

Octave Ultrasonic Water Meter

Scope of Use / Specification Sheet

The Octave Ultrasonic Meters are a revolutionary, precise and ultra-reliable ultrasonic bulk water meter with no moving parts. With superior hydraulics and batteries that last more than 15 years, the Octave is today's best choice for bulk meters.

The Octave Range is NMI approved.



Product Code

Model	Product Code
50mm Flanged Stainless Steel	WM500OCTSS
50mm Polymer Threaded *	WM500OCT-POLY
80mm Flanged Stainless Steel	WM800OCTSS
100mm Flanged Stainless Steel	WM1000OCTSS
150mm Flanged Stainless Steel	WM1500OCTSS
200mm Flanged Cast Iron	WM2000OCT
250mm Flanged Cast Iron	WM2500OCT
300mm Flanged Cast Iron	WM3000OCT

* Threaded versions are provided with couplings.

Note:

- All meters are ISO length.
- Option for Octaves with spool pieces to meet Australian length requirements are also available.

Application

Perfectly suitable for large projects, as key meters in grids and DMA (District Metered Areas), and for use in medium flow rates, from apartment buildings to small neighborhoods/housing projects. The Octave combines superior hydraulic characteristics with advanced alert, data and statistical features. For agricultural appliances the Octave is perfectly suitable as main meter with its high accuracy, low headloss, electronic information options and diverse electrical outputs.

The Octave Ultrasonic Meter's measurement method is based on an ultrasonic, transit time, dual beam sense which determines the length of time it takes an ultrasonic sound wave to travel the distance between the two sensors located on the meter's body.

Materials

Body	Polymer / SS / Cast Iron, Epoxy Coated
External Nuts and Bolts	Stainless Steel

Features and Benefits

- Dual beam ultrasonic technology for precise and ultra reliable metering
- No moving parts
- Excellent long-term stability and reliability
- Battery powered – up to 15 years life expectancy
- Rugged mechanical design – submersible (IP68)
- Extremely sensitive and accurate in low flows
- Bi-directional outputs (digital and analog)
- Flexible data formats including flow directions, flow rates and volumes
- AMR and cellular networks ready with alerts and statistics features
- Multiline LCD
- Programmable Display (units and outputs resolution)
- EMI / RFI Protection
- NMI approved to zero upstream and zero downstream straight length of pipe

Standards and Approvals

Polymer only:



WMK26311
AS 3565.1

Stainless Steel and Cast Iron only:

- Approved utility use only. No Watermark

All Types

- NMI R49

Octave Ultrasonic Water Meter

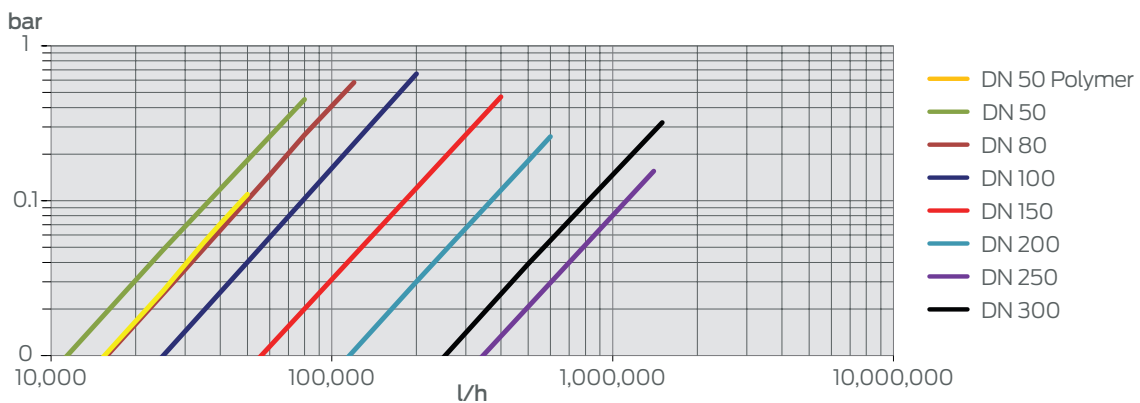
Performance Specifications

Maximum Working Pressure	16 bar
Liquid Temperature	0.1°C up to 50°C
Precision Class	ISO 4064 rev.2014, Accuracy class 2
Configuration	Compact – the display is built in to the unit
Power Source	2 x D size Li-battery: 15 year life time
Environmental Protection	IP 68, Ambient operation temp. -25°C up to +55°C
Volume Display Options	1. Net (Forward less reverse) 3. Reverse only 2. Forward only 4. Forward and reverse alternating
Outputs	Digital Dual Pulse Output (included), 4-20mA, SSR, M-Bus, MODBUS Fully configurable to suit site requirements
Connections	Flanges according to ISO, BS 10 and ANSI 150
Severity Levels	Mechanical class M1 and Electromagnetic Environment class E1
Pressure Loss	ΔP 0.16 bar

Flow Rate

m ³ /h	Meter Size						
	DN 50	DN 80	DN 100	DN 150	DN 200	DN 250	DN 300
Q1 Minimum flow rate	0.080	0.125	0.200	0.500	0.800	2	2
Q2 Transitional flow rate	0.125	0.200	0.320	0.800	1.280	3.2	3.2
Q3 Permanent flow rate	40	63	100	250	400	1000	1000
Q4 Overload flow rate	50	80	125	313	500	1250	1250
Q3/Q1 (R)	500	500	500	500	500	500	500
Starting Flow	0.025	0.025	0.025	0.2	0.2	0.5	0.5

Head Loss Curve

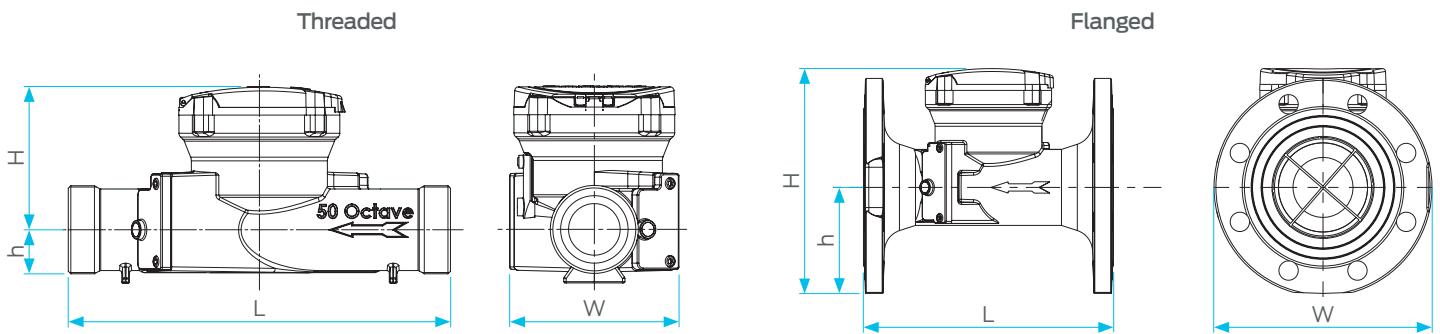


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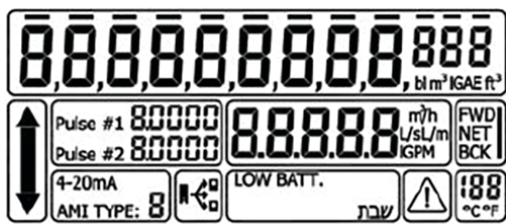
Dimensions

Model	mm	50 Threaded	50	80	100	150	200	250	300
	inch	2" Threaded	2"	3"	4"	6"	8"	10"	12"
(L) Length without couplings		300	200	225	250	300	350	449	499
(W) Width		113	165	200	220	285	340	406	489
(H) Height		155	194	210	223	282	332	383	456
(h) Height		35	40	90	103	140	165	203	245
Weight (kg) – Polymer body		1.45	-	-	-	-	-	-	-
Weight (kg) – SS body		-	6	7	9.5	16	-	-	-
Weight (kg) – Cast Iron body		-	-	-	-	-	45	68	96

Note: All measurements in mm unless otherwise stated.



Digital Display



- Flow Direction
- Flow Rate Units
- Accumulator Mode
- Communication Mode
- Low Battery Alert
- System Error
- Output Mode
- Volume Units
- Pulse Resolution

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Installation

For proper flow measurements, the Octave's measuring tube must be completely full of water at all times. Non-wetted sensors show loss of signal. Although this will not cause damage to the meter, it will not measure flow, and will display zero.

Due to the high sensitivity of ultrasonic measuring principals, it is recommended that a testable backflow device is installed downstream of the meter to provide hydraulic stability. The recommended backflow device should be installed between 2 and 10 pipe diameters from the meter outlet. Failure to do so may result in movement within the measuring chamber leading to backflow measurement. RWC is unable to support backflow diagnostics where this advice is not followed.

For further information view the instruction manual.

Installation is subject to the requirements of the applicable regulatory authority, the National Construction Code Volume Three – Plumbing Code of Australia, associated reference standards as applicable at the time and AS/NZS 3500.1.

Warranty

Reliance Worldwide Corporation (Aust.) Pty. Ltd. (RWC) will either replace or repair any defective goods where the defect arose as a result of manufacture within the warranty period. You may contact RWC at the phone number, address or e-mail shown below for further information or to make a claim.

Visit www.rmc.com.au/warranty to view the warranty statement in full and for further important information.