

hidroconta
metering technology

WHEN WATER COUNTS



water meter

centaURUS

SERIE 300

Made in Spain

hidroconta.com

**Volumetric
measuring system**

**Electronic
water meter with
mechanical
body**

**Autonomy
15 years**

**Starting flow
from 1 l/h**

**Protection
IP68**



**Communications
included
NB-IoT/WM-Bus**

**High accuracy
R500**

Adjustable display

**Installation
UO/DO**

REV.9

Smart water meter

CENTAURUS records water consumption in real-time. Access to recorded data by daily, weekly, or monthly patterns through our SOFTWARE solution.

Receive just-in-time leaks, tampering or clogging alerts. CENTAURUS sends an instant alert to take immediate action. Due to its high accuracy, the smallest leaks are now detectable. Avoid unnecessary waste thanks to predictive maintenance.

Our SOFTWARE solution includes DMA performance analysis. Access to a daily updated WATER BALANCE of your network.

CENTAURUS Series.
The smart water meter designed by HIDROCONTA in Europe.

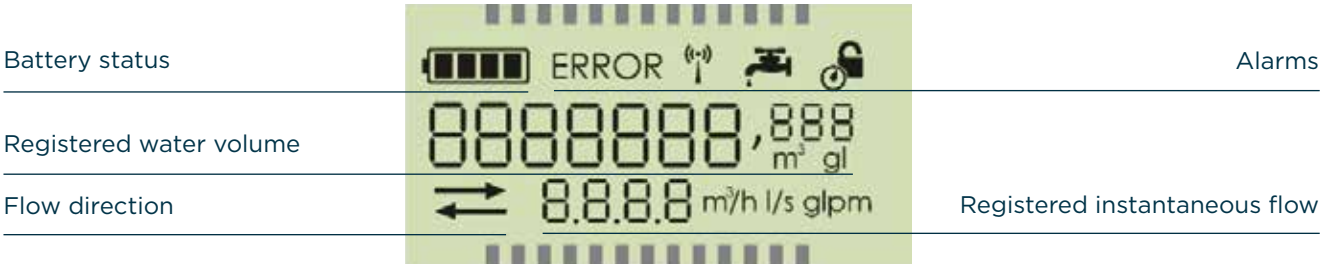
Homologation MID

Hidroconta's Centaurus water meter has the metrological requirements based on the Directive 2014/32 / EU, so they are normally used for the totalization and control of domestic water consumption. In Hidroconta we make strict tests in the counters that assure its quality and its precision.

Technical specifications

- ✓ Temperature class T30 or T50.
- ✓ Copper alloy body for sizes DN13 to DN 40 and plastic for sizes DN-13 and DN-15 mm.
- ✓ IP68 sealed electronic totalizer.
- ✓ The electronic totalizer can be rotated manually, for a reading in any position.
- ✓ MID approval for potable water. Directive 2014/32 / EU.
- ✓ Straight sections are not necessary at the meter input or output UO-DO.
- ✓ Volumetric measuring system.
- ✓ Electromagnetic environment class: E1

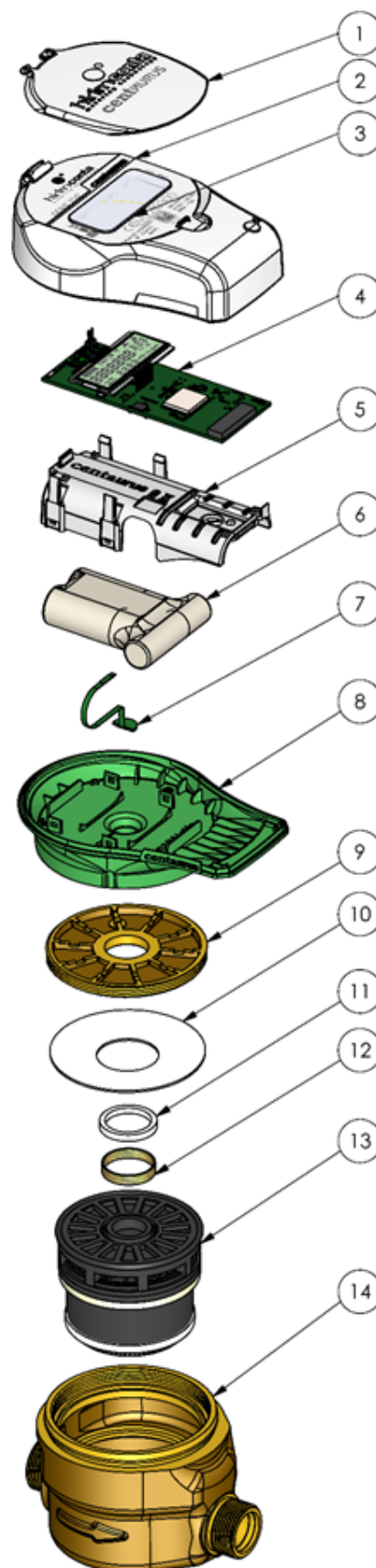
Dial marking



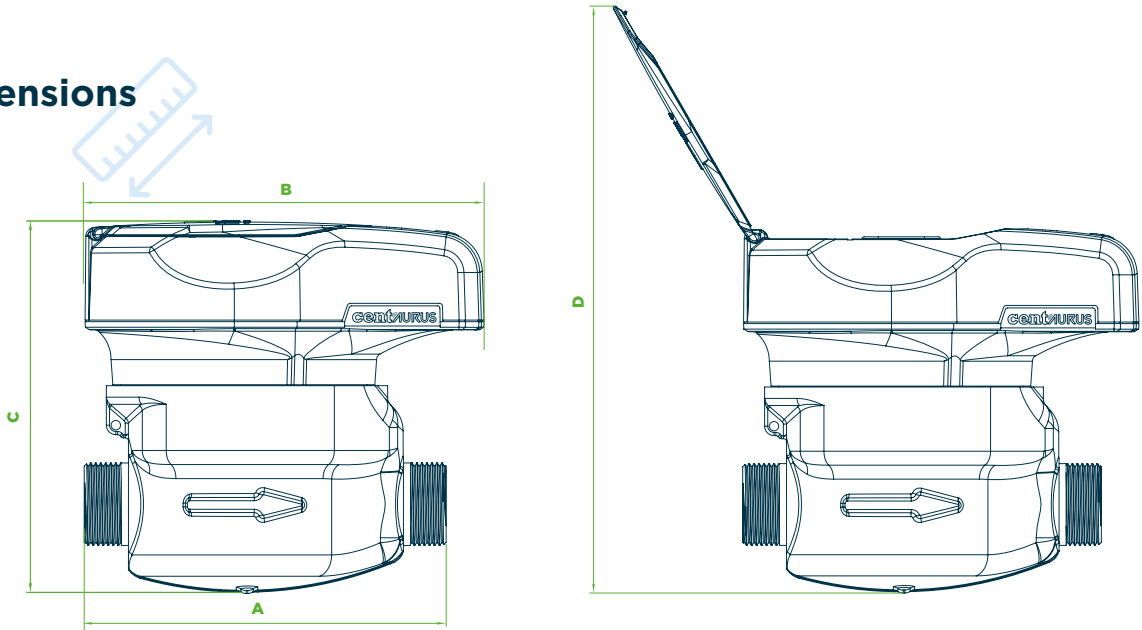
Disassembly



Nº	DESCRIPTION	MATERIAL
1	Cover	Polycarbonate
2	Casing body	Polycarbonate
3	Crystalline casing	Polycarbonate
4	PCB and Display	Assembly
5	Battery case	Polycarbonate
6	Batteries	Li-Ion
7	Inductive sensor	Assembly
8	Casing base	ABS
9	Closing ring	Copper alloy
10	Pressure plate	Nylon
11	Anti-fraud ring cover	Nylon
12	Anti-fraud ring	Iron
13	Volumetric mechanism	Plastic
14	Water meter body	Copper alloy or composite

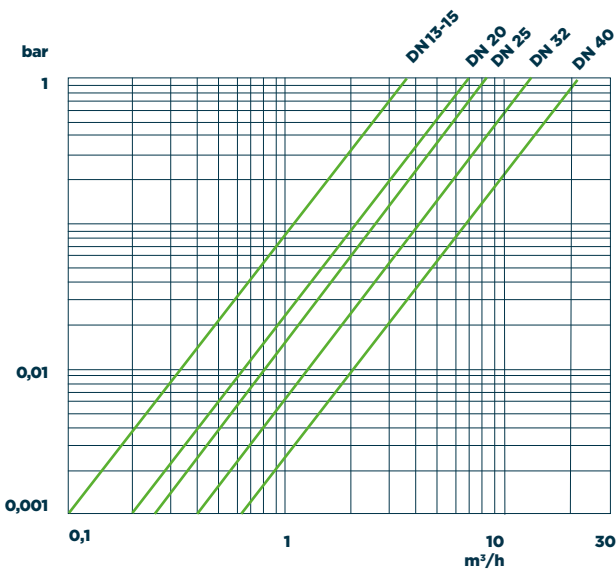


Dimensions

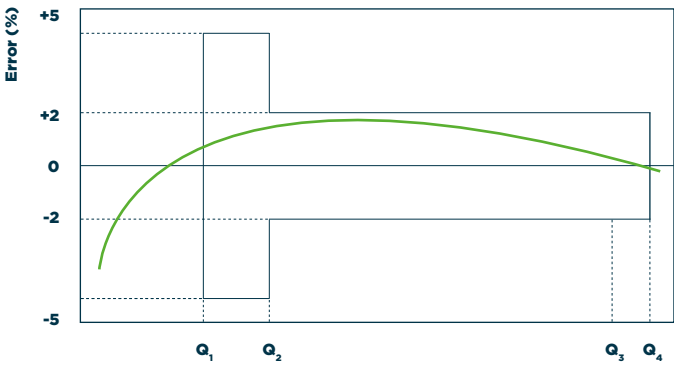


DN		A	B	C	D	WEIGHT WITHOUT COUPLING	THREADED CONNECTIONS	MATERIAL
mm	in	mm			Kg			
13	1/2"	115	130	142	211,5	0,80	G 7/8" x 3/4"	Composite
15	1/2"	110/115	130	142	211,5	0,80	G 3/4"	Composite
13	1/2"	115	130	118	188	1,07	G 7/8" x 3/4"	Brass
15	1/2"	110/115	130	118	188	1,30	G 3/4"	Brass
20	3/4"	190	130	128,5	198	1,44	G 1"	Brass
25	1"	260	130	151	234	2,60	G 1-1/4"	Brass
32	1-1/4"	260	130	172	241,5	4,40	G 1-1/2"	Brass
40	1-1/2"	300	130	192	261,5	6,80	G 2"	Brass

Pressure loss curve



Flow error curve



Working conditions

Maximum permissible

ROOM TEMPERATURE	MAXIMUM PRESSURE	RANGE	ERROR (%)
-10 °C ~ 55 °C	≤ 16 bar	$Q_1 \leq Q < Q_2$	± 5%
		$Q_2 \leq Q \leq Q_4$	± 2%

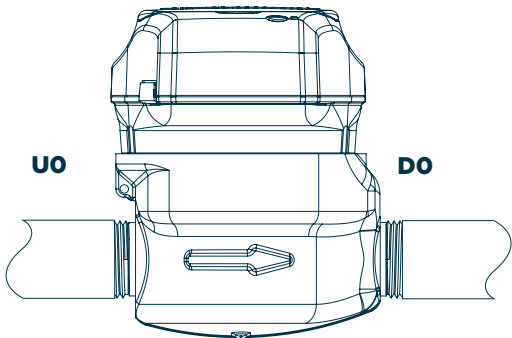
Technical specifications

DN		Q ₄	Q ₃	Q ₂	Q ₁	STARTING FLOW RATE	MINIMUM READING	MAXIMUM READING	RATIO	BODY MATERIAL
mm	in	m ³ /h		l/h		l/h		m ³		
13	1/2"	3,125	2,5	12,70	7,94	1	0,001	9.999.999	315	Composite
15	1/2"	3,125	2,5	12,70	7,94	1	0,001	9.999.999	315	Composite
13	1/2"	3,125	2,5	10,00 8,00	6,25 5,00	1	0,001	9.999.999	400 500	Copper alloy
15	1/2"	3,125	2,5	10,00 8,00	6,25 5,00	1	0,001	9.999.999	400 500	Copper alloy
20	3/4"	5	4	16,00 12,80	10,00 8,00	2	0,001	9.999.999	400 500	Copper alloy
25	1"	7,875	6,3	32,00	20,00	5	0,001	9.999.999	315	Copper alloy
32	1-1/4"	12,5	10	64,00	40,00	10	0,001	9.999.999	250	Copper alloy
40	1-1/2"	20	16	102,40	64,00	20	0,001	9.999.999	250	Copper alloy



Diagrams for installing

- ✓ For the installation of Centaurus serie 300 straight sections are not necessary in the input or output.



Communications

- Short range communications 868 MHz. **Wireless communication port for local connection to the device for maintenance/configuration tasks.**
- NB-IoT for long-range communications
- WM-Bus for walk-by/ drive-by communications or fixed network

Automatic reading water meter



NB-IoT		WM-Bus	
Bands	B8 / B20	868 MHz	
Transmission power	23 dBm +/-2dB	OMS T1 and C1	
Firmware Update	Via FOTA		



Historical values

- The hourly, daily and monthly values of the
- measured parameters are stored in internal memory.

The recorded data can be read remotely.

Data register

- Total volume.
- Hourly, daily and monthly volume.
- Engineering parameters of the NB-IoT connection.
- Alarms.

Reverse flow alarm:

Reverse flow detection. If there is flow in the reverse direction the alarm is triggered.

Set the amount of liters to trigger the alarm.

Leak alarm:

Occurs when constant flow rate is higher than a specific flow (time and flow are customizable values).

HIDROCONTA recommends to set it up 0.5% Q3.

No consumption alarm:

Occurs if the detected flow rate is zero for a certain period of time (customizable).

Under Dimensioned alarm:

Occurs when the average flow rate is higher than a custom value during a certain customizable period of time.

Over Dimensioned alarm:

Occurs when the average flow rate is lower than a custom value during a certain customizable period of time.

Burst alarm:

Occurs when a customized constant flow rate is higher than a specific flow for a short period of time

HIDROCONTA recommends to set it close to Q3.

Excessive flow alarm:

Occurs when an instant flow rate is higher than a custom flow value.

HIDROCONTA recommends to set it close to Q4.

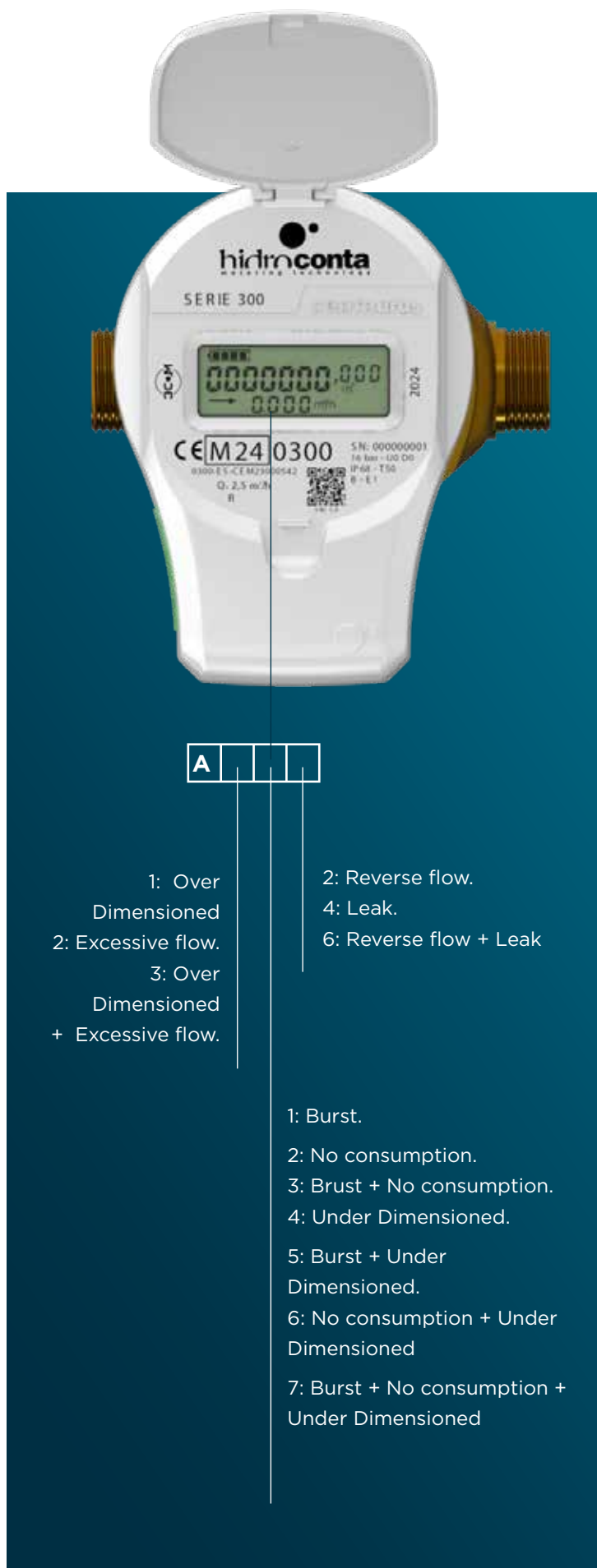


Alarms notice on the display

In the event that one or more alarms occur, they will be shown on the display instead of the flow rate digits, alternating with it as follows:

A capital "A" will appear in the leftmost digit indicating that there are active alarms (or already past but not reported).

The remaining 3 digits will show which alarms exist, each digit will report alarms as follows.



Functionality



Operation timed by a real-time clock periodically synchronized by an external clock source. Communications according to scheduled programming or commanded by an operator in person. Temporarily scheduled communication supports:

- ✓ Up to 8 registration windows within a day of operation. Specifying the start and end time of the period and the recording interval (minutes).
- ✓ Up to 8 daily transmission windows. Allowing to specify start time of the connection.
- ✓ Standardized operating profiles based on the requirements for registering historical consumption and communications.
 - **Normal-24:** Sending data every 24 hours and recording every hour.
 - **Normal-8:** Data sending every 8 hours and recording every hour.
 - **Medium:** Sending data every 12 hours and recording every 30 minutes.
 - **Extreme:** Sending data every 6 hours and recording every 15 minutes.

MODE	AUTONOMI	COMMUNICATION	HISTORICAL
Normal -24	15 years	24 h	1 h
Normal -8	11 years	8 h	1 h
Medium	13 years	12 h	30 min
Extreme	10 years	6 h	15 min

*Data with NB-IoT communications.

Installation instructions

The meters must always be full of water when operating, minimum pressure 0,3 bar, and installed below the slope of the rest of the pipeline. This stops air pockets from forming inside.

If there is air in the pipeline, suckers must be fitted to avoid incorrect readings. If the water in the pipeline contains large suspended particles, an initial screening filter should be installed.

Fit a valve upstream from the meter to facilitate maintenance or repair.

A new pipeline should be drained before fitting a meter to eliminate particles.

Do not force the meter during assembly; avoid tension or torsional stress, especially to the threaded connections.

Once the physical installation of the water meter has been completed, the same must be completed by adding the geolocation of the same in the server.

This step will be done using an application (APP) for mobile devices as a tool. The "Centaurus Connect" application.



1. What are the ranges of measurement and precision?

The measuring range of the meters is determined by the Directive MID 2014/32 / UE establishing the ratio between the value of the permanent flow (Q3) and that of the minimum flow (Q1). The water meter can measure up to the maximum flow rate (Q4) for short periods of time without deterioration.

The maximum permissible error, positive or negative, in volumes between the transition flow (Q2) (included) and the overload flow (Q4) would be 2% with a water temperature 30 ° C.

The maximum permissible error, positive or negative, in volumes between the minimum flow rate (Q1) and the transition flow (Q2) (excluded) would be 5%.

2. The MID directive and its compliance

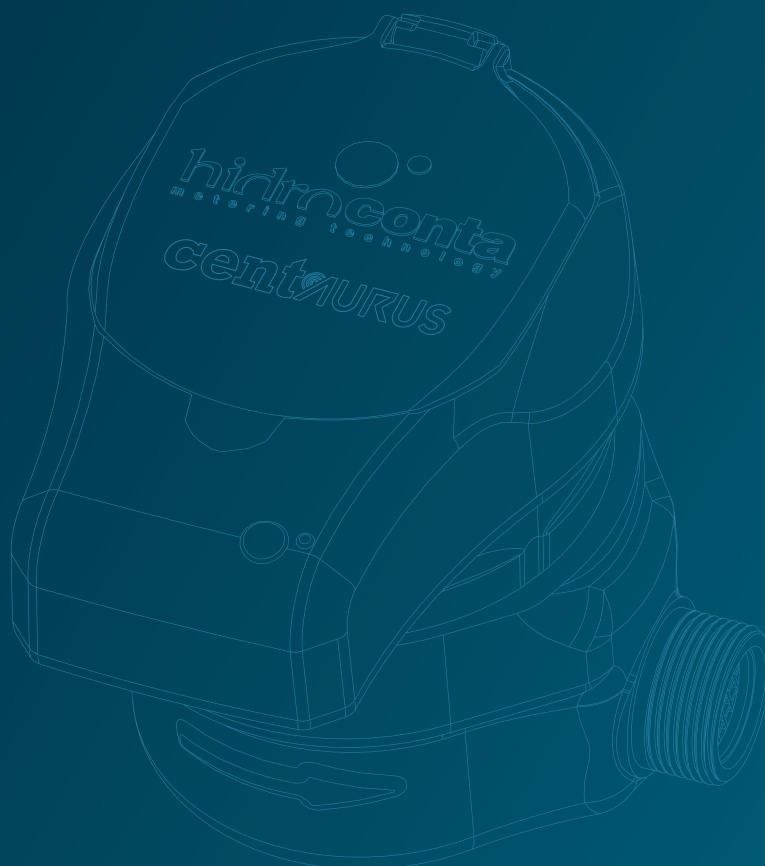
The MID Directive (2014/32 / EU Measuring Instruments Directive) is a directive of the European Union whose purpose is to harmonize the di

erent aspects of Legal Metrology in the member states.

The most important aspect of this directive is that equipment in possession of a MID certificate can be used in the EU.

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