Superaqua 1M

Electronic Water Meter - Multi-jet Dry Meter Measuring Capsules





The Superaqua 1 Multi-jet Dry Meter Measuring Capsules – A future-proof metering solution tailored specifically to the requirements of the sub-metering market in Germany and Austria.

The Superaqua 1 measuring capsules are modular multi-jet water meters designed for all standard in-wall housings. Manufactured for both cold and hot water applications, the meters achieve standard MID accuracy class R160H/V, for enhanced low-flow performance.

Integrated OMS (wireless M-Bus), LoRaWAN® and Sontex radio technologies ensure seamless integration into modern AMR and smart metering infrastructures. The robust brass and composite bodies enable optimal adaptation to different installation environments, durability requirements, and cost targets.

Engineered for long-term reliability, easy installation, and highly accurate billing, the Superaqua 1 portfolio covers all application areas, providing an efficient and sustainable solution for utilities, property managers and metering service providers.

More Information on
www.sontex.ch

your link to innovative metering

Main Features

- A comprehensive portfolio covering 13 different capsule types ensures compatibility with all common systems from leading manufacturers.
- Approved with a MID measurement range class (Q3/Q1) of **R250 horizontal** and **R200 vertical.**
- Manufactured with a standard MID measurement range class of **R160H/V** to ensure an excellent metrological performance.
- Very low starting flow rates down to **3 l/h** enable reliable detection of small consumption volumes and leakage.
- Advanced alarm functions support early **detection of leakage, backflow, no-flow conditions, and pipe burst events**, increasing operational transparency.
- Integrated long-term data logging stores billing date values, monthly values, and **up to 480 daily values**, enabling detailed consumption analysis.
- Batteries with a lifetime of up to **16 years** (depending on radio settings) ensure long maintenance intervals and reliable long-term operation.
- A dedicated recommissioning function allows authorised laboratories to prepare meters for reuse after reverification, reducing replacement costs, supporting a more sustainable metering infrastructure.
- Available for **cold and hot** water applications, allowing use across a wide range of installations.
- Protection class **IP68** ensures reliable operation in demanding installation environments (except for pit installations).
- Compliance with international metering standards such as **OIML R49 and EN 14154** guarantees proven measurement quality and regulatory conformity.
- Certified according to major drinking water approvals including **KTW-BWGL (D)**, **W270 (D) and ÖNORM B5014 (AT)**.
- Custom printing and brand labelling are available on request, supporting customer-specific product identification and branding.

Technical Data

Temperature class: MAT	Cold water (T50) and Warm water (T50/T90)
Operating temperature	+0.1 °C to +65 °C, ⩽ 95% RH (non-condensing)
Storage & transport temperature	-10°C to 65 °C (dry, non-condensing)
Degree of protection (IP)	IP68 (not suitable for pit installation)
Environmental class (MID)	B
Electromagnetic class (MID)	E1
Mechanical class (MID)	M1
Measuring accuracy class	2
Volume measurement Cycle	0.5 seconds (at nominal flow)
Battery type	3 VDC Lithium battery (Lithium content ⩽ 1g)
Battery Life	up to 16 years (depending on the radio configuration)
Battery protection class	III
Display	LCD, 8 digits - with configurable loop, rotatable 360 degree.
Configuration Interface	NFC according to ISO/IEC 15693
Metering Standards	OIML R49 and EN 14154

Radio Communication Options

Open communication standards enable seamless integration into modern AMR infrastructures, ensure long-term interoperability and provide maximum investment security. Customer-specific communication settings can be pre-configured before delivery using the Sontex Radio Configurator simplifying large-scale deployments.

	Sontex Radio	wM-Bus	LoRaWAN®
Radio protocol	▪ Radian V1.0	▪ Wireless M-Bus (EN 13757-4) ▪ OMS Certified (Gen. 4)	▪ LoRaWAN Certified® (acc. to Specification V1.0.2) ▪ LoRaWAN™ Swisscom IoT Qualified Product
Transmission mode/ class	▪ N.a.	▪ T1 ▪ C1	▪ Class A
Encryption mode	▪ AES-128 CBC	▪ AES-128 - Mode 5/7	▪ AES-128 - AppKey
Encryption options	▪ Individual key ▪ General key ▪ Unencrypted	▪ Individual key ▪ General key	▪ Individual key
Radio frequency	▪ 433.82 MHz	▪ 868.95 MHz	▪ ISM Frequency band EU863-870
Transmission power	▪ Max. 10 mW (10 dBm) ▪ Typ. -3 dBm	▪ Max. 25 mW (14 dBm) ▪ Typ. 5 dBm	▪ Max. 25 mW (14 dBm) ▪ Typ. 5 dBm
Communication	▪ Bidirectional	▪ Unidirectional	▪ Bidirectional
Radio telegrams	▪ Telegram 1 (current data) ▪ Telegram 2 (historical data)	▪ Telegram S (Short - OMS) ▪ Telegram L (Long - walk-By)	▪ Telegram S (SF10-12): 49 bytes ▪ Telegram L (SF7-9): 113 bytes
Transmission intervals (1)	▪ When calling (after wake-up)	▪ OMS: 15-3600 s (120 s) ▪ Walk-by: 15-3600 s (120 s)	▪ SF7-9: 15-480 min. (60/ 60/ 120 min.) ▪ SF10-12: 15-480 min. (120/ 240/ 360 min.)
Radio activity	▪ Configurable via calendar function	▪ Configurable via calendar function	▪ No calendar function
Radio activity standard (1)	▪ Daily, 06:00 up 19:59 h	▪ 13 h/day (06:00 - 19:00 h) ▪ 7 Days a week	▪ Periodic dispatch according to transmission intervals
Type of reading			
Mobile (Walk-by)	▪ Radio modem *Supercom 636*	▪ Radio modem *Supercom 637*	▪ N.a.
Automatic Meter Reading (AMR)	▪ Data concentrator *Supercom 636* ▪ Gateway Superlink C	▪ Data concentrator Supercom 647 ▪ Gateway Superlink C	▪ Commercially available LoRaWAN® Gateway

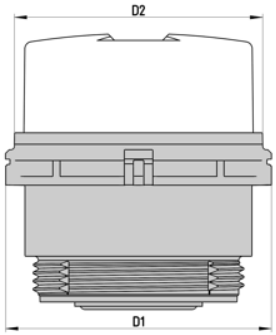
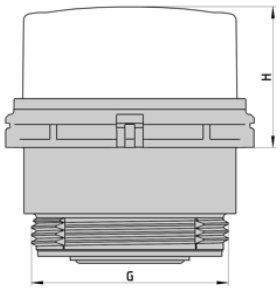
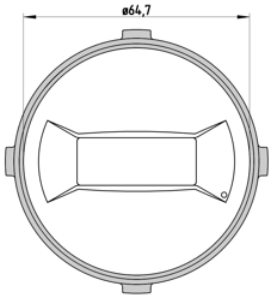
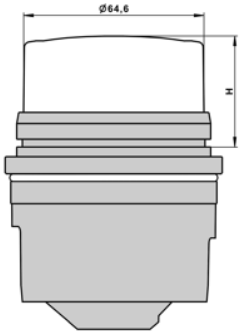
(1) Default value in brackets

Models

The Superaqua 1 Multi-Jet Measuring Capsules in dry dial design are compact and cost-effective devices for the precise measurement of potable water consumption. Water is directed onto the impeller via a multi-jet, ensuring efficient operation, while the hermetically sealed register provides reliable protection against moisture, deposits, and magnetic interference. All models are available in Q3 2.5 m³/h with a starting flow rate of 3 l/h.

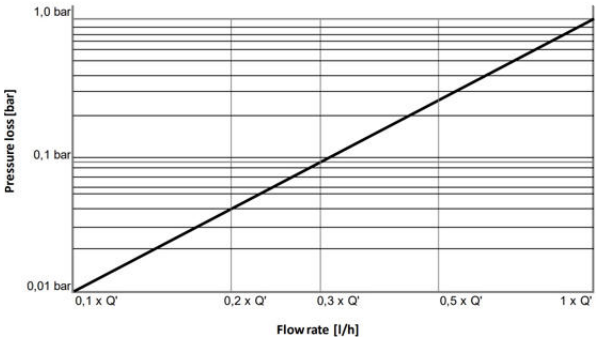
Manufacturer		Type	Housing Material	Height H [mm]	D1 [mm]	D2 [mm]	Thread G	Weight [kg]	Flow Q horiz. [l/h]
ISTA EAS-N		**IST**	Composite	62	75	71	G 2"	0.2	3400
Elster/ABB MO-E/EAS-H MO-C/EAS-N		**MOE / MOC**	Composite	35			M65x2	0.2	
Allmess UP600		**A34**	Brass	43			M77x1,5	0.5	
Techem UP		**TE1**	Composite	40			M62x2	0.2	
Metrona/ Brunata HT3		**MET**	Composite	35			M64x2	0.2	
Deltamess TRK		**DM1**	Brass	55			M60x2	0.4	
Metrona 307/1		**HT2**	Brass	51			M66x1	0.4	
SPX/Spanner Pollux Pollomuk		**MUK**	Brass	35			G 2 ¼"	0.3	
Wehrle Unterputz		**WE1**	Brass	45			M78x1,5	0.6	
Wasser-Geräte		**WGU**	Brass	51			M66x1,25	0.4	
Minol MB3		**MB3**	Brass	47			M76x1,5	0.5	
Minol MB2		**MB2**	Brass	40	-	-	-	0.5	2800
Minol M7L		**M7L**	Brass	47	67	67	M58x1,5	0.3	3400

Dimensions

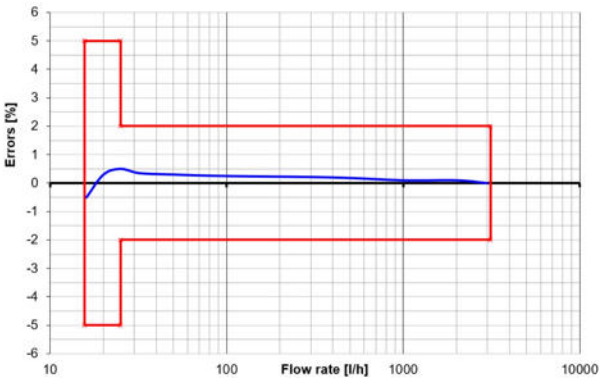
Diameters (D1, D2)	Height (H)	Diameter (1)	Minol MB2
			

(1) Diameter of the M7L measuring capsule: 63 mm

Typical Pressure Loss Curve



Typical Error Curve Q_3 2.5 R160H



Accessories

- Different accessories → Fig. 1
- Suitable rosettes → Fig. 2



Fig. 1



Fig. 2

Legal and Compliance Information

Hereby, Sontex declares that the product is in compliance with Directive 2014/53/EU, 2014/32/EU and 2011/65/EU.

The full text of the CE Declaration of Conformity can be found on our website.

Support & Warranty Information

- For technical support, please contact your local agent.
- Warranty and guarantee claims are only valid if the device has been used in accordance with their intended use and if the technical requirements and any applicable technical regulations have been observed.
- Links to online documentation, declaration of conformity, manuals, or support forums:

Sontex
your link to innovative metering

Sontex SA
Rue de la Gare 27
CH-2605 Sonceboz
Tel. +41 32 488 30 00
sontex@sontex.ch
www.sontex.ch