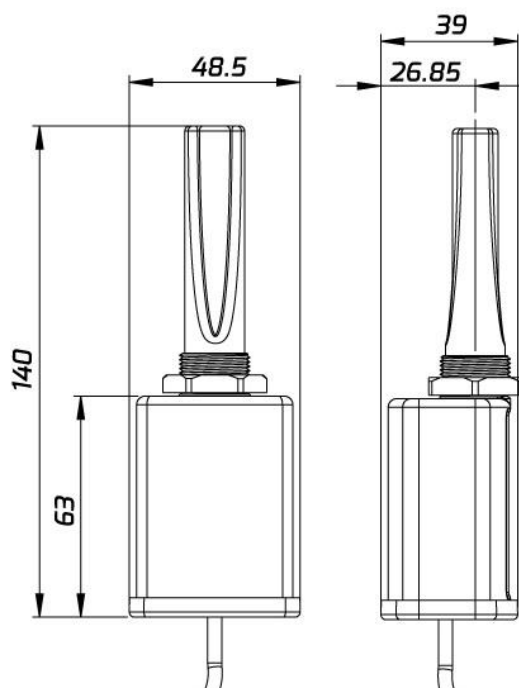
Water Management Unit Panel Mount: (WMU-PM)

Saving water. Saving lives.

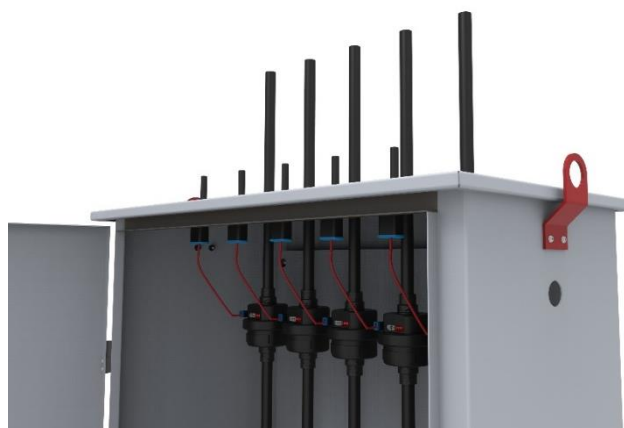
TECHNICAL SPECIFICATIONS:

- Versatile Mounting Options:
 - Panel Mount
 - Wall mount
- Long Range Wireless communication via IoT Networks.
(LesiraNet, LoRaWAN)
- Waterproof
- Probe options:
 - Probe Wire length: 3m / 10m
 - Lesira Smart Probe for Piston Meter connections
 - Open Wire Probe for connection to various reed pickup / inductive pulse output devices

DIMENSIONS OF WMU-PM:



WMU-S with wall mount bracket



WMU-PM Retrofitted into steel Enclosure

PRODUCT CODE TABLE:

PRODUCT CODE	DESCRIPTION
WMU-PM-L-3M	Water Management Unit, LoRa, Panel Mount 3m Wired Probe
WMU-PM-L-10M	Water Management Unit, LoRa, Panel Mount 10m Wired Probe
BKT-WM-WMU-PM	Bracket Kit, Wall Mount, WMU-PM
WMU-PM-L-3M-RP	Water Management Unit, LoRa, Panel Mount 3m Wired Probe, Reed
WMU-PM-L-10M-RP	Water Management Unit, LoRa, Panel Mount 10m Wired Probe, Reed



PRODUCT CODE: BKT-WM-WMU-PM

HEAD OFFICE CONTACT DETAILS:
523 Stanza Bopape Street
Arcadia
Pretoria, 0083
South Africa

Telephone: +27 12 440 9885
Fax: +27 12 440 9751
Email: info@lesira.co.za
Web: www.lesira.co.za



SACAS
ISO 9001:2008

Water Management External Probe: (WMU-EXT)

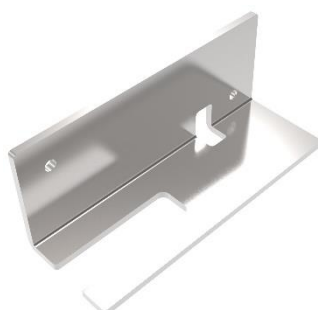
Saving water. Saving lives.

TECHNICAL SPECIFICATIONS:

- Long Range Wireless communication via SigFox IoT Network
- Waterproof
- Can be connected to various meters that has pulse outputs (Reed sensing probes, Inductive sensing probes, and piston type meters with pickup probe preparation.
- Probe options:
 - Probe Wire length: 3m / 10m
 - Lesira Smart Probe for Piston Meter connections
 - Open Wire Probe for connection to various reed pickup / inductive pulse output devices



WMU-S-EXT with wall
mount bracket



PRODUCT CODE: BKT-WM-WMU



PRODUCT CODE: WMU-S-EXT

PRODUCT CODE TABLE:

PRODUCT CODE	DESCRIPTION
WMU-EXT-S-3M	Water Management Unit, SigFox, 3m Wired Probe
WMU-EXT-S-10M	Water Management Unit, SigFox, 10m Wired Probe
BKT-WM-WMU	Bracket Kit, Wall Mount, WMU
WMU-EXT-S-3M-RP	Water Management Unit, SigFox, 3m Wired Probe, Reed
WMU-EXT-S-10M-RP	Water Management Unit, SigFox, 10m Wired Probe, Reed

HEAD OFFICE CONTACT DETAILS:
523 Stanza Bopape Street
Arcadia
Pretoria, 0083
South Africa

Telephone: +27 12 440 9885
Fax: +27 12 440 9751
Email: info@lesira.co.za
Web: www.lesira.co.za



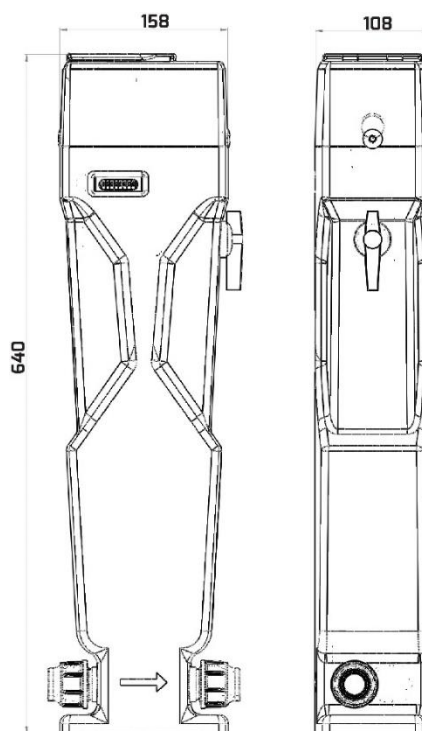
S A C A S
ISO 9001:2008

Water Management Unit: (Above Ground Installation)

Saving water. Saving lives.

TECHNICAL SPECIFICATIONS:

- Available Connections:
 - 15 mm Compression Connections
 - 20mm Compression Connections
 - 25mm Compression Connections
- Integrated Manual Shut-off Valve
- Integrated Non-Return Valve
- Integrated Strainer
- Incorporates Class C Plastic Piston Type Meter (Brass on request)
- Robust plastic box with UV protection
- Volumetric meter using rotating piston for accuracy
- Mechanical Meter Totaliser visible



WORKING CONDITIONS:

- Water Temperature: 2°C - 40°C
- Water Pressure: $\leq 1.6\text{MPa}$ (16bar)

MAXIMUM PERMISSIBLE ERRORS:

- In the lower zone from Q_{\min} inclusive up to but not excluding Q_t is $\pm 5\%$
- In the upper zone from Q_t inclusive up to and

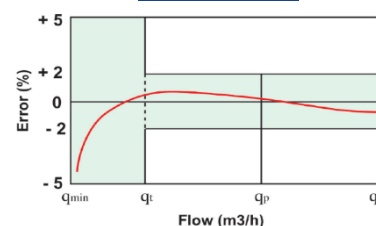
INSTALLATION REQUIREMENTS:

- Pipeline must be flushed before installation
- Meter should be constantly full of water during

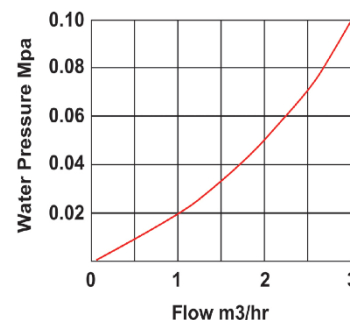
MAIN TECHNICAL SPECIFICATIONS:

OVERLOAD FLOW (Q_s)	PERMANENT FLOW (Q_p)	TRANSITIONAL FLOW (Q_t)	MINIMUM FLOW (Q_{\min})	MIN READING	MAX READING
m^3/h		L/h		m^3	
3	1.5	22.5	15	0.0001	9999

FLOW ERROR



PRESSURE LOSS DATA:



PRODUCT CODE TABLE:

PRODUCT CODE	DESCRIPTION
WMU-L-PB2-CF-20	Water Management Unit, LoRa, Above Ground Pillar Box, 15mm Compression Connections
WMU-S-PB2-CF-20	Water Management Unit, SigFox, Above Ground Pillar Box, 15mm Compression Connections
WMU-L-PB2-CF-20	Water Management Unit, LoRa, Above Ground Pillar Box, 20mm Compression Connections
WMU-S-PB2-CF-20	Water Management Unit, SigFox, Above Ground Pillar Box, 20mm Compression Connections
WMU-L-PB2-CF-25	Water Management Unit, LoRa, Above Ground Pillar Box, 25mm Compression Connections
WMU-S-PB2-CF-25	Water Management Unit, SigFox, Above Ground Pillar Box, 25mm Compression Connections

HEAD OFFICE CONTACT DETAILS:

523 Stanza Bopape Street
Arcadia
Pretoria, 0083
South Africa

Telephone: +27 12 440 9885

Fax: +27 12 440 9751

Email: info@lesira.co.za

Web: www.lesira.co.za



SACAS
ISO 9001:2008

Water Management Unit: (Ground Level Installation)

Saving water. Saving lives.

TECHNICAL SPECIFICATIONS:

- Robust plastic box with UV protection
- Available Connections:
 - 15 mm Compression Connections
 - 20mm Compression Connections
 - 25mm Compression Connections
 - 15mm / ¾" BSP Connections
 - 20mm / 1" BSP Connections
- Maximum admissible pressure: 1.6MPa
- Manual Shut-off Valve included
- Integrated Non-Return Valve (Piston meter)
- Integrated strainer (Piston meter)
- Incorporates Class C Brass or Plastic Piston Type Meter (Sold separately. See Product Code table below)
- Easy meter swop-out (Tailpiece fittings)



PRODUCT CODE TABLE:

PRODUCT CODE	DESCRIPTION
GLB-CF-15-MS	Mounting Solution Ground Level Box, 15mm Compression Connections
GLB-CF-20-MS	Mounting Solution Ground Level Box, 20mm Compression Connections
GLB-CF-25-MS	Mounting Solution Ground Level Box, 25mm Compression Connections
GLB-BSP-15-MS	Mounting Solution Ground Level Box, ¾" BSP Connections
GLB-BSP-20-MS	Mounting Solution Ground Level Box, 1" BSP Connections
CPP-15	Conventional Plastic Piston Meter 15mm, ¾" BSP Connections
CPP-15-B	Conventional Plastic Piston Meter 20mm, ¾" BSP Connections
CPP-20	Conventional Plastic Piston Meter 20mm, 1" BSP Connections
CPP-20-B	Conventional Brass Piston Meter 20mm, 1" BSP Connections
FIT-TP-15-PL	Fitting Tail-Piece set with Nut 15mm Plastic, ¾" BSP Connections
FIT-TP-15-BR	Fitting Tail-Piece set with Nut 15mm Brass, ¾" BSP Connections
FIT-TP-20-PL	Fitting Tail-Piece set with Nut 20mm Plastic, 1" BSP Connections
FIT-TP-20-BR	Fitting Tail-Piece set with Nut 20mm Brass, 1" BSP Connections

HEAD OFFICE CONTACT DETAILS:
523 Stanza Bopape Street
Arcadia
Pretoria, 0083
South Africa

Telephone: +27 12 440 9885
Fax: +27 12 440 9751
Email: info@lesira.co.za
Web: www.lesira.co.za



SACAS
ISO 9001:2008