Dry-dial vane-wheel single-jet water meter

JS MASTER+ IP68/IP65

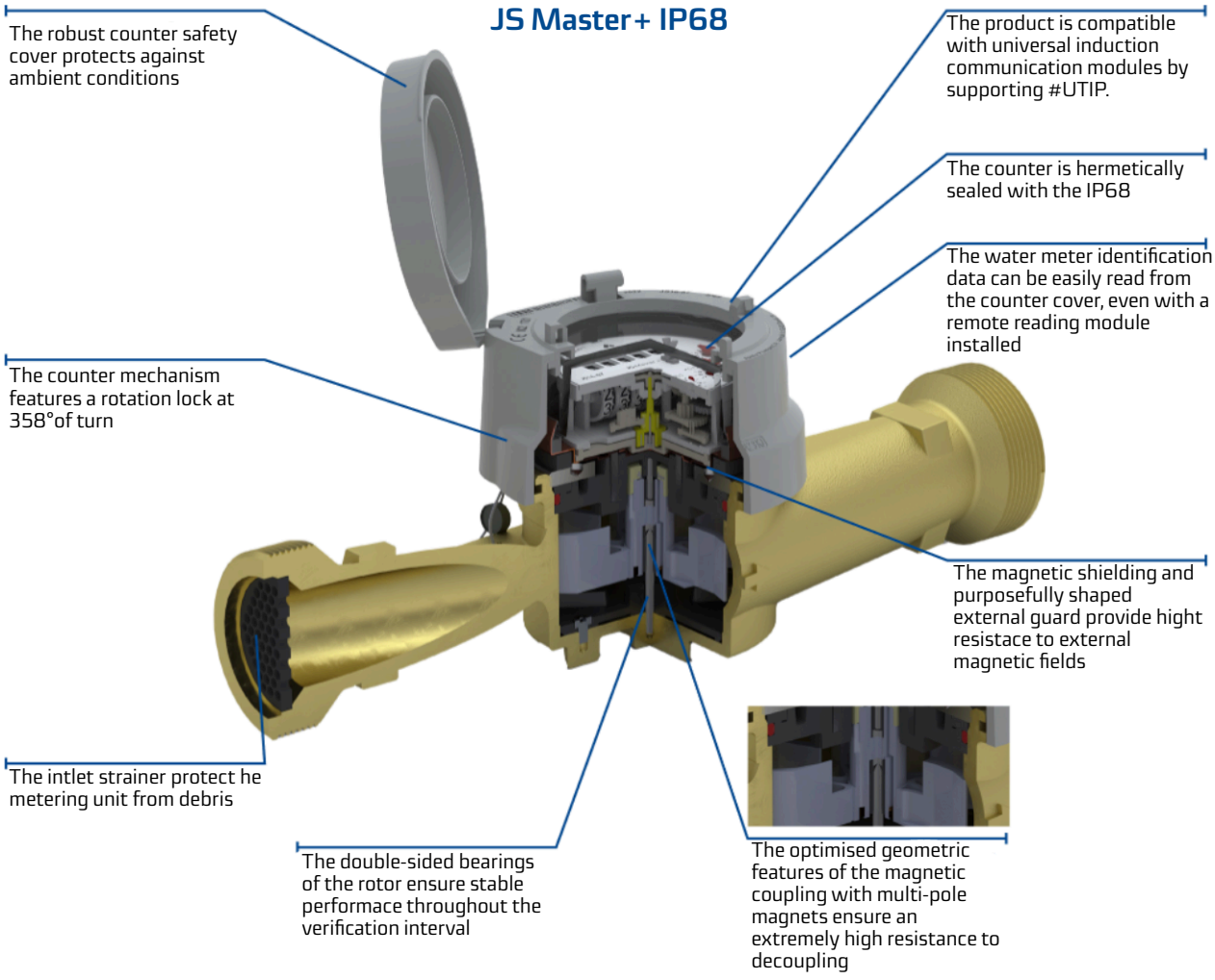
Description

JS Master + IP68/IP65 is a single-jet vane-wheel dry water meter for precise measurement of water supply consumption. The advanced design engineering ensures a high dynamic response to metering conditions and a high immunity to strong magnetic fields. The water meter is compatible with optical and induction data communication modules from Apator Powogaz S.A. for automatic wired or wireless meter reading. The water meter is designed and manufactured to the MID (Measuring Instruments Directive) and complies with EN14154, OIML R49 and ISO4064 for maximum measurement range of R100.

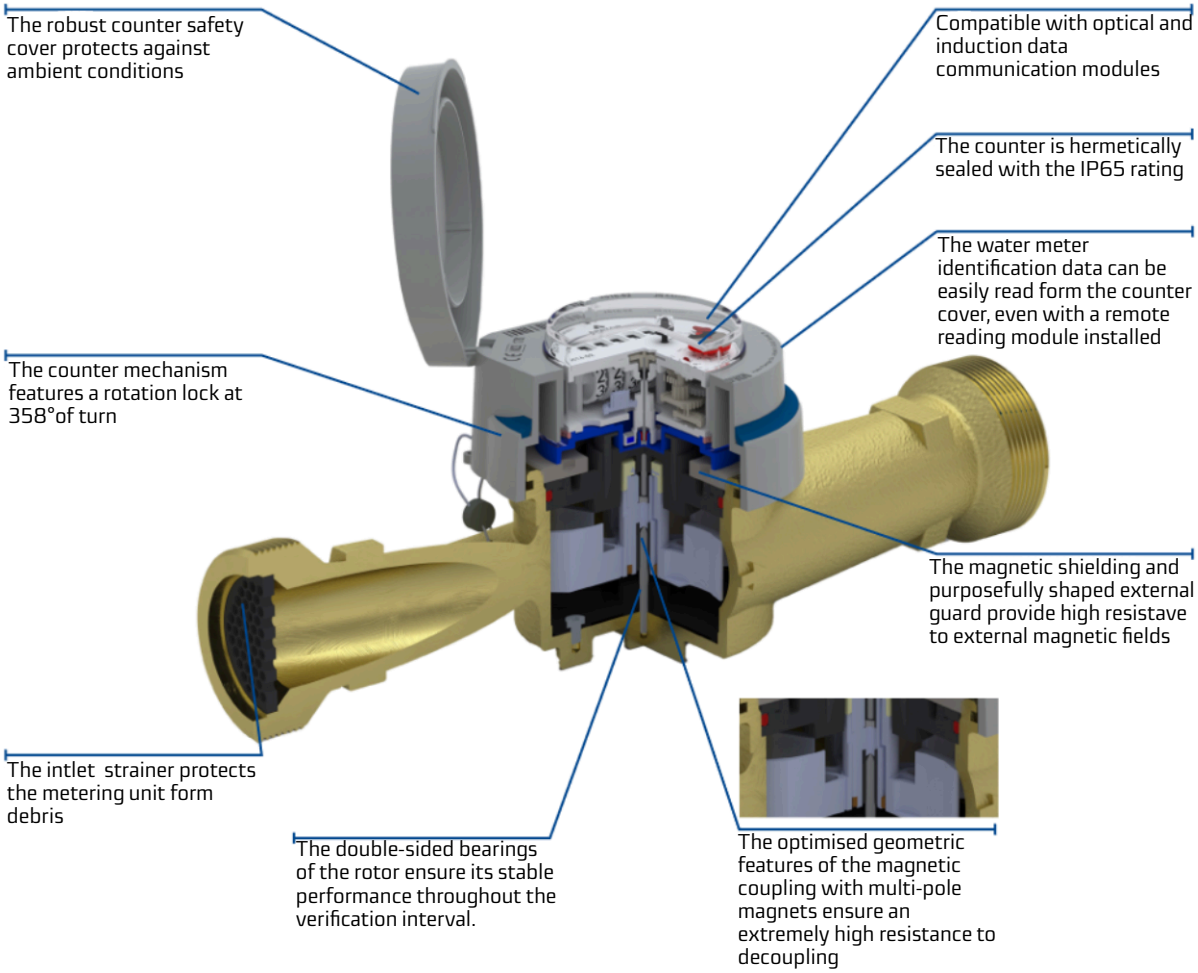
Usage

Cold water supply systems (max. 50°C) and hot water supply systems (max. 130°C) in multifamily housing, industrial facilities, public facilities, and metering stations. The maximum operatng pressure (MOP) is 16 bar. The water meter is designed for installation in a horizontal orientation with the counter upward (H) or sideways (H), and in a vertical orientation (V). The rotary counter provides easily readable indications directly from the front face and works well in different installation orientations. The standard IP68 version is compatible with directly installed induction data communication modules which feature #UTIP (Universal TI Plug), whereas the IP65 water meters support optical and induction data communication modules mounted using an interface ring.

JS Master+ IP68

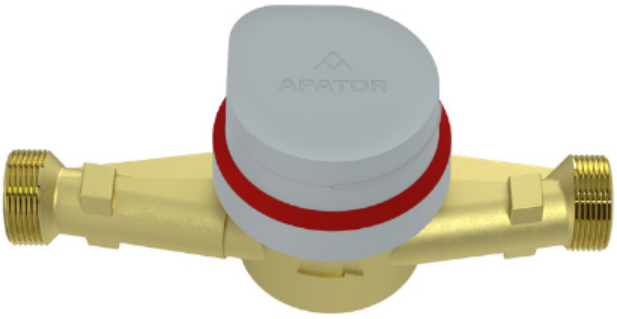


JS Master+ IP65



JS Master+ IP65

Hot water meter version



JS Master+ IP65

Cold water meter version

Advantages

- Precise measurement at R100 - H
- Remote meter reading via wired or wireless interface
- Protection against:
  - Strong magnetic field effects (by magnetic shielding)
  - Mechanical tampering (a robust, tamper-proof counter design)
  - Multiple rotations of the counter by more than 358°
- The water meter is AMR (automatic meter reading) (MDMS)-capable and provided with #UITP in the IP68 version for direct installation of induction data communication modules, while the IP65 version is compatible with optical and induction data communication modules which feature an intreface ring
- Easily readable:
  - The conter can be oriented anywhere within 0 to 358°
  - Hermetically sealed, non-fogging IP68 counter: the counter mechanism is sealed in a copper-glass enclosure with a copper guard
- Wireless reading-capable via:
  - Induction communication modules: IN-WMBUS, IN-GSM for the IP65 and IP68 versions
  - APT-03A-3 optical communication module for the IP65 version
- Wired reading-capable via:
  - Inducton communication modules: IN-PULSE for the IP65 and IP68 versions
  - Optical communication modules: APT-MBUS-NA2 and AT-MBUS-NE-03 for the IP65 version
  - NK reed relay pulse transmitter for the IP65 version
- Long operating life thanks to advanced materials
- The inlet strainer which protects the metering unit from debris

Key features

- Output of event alarms: when equipped with a RF communication module, the water meter can indicate removal or breaking of the module, module operating disturbance, reverse flow, leaks, etc.
- The rotor bearings, other solutions and materials used ensire stable metrology over the service life
- IP68 rating: the water meter os capable of operation in extremely difficult ambient conditions (even when fully immersed in water), including with a data communication module installed
- Highly aesthetic water drop-shaped design of the counter safety guards and covers
- Stable flow rate inlet bore design
- Double-sided rotor bearings
- Available n the IP65 version with a reed relay pulse transmitter

Regulatory and standards compliance

- Directive 2014/32/EC of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of measuring instruments
- OIML R49-1:2006 - Water meters intended for the metering of cold potable water and hot water. Part 1: Metrological and technical requirements
- OIML R49-2:2013 - Water meters intended for the metering of cold potable water and hot water. Part 2: Test methods
- OIML R49-3:2013 - Water meters intended for the metering of cold potable water and hot water. Part 3: Test report format
- EN 14154-1:2005+A2:2011 - Water meters. Part 1: General requirements
- EN 14154-2:2005+A2:2011 - Water meters. Part 2: Installation and conditions of use
- EN 14154-3:2005+A2:2011 - Water meters. Part 3: Test methods and equipment
- EN ISO 4064-1:2017 - Water meters for cold potable water and hot water. Part 1: Metrological and technical requirements
- EN ISO 4064-2:2017 - Water meters for cold potable water and hot water. Part 2: Test methods
- EN ISO 4064-5:2017 - Water meters for cold potable water and how water. Part 5: Installation requirements
- EC type examination certificate no. SK 21-MI001-SMUU071
- Classification of environmental climate and mechanical conditions: Class B (ref. PN-ISO 4064-1:2014 E)
- Classification of mechanical environment conditions: Class M1 (ref. Polish Regulation Dz.U. 2007.3.27)
- Classification of electromagnetic environment conditions: Class E1 (ref. Polish Regulation Dz.U. 2007.3.27)

TECHNICAL DATA

Parameter					JS Master+ IP68/IP65			
					JS6,3-02* JS6,3-02-XX*** JS130-6,3-02* JS130-6,3-02-XX*** JS6,3-07**	JS10-G1 ¼-02* JS10-G1 ¼-02-XX*** JS130-10-G1 ¼-02* JS130-G1 ¼-02-XX*** JS10-G1 ¼-07**	JS10-02* JS10-02-XX*** JS130-10-02* JS130-10-02-XX*** JS10-07**	JS16-02* JS16-02-XX*** JS130-13-02* JS130-16-02-XX*** JS16-07**
Nominal diameter			DN	mm	25	25	32	40
Permanent flow rate			Q_3	m^3/h	6,3	10		16
Maximum flow rate			Q_4	m^3/h	7,875	12,5		20
Transitional flow rate	Cold water	H↑ R100 V,H →R50	Q_2	dm^3/h	101 202	160 320		256 512
	Hot water	H↑ R100 V,H →R40			126 252	200 400		320 640
Minimum flow rate	Cold water	H↑ R100 V,H →R50	Q_1	dm^3/h	63 126	100 200		160 320
	Hot water	H↑ R100 V,H →R40			79 158	125 250		200 400
Starting flow			-	dm^3/h	21	33		53
Q_2/Q_1 ratio			-	-	1,6			
Temperature class (rated operating temperature)			-	-	T30/T50/T130			
Flow profile sensitivity class			-	-	U0, D0			
Indicating range			-	m^3	99,999			
Reading resolution			-	m^3	0,00005			
Maximum pressure			P_{max}	MPa	1,6			
Maximum pressure loss			Δp	kPa	63			
Maximum permissible error range: $Q_2 \leq Q \leq Q_4$			ε	%	±2 for 0,1 to 30°C cold water ±3 for >30°C water			
Maximum permissible error range: $Q_1 \leq Q < Q_2$			ε	%	±5			
NK reed relay pulse transmitter			-	dm^3/ pulse	10 (standard pulse rate); 100			100 (standard pulse rate);10
Inlet and outlet pipe end threads			G	inch	G1¼	G1¼	G1½	G2
Height			h	mm	36			
			H	mm	115			
			H1	mm	123			
			H2	mm	200			
Length			L	mm	165****/ 260	260		300
			l	mm	380			440
Diameter			D	mm	111			
Weight (w/o connection fittings	W/o NK transmitter		-	kg	2,2	2,2		2,5
	With NK transmitter		-	kg	2,2	2,4		2,7

Versions:

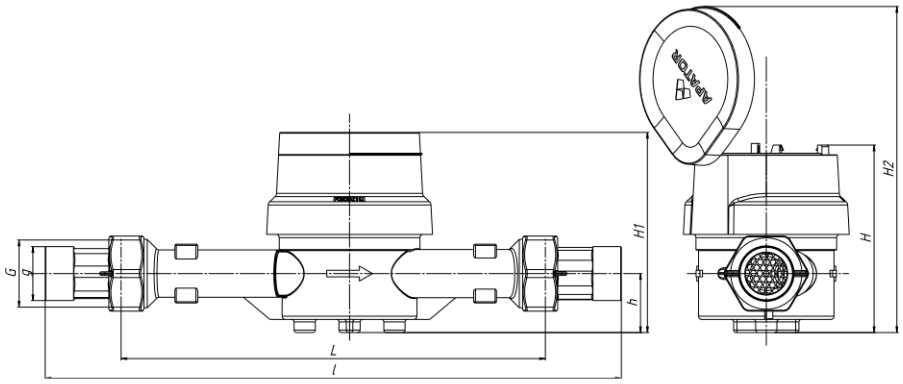
*Version -**02** - IP65 rated counter mechanism; supports readout with induction communication modules (Ti) and optical communication modules (IR)

Version -07** - IP68 rated counter mechanicm sealed with mineral glass enclousure with a copper guard; supports readout with induction communication modules (Ti)

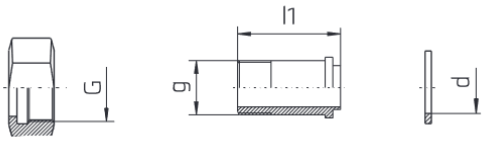
***Version **XX-NK** or NKP reed relay transmitter; supports reed relay pulse transmitters

****For cold water versions only

Dimensional drawing

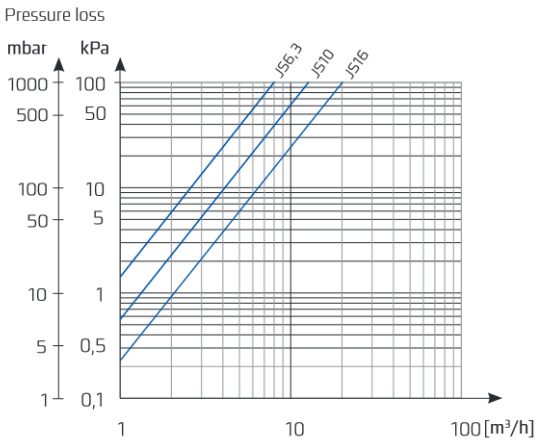


Connection fittings

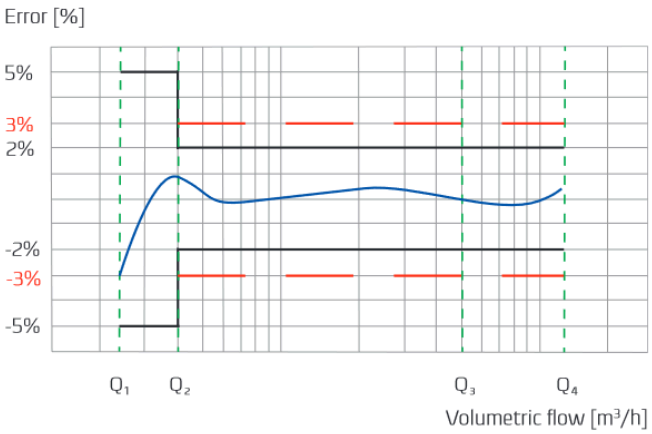


DN	G	g	d	l1
	inch	inch	mm	mm
25	1¼	1	29	46,5
32	1½	1¼	36	56
40	2	1½	43	66

Pressure loss chart



Typical error chart



Contacts

APATOR METRA s.r.o.
Havlíčkova 919/24
787 01 Šumperk
Czech Republic

Tel.: +420 583 718 261
E-mail: prodej@metra-su.cz
Web: www.metra-su.cz

Your distributor: