



JV400e

WATER METER FOR DRIKING WATER WITH ELECTRONIC REGISTER VOLUMETRIC | SINGLEJET MULTIPROTOCOL LORAMAN M-Bus

Content

JV400e	page 2
JV600e	page 8
JM300e	page 14
JM600e	page 20





JV400e

DN15 to DN40 Q₃=1,6 to 16 m³/h Up to R800 T50 MAP 16 Electronic register IoT Ready

VOLUMETRIC WATER METER WITH ELECTRONIC REGISTER MULTIPROTOCOL LORAMAN M-Bus

The accuracy of the volumetric measurement allied to a high-performance electronic register.

Secure data: four circular buffers for a high data storage capacity.

Alarms on Demand: Allows the reception of any alarm in real time.

Effective protection against external influences.





JV400e offers:

- Volumetric water meter with electronic register. Multiprotocol, able to work with wM-Bus and LoRaWAN mode.
- An extended curve error accuracy. Exactness from flowrates under the minimum standardized up to the maximum flowrate.
- Materials consciously selected to be resistant to corrosion and hydrolysis.
- Shock resistant thermoplastic components that can be safely submitted to temperatures up to 50 °C.

OPERATIONAL FEATURES:

Maximum Admissible Pressure (bar): MAP 10 | MAP 16

Temperature Class (°C): T30 | T50

Ratio Q₃/Q₁: up to R800

Pressure Loss-Class: ΔP 63

Installation Position: Any position

Flow Profile Sensitivity Classes: U0/D0

Indicating range (m³): LCD 7 segments, 6 digits (m³) with 3 decimals, UV protection

Resolution of the indicating device (L): 0,001 in test mode

Body: Brass

Certification:

UE Examination Certificate TCM 142/10 - 4738 in accordance with directive 2014/32 UE, CE, ISO 4064-1: 2014, OIML Recommendation R49: 2006, ACS approval, RoHs, WEE, OMS, LoRaWAN, EMC, RED 2014/53/EU, ETSI and EN14154: 2005 + A2: 2011.

Retention valve incorporated: available



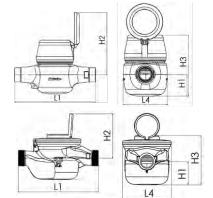


TECHNICAL DATA:

DN			15	20	25	32	40
Ratio Q ₃ /Q ₁		R		200 -	800		200 - 500
Permanent Flowrate	Q ₃	m³/h	≤ 2,5	≤ 4	≤ 6,3	\leq 10	≤ 16
Overload Flowrate	\mathbf{Q}_4	m³/h			Q ₃ x 2	L,25	
Transitional Flowrate	Q ₂	m³/h	Q ₁ × 1,5				
Minimum Flowrate	Q_1	m³/h			Q ₃ /	R	
Quadrant Indication	r	n ³	999 999, 999				
Verification Division		L			0,00)1	

DIMENSIONS:

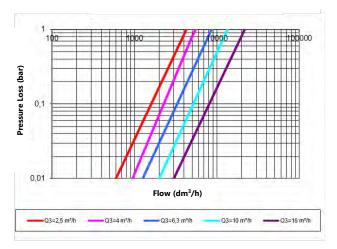
Nominal Diameter	DN		15	20	25	32	40
Threaded Connections*	R1-R2	11	G ^{3/4}	G1	G1 ^{1/4}	G1 ^{1/2}	G2
Length	L1	mm	110-190	110-190	198-260	260	300
Height	H1	mm	38	45	63	75	81
Height	H2	mm	152	153	151	169	169
Height Register	H3	mm	119	128	138	167	179
Width	L4	mm	80	86	129	145	169
Weight		kg	0,85	1,25	3,15	4,50	6,80



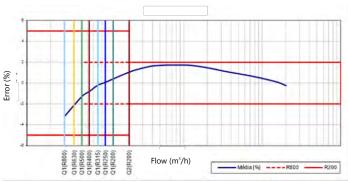
*Other available options

Dimension plan please check our website Janz.pt





TYPICAL CURVE ERROR





TECNOLOGY:

The magnetic coupling in the **JV400e** was designed to reduce the number of mechanisms and components immersed in water, thus increasing the longevity of the product. This feature also provides effective protection against external influences. Protected against magnetic fraud.

RADIO FEATURES:

Sensor Type: Inductive, bidirectionalBattery Lifetime*: Standard Profile: Up to 13 yearsElectric Power: Lithium battery LiSoCI2 3.6 VProtection: IP68Operating Temperature: -10° C to 55°CRecommended Warehousing Temperature: -20°C to 60°CCommunication technology: LoRaWAN and wM-BusRadio Setup: Automatically after the passage of 10L*Depending on configuration and environmental conditions

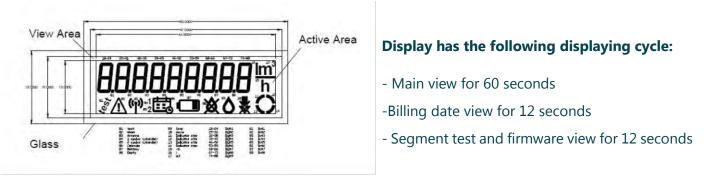
COMMUNICATION MULTI-PROTOCOL FEATURES:

Possibility to configure protocols and alarms for optimized communication.

Model		
Frequency	868 MHz	868 MHz
Modulation/Transmission Mode	Class A, EU868	C1 default, T1

DISPLAY:

The display is a passive type, 7 segments, with 9 digits and symbol icons. UV protection is provided by the LCD itself.





ICONS FUNCTIONALITIES:

- START INDICATOR
 - o Moves in succession 2 quarters that chase each other:
 - Forward flow = clockwise
 - Backflow = counterclockwise
- Backflow
 - Is reflected in BACKFLOW alarm
- Leak 💧
 - Is reflected in LEAKAGE alarm
- Antenna 柳
 - At every transmission must toggle for 6 times the status of the icon (blinks)
 - o Icon status (optional):
 - If the radio scheduler is disabled the icon status is OFF
 - If the radio scheduler is enabled the icon status is:
 - ON if the parameter RADIO_ICON_ON_ENABLED = true
 - OFF if the parameter RADIO_ICON_ON_ENABLED = false
 - NOTE: the parameter RADIO_ICON_ON_ENABLED must be activated by the assistance service



- Reserved for future use
 - o Not used at the moment, always OFF
- Battery 🛯 is ON
 - o If the calculated life is finishing
 - if the battery measured voltage is LOW. In this case the Error icon must be on
- Calendar
 SON
 - During the billing dates visualizations (1 and 2 are used to define which billing date is shown)
- Error 📉
 - o It is ON when an error appears
- Test
 It is ON during verification test

DATALOGGING:

The device has datalogging functionality with different data periodicity and storage timespan. For each period the following data is saved: Current volume, current backflow volume, minimum and maximum flowrate of the period.

Data is stored in 4 circular buffers with the following data periodicity and storage timespan:

DATA PERIOD	STORAGE TIMESPAN
15 minutes	9 days
Hour	37 days
Day	896 days
Month	21 years

When the buffer is full, older data is removed.





ALARMS:

- Leakage: a continuous flow has been detected.
- **Overflow:** flow exceeds a given value in a defined time interval.
- Backflow: flow in opposite direction above a defined value.
- Blocked Meter: the meter does not register flow for a defined time period.
- **Reversed Meter:** constant negative consumption for more than 10 days.
- Battery Status: low battery level.
- **Meter Lifetime Expired:** the device can send an alarm for end of lifetime after achieving configured lifetime (programable up to 15 years).
- Hardware Error: microcontroller memory damaged.







JV600e

VOLUMETRIC WATER METER WITH ELECTRONIC REGISTER MULTIPROTOCOL



The accuracy of the volumetric measurement allied to a high-performance electronic register.

Secure data: four circular buffers for a high data storage capacity.

Alarms on Demand: Allows the reception of any alarm in real time.

Effective protection against external influences.



IoT Ready

DN15 to DN25

Up to R800

T50

MAP 16

Q₃=2,5 to 6,3 m³/h

Electronic register



JV600e offers:

- Volumetric water meter with electronic register. Multiprotocol, able to work with wM-Bus and LoRaWAN mode.
- An extended curve error accuracy. Exactness from flowrates under the minimum standardized up to the maximum flowrate.
- Materials consciously selected to be resistant to corrosion and hydrolysis.
- Shock resistant thermoplastic components that can be safely submitted to temperatures up to 50 °C.

OPERATIONAL FEATURES:

Maximum Admissible Pressure (bar): MAP 10 | MAP 16

Temperature Class (°C): T30 | T50

Ratio Q₃/Q₁: up to R800

Pressure Loss-Class: ΔP 63

Installation Position: Any position

Flow Profile Sensitivity Classes: U0/D0

Indicating range (m³): LCD 7 segments, 6 digits (m³) with 3 decimals, UV protection

Resolution of the indicating device (L): 0,001 in test mode

Body: Composite

Certification:

UE Examination Certificate TCM 142/10 - 4738 in accordance with directive 2014/32 UE, CE, ISO 4064-1: 2014, OIML Recommendation R49: 2006, ACS approval, RoHs, WEE, OMS, LoRaWAN, EMC, RED 2014/53/EU, ETSI and EN14154: 2005 + A2: 2011.

Retention valve incorporated: available



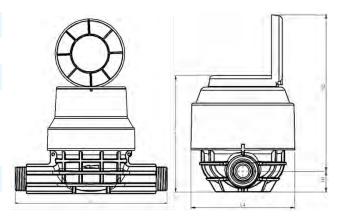


TECHNICAL DATA:

DN			15	20	25
Ratio Q ₃ /Q ₁		R		200, 250, 315, 400, 500, 630, 8	300
Permanent Flowrate	Q ₃	m³/h	1,0 - 1,6 - 2,5	2,5 – 4	6,3
Overload Flowrate	\mathbf{Q}_4	m³/h		Q ₃ x 1,25	
Transitional Flowrate	\mathbf{Q}_2	m³/h		Q ₁ x 1,5	
Minimum Flowrate	Q_1	m³/h		Q ₃ / R	
Quadrant Indication		m ³		999 999, 999	
Verification Division		L		0,001	

DIMENSIONS:

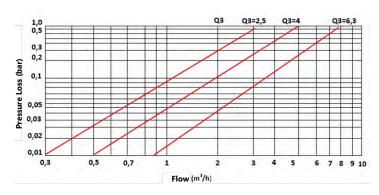
Nominal Diameter	DN		15	20	25
Threaded Connections*	R1-R2	11	G ^{3/4}	G1	G1 ^{1/4}
Length	L1	mm	110-190	110-190	198-260
Height	H1	mm	16	18,5	26
Height	H2	mm	181	190	202
Height Register	H3	mm	127	139	159
Width	L4	mm	95	108	132
Weight		kg	0,46	0,9	1,3



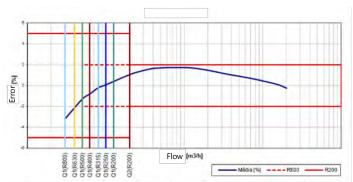
Dimension plan please check our website Janz.pt

*Other available options

HEAD LOSS DIAGRAM



TYPICAL CURVE ERROR







TECNOLOGY:

The magnetic coupling in the **JV600e** was designed to reduce the number of mechanisms and components immersed in water, thus increasing the longevity of the product. This feature also provides effective protection against external influences. Protected against magnetic fraud.

RADIO FEATURES:

Sensor Type: Inductive, bidirectionalBattery Lifetime*: Standard Profile: Up to 13 yearsElectric Power: Lithium battery LiSoCI2 3.6 VProtection: IP68Operating Temperature: -10° C to 55°CRecommended Warehousing Temperature: -20°C to 60°CCommunication technology: LoRaWAN and wM-BusRadio Setup: Automatically after the passage of 10L*Depending on configuration and environmental conditions

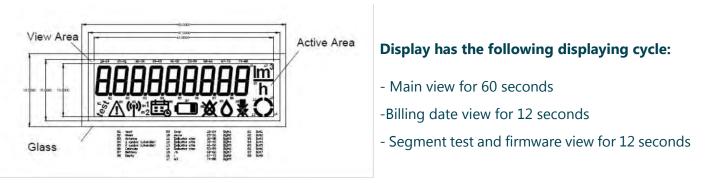
COMMUNICATION MULTI-PROTOCOL FEATURES:

Possibility to configure protocols and alarms for optimized communication.

Model		
Frequency	868 MHz	868 MHz
Modulation/Transmission Mode	Class A, EU868	C1 default, T1

DISPLAY:

The display is a passive type, 7 segments, with 9 digits and symbol icons. UV protection is provided by the LCD itself.







- START INDICATOR
 - o Moves in succession 2 quarters that chase each other:
 - Forward flow = clockwise
 - Backflow = counterclockwise
- Backflow
 - Is reflected in BACKFLOW alarm
- Leak 💧
 - Is reflected in LEAKAGE alarm
- Antenna 柳
 - At every transmission must toggle for 6 times the status of the icon (blinks)
 - o Icon status (optional):
 - If the radio scheduler is disabled the icon status is OFF
 - If the radio scheduler is enabled the icon status is:
 - ON if the parameter RADIO_ICON_ON_ENABLED = true
 - OFF if the parameter RADIO_ICON_ON_ENABLED = false
 - NOTE: the parameter RADIO_ICON_ON_ENABLED must be activated by the assistance service



- Reserved for future use
 - o Not used at the moment, always OFF
- Battery 🛯 is ON
 - o If the calculated life is finishing
 - if the battery measured voltage is LOW. In this case the Error icon must be on
- Calendar
 SON
 - During the billing dates visualizations (1 and 2 are used to define which billing date is shown)
- Error 📐
 - o It is ON when an error appears
- Test
 It is ON during verification test

DATALOGGING:

The device has datalogging functionality with different data periodicity and storage timespan. For each period the following data is saved: Current volume, current backflow volume, minimum and maximum flowrate of the period.

Data is stored in 4 circular buffers with the following data periodicity and storage timespan:

DATA PERIOD	STORAGE TIMESPAN
15 minutes	9 days
Hour	37 days
Day	896 days
Month	21 years

When the buffer is full, older data is removed.





ALARMS:

- Leakage: a continuous flow has been detected.
- **Overflow:** flow exceeds a given value in a defined time interval.
- **Backflow:** flow in opposite direction above a defined value.
- Blocked Meter: the meter does not register flow for a defined time period.
- **Reversed Meter:** constant negative consumption for more than 10 days.
- Battery Status: low battery level.
- **Meter Lifetime Expired:** the device can send an alarm for end of lifetime after achieving configured lifetime (programable up to 15 years).
- Hardware Error: microcontroller memory damaged.







DN15 to DN20

 $Q_3=2,5$ to 4 m³/h

R200

T50

MAP 16

Electronic register

IoT Ready

SINGLE JET WATER METER WITH ELECTRONIC REGISTER MULTIPROTOCOL LORAMAN M-Bus

High accuracy singlejet meter allied to a high-performance electronic register.

Secure Data: four circular buffers for a high data storage capacity.

Alarms on Demand: Allows the reception of any alarm in real time.

Effective protection against external influences.





JM300e offers:

- Singlejet water meter with electronic register. Multiprotocol, able to work with wM-Bus and LoRaWAN mode.
- An extended curve error accuracy. Exactness from flowrates under the minimum standardized up to the maximum flowrate.
- Materials consciously selected to be resistant to corrosion and hydrolysis.
- Shock resistant thermoplastic components that can be safely submitted to temperatures up to50 °C.

OPERATIONAL FEATURES:

Maximum Admissible Pressure (bar): MAP 10 | MAP 16

Temperature Class (°C): T30 | T50

Ratio Q₃/Q₁: R200

Pressure Loss-Class: ΔP 63

Installation Position: Any position

Flow Profile Sensitivity Classes: U0/D0

Indicating range (m³): LCD 7 segments, 6 digits (m³) with 3 decimals, UV protection

Resolution of the indicating device (L): 0,001 in test mode

Body: Brass

Certification:

UE Examination Certificate TCM 142/10 - 4738 in accordance with directive 2014/32 UE, CE, ISO 4064-1: 2014, OIML Recommendation R49: 2006, ACS approval, RoHs, WEE, OMS, LoRaWAN, EMC, RED 2014/53/EU, ETSI and EN14154: 2005 + A2: 2011.



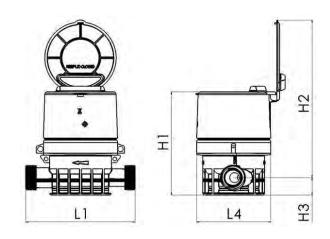


TECHNICAL DATA:

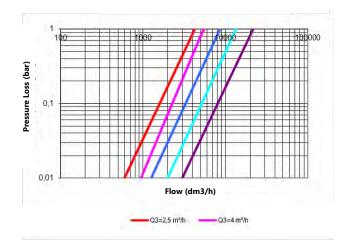
DN			15	20
Ratio Q ₃ /Q ₁	R		200 H	/63 V
Permanent Flowrate	Q_3	m³/h	2,5	4
Overload Flowrate	\mathbf{Q}_4	m³/h	3,13	5
Transitional Flowrate	\mathbf{Q}_2	m³/h	Q ₁ x	1,6
Minimum Flowrate	Q_1	m³/h	Q ₃ ,	/ R
Quadrant Indication	r	n ³	999 99	9, 999
Verification Division		L	0,0	01

DIMENSIONS:

Nominal Diameter	DN		15	20
Threaded Connections*	R1-R2	"	3/4 - 3/4	1 -1
Length	L1	mm	110-190	110-190
Height	H1	mm	14	14
Height	H2	mm	165	165
Height Register	H3	mm	109	109
Width	L4	mm	78	78
Weight		kg	0,61	0,67



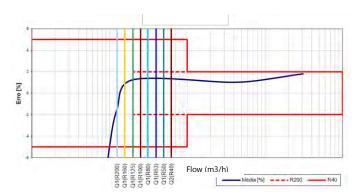
*Other available options



HEAD LOSS DIAGRAM

Dimension plan please check our website Janz.pt

TYPICAL CURVE ERROR





WATER METER **eREGISTER**

TECNOLOGY:

The magnetic coupling in the **JM300e** was designed to reduce the number of mechanisms and components immersed in water, thus increasing the longevity of the product. This feature also provides effective protection against external influences. Protected against magnetic fraud.

RADIO FEATURES:

Sensor Type: Inductive, bidirectional Battery Lifetime*: Standard Profile: Up to 13 years Electric Power: Lithium battery LiSoCI2 3.6 V Protection: IP68 **Operating Temperature:** -10° C to 55°C Recommended Warehousing Temperature: -20°C to 60°C Communication technology: LoRaWAN and wM-Bus **Radio Setup:** Automatically after the passage of 10L *Depending on configuration and environmental conditions

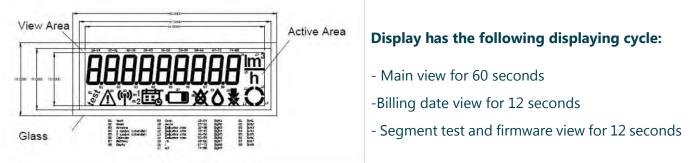
COMMUNICATION MULTI-PROTOCOL FEATURES:

Possibility to configure protocols and alarms for optimized communication.

Model		M-Bus
Frequency	868 MHz	868 MHz
Modulation/Transmission Mode	Class A, EU868	C1 default, T1

DISPLAY:

The display is a passive type, 7 segments, with 9 digits and symbol icons. UV protection is provided by the LCD itself.







ICONS FUNCTIONALITIES:

- START INDICATOR
 - Moves in succession 2 quarters that chase each other:
 - Forward flow = clockwise
 - Backflow = counterclockwise
- Backflow
 - o Is reflected in BACKFLOW alarm
- Leak 💧
 - Is reflected in LEAKAGE alarm
- Antenna 🔮
 - At every transmission must toggle for 6 times the status of the icon (blinks)
 - o Icon status (optional):
 - If the radio scheduler is disabled the icon status is OFF
 - If the radio scheduler is enabled the icon status is:
 - ON if the parameter RADIO_ICON_ON_ENABLED = true
 - OFF if the parameter RADIO_ICON_ON_ENABLED = false
 - NOTE: the parameter RADIO_ICON_ON_ENABLED must be activated by the assistance service

- Reserved for future use
 - o Not used at the moment, always OFF
- Battery 🛯 is ON
 - o If the calculated life is finishing
 - if the battery measured voltage is LOW. In this case the Error icon must be on
- Calendar
 S ON
 - During the billing dates visualizations (1 and 2 are used to define which billing date is shown)
- Error
 It is ON when an error appears
- Test
 It is ON during verification test

DATALOGGING:

The device has datalogging functionality with different data periodicity and storage timespan. For each period the following data is saved: Current volume, current backflow volume, minimum and maximum flowrate of the period.

Data is stored in 4 circular buffers with the following data periodicity and storage timespan:

DATA PERIOD	STORAGE TIMESPAN
15 minutes	9 days
Hour	37 days
Day	896 days
Month	21 years

When the buffer is full, older data is removed.



ALARMS:

- Leakage: a continuous flow has been detected.
- **Overflow:** flow exceeds a given value in a defined time interval.
- **Backflow:** flow in opposite direction above a defined value.
- **Blocked Meter:** the meter does not register flow for a defined time period.
- **Reversed Meter:** constant negative consumption for more than 10 days.
- Battery Status: low battery level.
- **Meter Lifetime Expired:** the device can send an alarm for end of lifetime after achieving configured lifetime (programable up to 15 years).
- Hardware Error: microcontroller memory damaged.









JM600e

DN13 to DN15

 $Q_3 = 2,5 \text{ m}^3/\text{h}$

R200

T50

MAP 16

Electronic register

IoT Ready

SINGLEJET WATER METER WITH ELECTRONIC REGISTER MULTIPROTOCOL

The accuracy of the volumetric measurement allied to a high-performance electronic register.

Secure data: four circular buffers for a high data storage capacity.

Alarms on Demand: Allows the reception of any alarm in real time.

Effective protection against external influences.





JM600e offers:

- Singlejet meter with electronic register. Multiprotocol, able to work with wM-Bus and LoRaWAN mode.
- An extended curve error accuracy. Exactness from flowrates under the minimum standardized up to the maximum flowrate.
- Materials consciously selected to be resistant to corrosion and hydrolysis.
- Shock resistant thermoplastic components that can be safely submitted to temperatures up to50 °C.

OPERATIONAL FEATURES:

Maximum Admissible Pressure (bar): MAP 10 | MAP 16

Temperature Class (°C): T30 | T50

Ratio Q₃/Q₁: R200

Pressure Loss-Class: ΔP 63

Installation Position: Any position

Flow Profile Sensitivity Classes: U0/D0

Indicating range (m³): LCD 7 segments, 6 digits (m³) with 3 decimals, UV protection

Resolution of the indicating device (L): 0,001 in test mode

Body: composite

Certification:

UE Examination Certificate TCM 142/10 - 4738 in accordance with directive 2014/32 UE, CE, ISO 4064-1: 2014, OIML Recommendation R49: 2006, ACS approval, RoHs, WEE, OMS, LoRaWAN, EMC, RED 2014/53/EU, ETSI and EN14154: 2005 + A2: 2011.





TECHNICAL DATA:

DN			15	20
Ratio Q ₃ /Q ₁		R	200 H /	′63 V
Permanent Flowrate	Q₃	m³/h	2,5	
Overload Flowrate	\mathbf{Q}_4	m³/h	3,1	3
Transitional Flowrate	Q ₂	m³/h	Q ₁ x	1,6
Minimum Flowrate	Q_1	m³/h	Q ₃ /	R
Quadrant Indication	r	m ³	999 999), 999
Verification Division		L	0,00)1

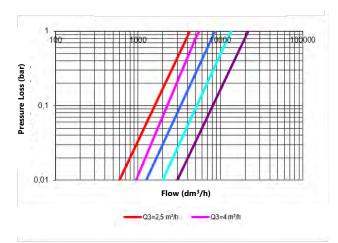
DIMENSIONS:

Nominal Diameter	DN		13	15
Threaded Connections*	R1-R2	11	⁷ / ₈ - ³ / ₄	³ / ₄ - ³ / ₄
Length	L1	mm	110-	-19
Height	H1	mm	17	7
Height	H2	mm	16	6
Height Register	H3	mm	11	4
Width	L4	mm	92	2
Weight		kg	0,3	1

Dimension plan please check our website Janz.pt

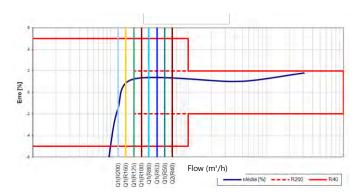
*Other available options





sion plan please check our website sanz.pt

TYPICAL CURVE ERROR





TECNOLOGY:

The magnetic coupling in the **JM600e** was designed to reduce the number of mechanisms and components immersed in water, thus increasing the longevity of the product. This feature also provides effective protection against external influences. Protected against magnetic fraud.

RADIO FEATURES:

Sensor Type: Inductive, bidirectionalBattery Lifetime*: Standard Profile: Up to 13 yearsElectric Power: Lithium battery LiSoCI2 3.6 VProtection: IP68Operating Temperature: -10° C to 55°CRecommended Warehousing Temperature: -20°C to 60°CCommunication technology: LoRaWAN and wM-BusRadio Setup: Automatically after the passage of 10L*Depending on configuration and environmental conditions

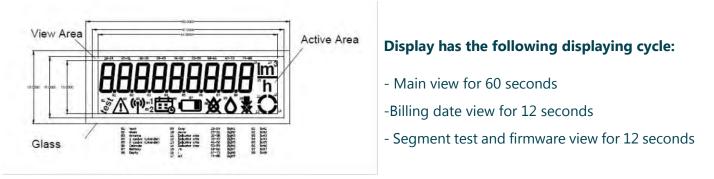
COMMUNICATION MULTI-PROTOCOL FEATURES:

Possibility to configure protocols and alarms for optimized communication.

Model		
Frequency	868 MHz	868 MHz
Modulation/Transmission Mode	Class A, EU868	C1 default, T1

DISPLAY:

The display is a passive type, 7 segments, with 9 digits and symbol icons. UV protection is provided by the LCD itself.







ICONS FUNCTIONALITIES:

- START INDICATOR
 - o Moves in succession 2 quarters that chase each other:
 - Forward flow = clockwise
 - Backflow = counterclockwise
- Backflow
 - Is reflected in BACKFLOW alarm
- Leak 💧
 - Is reflected in LEAKAGE alarm
- Antenna 柳
 - At every transmission must toggle for 6 times the status of the icon (blinks)
 - o Icon status (optional):
 - If the radio scheduler is disabled the icon status is OFF
 - If the radio scheduler is enabled the icon status is:
 - ON if the parameter RADIO_ICON_ON_ENABLED = true
 - OFF if the parameter RADIO_ICON_ON_ENABLED = false
 - NOTE: the parameter RADIO_ICON_ON_ENABLED must be activated by the assistance service

- Reserved for future use
 - Not used at the moment, always OFF
- Battery 🗂 is ON
 - If the calculated life is finishing
 - if the battery measured voltage is LOW. In this case the Error icon must be on
- Calendar 🔝 is ON
 - During the billing dates visualizations (1 and 2 are used to define which billing date is shown)
- Error
 It is ON when an error appears
- Test
 - It is ON during verification test

DATALOGGING:

The device has datalogging functionality with different data periodicity and storage timespan. For each period the following data is saved: Current volume, current backflow volume, minimum and maximum flowrate of the period.

Data is stored in 4 circular buffers with the following data periodicity and storage timespan:

DATA PERIOD	STORAGE TIMESPAN
15 minutes	9 days
Hour	37 days
Day	896 days
Month	21 years

When the buffer is full, older data is removed.



ALARMS:

- Leakage: a continuous flow has been detected.
- **Overflow:** flow exceeds a given value in a defined time interval.
- **Backflow:** flow in opposite direction above a defined value.
- Blocked Meter: the meter does not register flow for a defined time period.
- Reversed Meter: constant negative consumption for more than 10 days.
- Battery Status: low battery level.
- **Meter Lifetime Expired:** the device can send an alarm for end of lifetime after achieving configured lifetime (programable up to 15 years).
- Hardware Error: microcontroller memory damaged.

OPTIONS:

eREGISTER water meters can be integrated into a smart city project by being combined with JANZ Telemetry System and mobile application (MATER LPWA Telemetry System) or any other similar product.

For more information, please contact: Av. Infante D. Henrique 288, 1950-421 Lisboa, Portugal T. (+351) 218 316 000 | geral@janz.pt www.JANZ.pt



