WATER MEASUREMENT

MASTER C_+

VANE-WHEEL SINGLE-JET WATER METER DN25, DN32, DN40

Master C_+ is a single-jet dry dial water meter for precise measuring of supplied water consumption. With the modern structural solutions, it is possible to mount a radio or reed contact to enable remote reading. With the latest anti fraud solutions, this water meter provides the best protection against strong magnetic field. The water meter is compliant with the MID Directive for the measurement range corresponding to the value of R=160 (formerly metrological class C).

APPLICATION

Water supply systems for cold water up to 30°C, or water up to 50°C and hot water up to 130°C for the family houses and, public buildings. The water meter structure allows for installing it in both horizontal position with counter set upwards (**H**) or sideways (**V**), and in vertical position (**V**). Rotating counter allows easy reading from the meter. As part of the measuring system, it allows to measure the water consumption in buildings.

APATOR

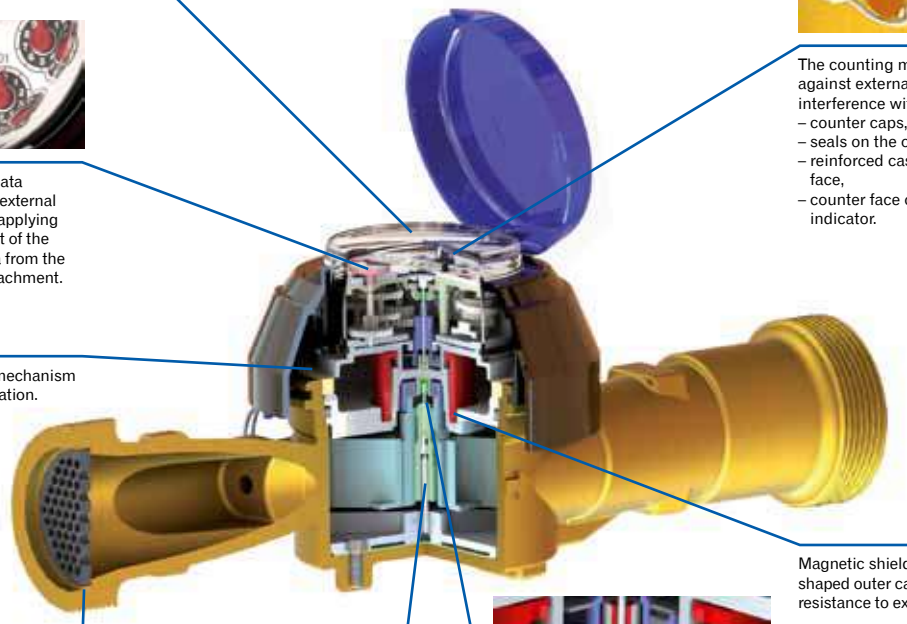
NEW MID R=160 formerly class C

master C+

The total resistance of the data transmission system to the external magnetic field obtained by applying the reflection pointer as part of the optical transmission of data from the water meter to the radio attachment.

Hermetic counter (with higher watertightness) resistant to fogging up.

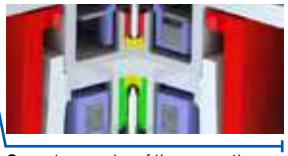
The counting mechanism is protected against external mechanical interference with:
– counter caps,
– seals on the outer casing,
– reinforced casing of the counter face,
– counter face casing squeeze indicator.



Rotation lock for counting mechanism to prevent from multiple rotation.

Magnetic shielding and specially shaped outer casing to provide high resistance to external magnetic fields.

Strainer on the water meter inlet to protect against pollutants getting into the measuring device.



Double-side rotor bearing to ensure stable operation and use during the inter-verification period.

Correct geometry of the magnetic coupling system and application of multi-field magnets to give very high resistance to breaking the coupling.

ADVANTAGES

ECONOMY:

- accurate measurement determined by the R160 – H coefficient (formerly class C)
- protection against:
  - strong magnetic field interference (magnetic shielding)
  - mechanical interference (squeeze indicator)
  - multiple counter rotation prevention

COMFORT OF USE:

- remote radio readings possibility
- easy to read with
  - any counter setting within 360°
  - hermetic counter resistant to fogging up
- reading possible with the use of the reed transmitter

RELIABILITY:

- proven and strong construction
- long service life achieved through the use of modern materials:
  - with high resistance to wear (bearings and plugs)
  - with surface structure minimizing flow resistance (rotor, seal plate)
- strainer on the inlet nozzle (measuring device protection)

SPECIAL FEATURES

- alarms signalling – water meter fitted with a radio attachment can signal, for instance, removing or breaking the attachment, attachment operation interference, reverse flow, leaks, etc.
- design of the inlet channel stabilizes the flow rate
- double-side rotor bearing
- external control system

JS Master C+
for cold water

JS Master C+
for hot water

JS Master C+
for remote radio reading

In a standard version the JS Master C+ water meter is designed for mounting a radio attachment to enable radio data reading from the mobile terminal or the fix system.

COMPLIANCE WITH STANDARDS AND REGULATIONS

- Directive 2004/22/EC of the European Parliament and European Council of 31 March 2004 on measuring instruments,
- PN-EN-14154 :2011 – Water meters. Part 1 ÷ 3,
- OIML R49 :2004 and 2006 – Water meters intended for the measurement of volumes of clean, cold or heated water
- EC-type examination certificate – cold and hot water no. TCM 142/11-4832
- Classification of environmental, climatic and mechanical conditions – class B – acc. to PN-EN-14154-3:2005:A1.
- Classification of environmental mechanical conditions – class MI – acc. to RMG of 18 December 2006.
- Classification of environmental electromagnetic conditions – class E1 – acc. to RMG of 18 December 2006.

All materials used to manufacture the JS Master C+ water meter have appropriate Hygienic Certificates allowing the product to come into contact with drinking water.

SAMPLE ORDER:

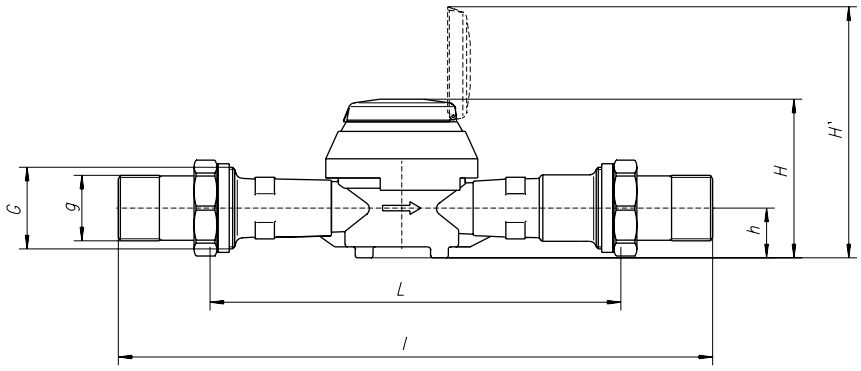
Water meter for:
- cold water – JS Master C+ 6,3 water meter
  – JS Master C+ 6,3-NK water meter (25 dm³/pulse)
- hot water – JS130 Master C+ 6,3 water meter

At additional request we supply:
- water meter connectors

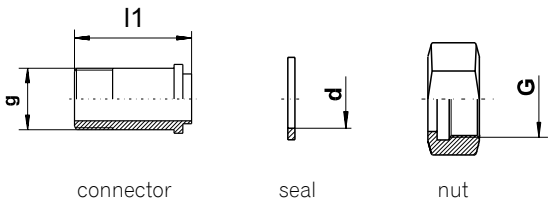
Table 1. TECHNICAL DATA

Parameter					Master C_+			
					JS6,3 JS6,3-XX* JS130-6,3 JS130-6,3-XX*	JS10-G1¼ JS10-G1¼-XX* JS130-10-G1¼ JS130-10-G1¼-XX*	JS10- JS10-XX* JS130-10 JS130-10-XX*	JS16- JS16-XX* JS130-16 JS130-16-XX*
Nominal diameter			DN	mm	25	25	32	40
Continuous flow rate			Q_3	m^3/h	6,3	10		16
Maximum flow rate			Q_4	m^3/h	7,875	12,5		20
Intermediate flow rate	for cold water	H R160** V R63	Q_2	dm^3/h	63 160	100 254		160 406
	for hot water	H R80 V R40			126 252	200 400		320 640
Minimum flow rate	for cold water	H R160** V R63	Q_1	dm^3/h	40 100	63 160		100 254
	for hot water	H R80 V R40			78,8 157,5	125 250		200 400
Starting value			–	dm^3/h	13	21		33
Q_2/Q_1 ratio			–	–	1,6			
Temperature class (nominal operating temperature)			–	–	T30 / T50 / T130***			
Flow profile resistance classes			–	–	U0, D0			
Indications range			–	m^3	99 999			
Indications precision			–	m^3	0,00005			
Maximum pressure			P_{max}	MPa	1,6			
Maximum pressure loss			Δp	kPa	63			
Permissible limiting error within: $Q_2 \le Q \le Q_4$			ε	%	± 2 for cold water with the temperature of ≤30°C ± 3 for hot water with the temperature of >30°C			
Permissible limiting error within: $Q_1 \le Q < Q_2$			ε	%	± 5			
NK pulse reed transmitter			–	dm^3/ imp	10 (standard pulsing); 2,5; 25; 100; 250; 1000			100 (standard pulsing) 2,5; 10; 25; 250; 1000
Dimension			G	inch	G1¼	G1¼	G1½	G2
			h	mm	36			
			H	mm	120			
			H'	mm	185			
			L	mm	165***/ 190***/ 260	165***/260		300
			l	mm	380			440
			D	mm	111			
Weight (without connection elements)	Without the transmitter		–	kg	2,0	2,2		2,5
	With the NK transmitter		–	kg	2,2	2,4		2,7

* Version: NK reed transmitter or NKP preequipment of water meter for the reed transmitter
** At special request in the R200 version
*** Only in the R80 version

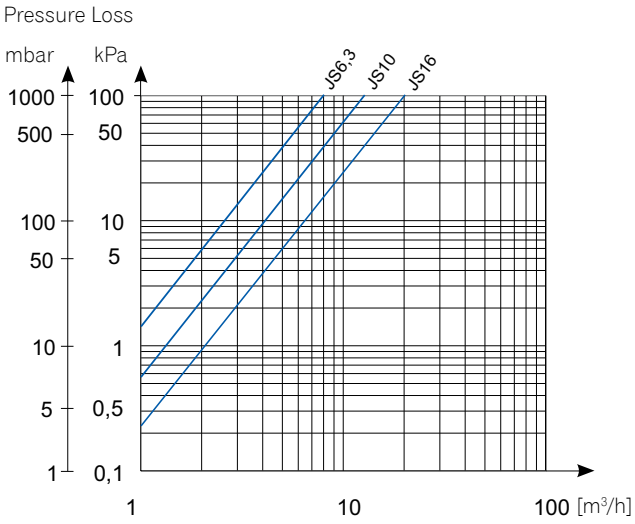


CONNECTION ELEMENTS

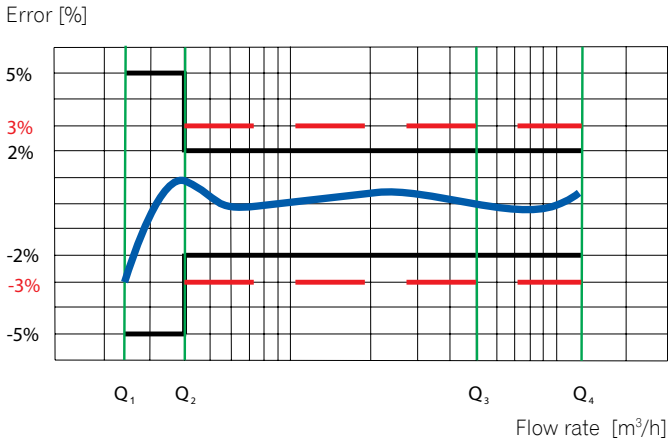


DN	G	g	d	l1
25	1¼"	1"	29	60
32	1½"	1¼"	36	60
40	2"	1½"	43	70

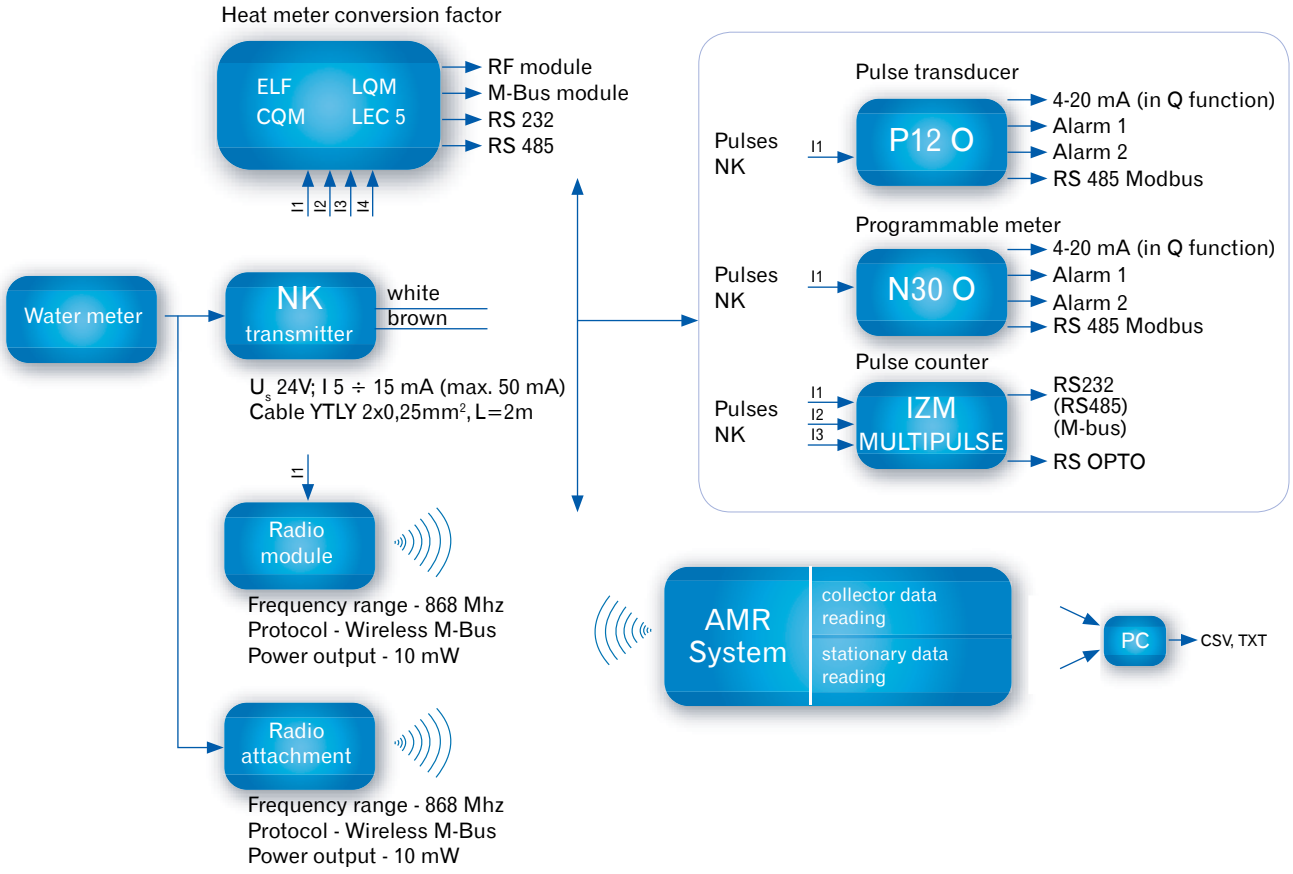
PRESSURE LOSS CHART



TYPICAL ERROR CHART



REMOTE READING TRANSMISSION, FLOW RATE, MEASUREMENT



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