

Application

Single jet dry type water meter. For the consumption measurement of cold and hot drinking water or service water.

Features

For horizontal and vertical installation . Accuracy class 2 8-digit register and modulator disc (1 l/pulse), as a basis for remote reading by radio wM-Bus, Register rotatable 355 °. With option for integration of radio module Wireless M-Bus (868 MHz) for remote reading and alarms of the meter in mobile mode (walk-by/drive by).



Working conditions

Maximum admissible temperature: 0.1~ 50 for cold water meter

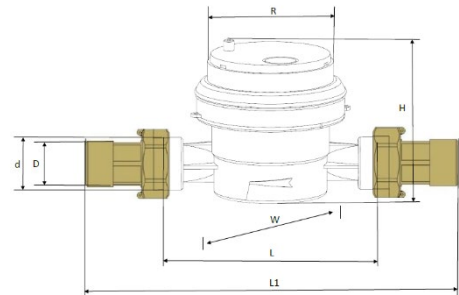
Maximum admissible temperature: 0.1~90 for hot water meter

Maximum admissible working pressure: 1.6 MPa

Special features

Model SJ-CHW meter is a single jet, dry type, straight reading meter for hot/ cold water. It has the advantages of the big capacity, easy reading, reliable operation, antimagnetic construction and without condensation problem etc.

Size	DN 15	DN20
L	110	130
L1	195	215
aprox.		
H	78	78
W	84.5	84.5
D	R 3/4"	R 1"
d	R 1/2"	R 3/4"
R	Ø 65	Ø 65



Working principle

The potable water enters the meter from the inlet of the meter and is distributed by the lower orifices, the single jet distributed strike the vane wheel at the tip of the vane blades to make it rotation. The measured water by the vane wheel flows out from the top orifices. The rotation of the vane wheel (proportional to the velocity of the water flow) is transmitted directly to the clockwork by magnetic drive, the clockwork totalizes the rotation of the vane wheel and indicates the water volume passing through the water.

Structure

The single jet water meter type SJ-CHW are designed to measure, memories and display the volume at metering conditions of water passing through the measurement transducer in the sense of the Directive of European Parliament and of the Council no. 2014/32/EU of measuring instruments , as The water meters' type SJ-CHW are single jet rotary vane wheel water meters with dry mechanical indicating device. The water meter type SJ-CHW consist of brass body with connecting threads and inlet strainer, a button plate, stainless steel shaft, a rotary vane wheel with magnetic holder and stainless steel shaft, a plastic gasket, a rubber O-ring, a pressure plate with agate bearing, a brass, steel or plastic inner head ring, two antimagnetic protection rings (optional), a dry or super dry mechanical indicating device, closing ring with plastic cover (optional) or plastic clamp on cover.

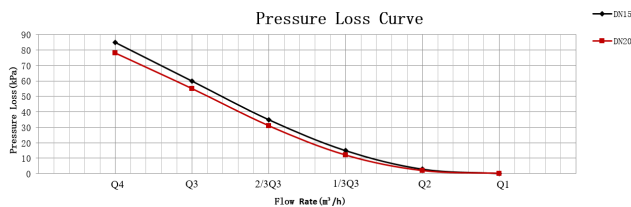
Type of the mechanical indicating device - with 8 drums and 1 pointer . These calculators can be designated for inclined reading. These is black star wheel with 6 arms, which can be used for rapid testing.

TECHNICAL DATA

Nominal diameter	DN	mm	15	20
Thread meter	-	inch	1/2"	3/4"
Thread connector G x B	-	inch	3/4"	1"
Overall length	-	mm	110	130
Permanent flowrate	Q_3	m^3/h	2.5	4.0
Ratio	Q_3/Q_1	R	80H/50V	80H/50V
Accuracy class	Class	-	2	2
Min. flowrate	Q_1	l/h	H 31 V 50	H 50 V 80
Transitional flowrate	Q_2	l/h	H 50 V 80	H 80 V 128
Overload flowrate	Q_4	m^3/h	H 3.13 / V 3.13	H 5.00 / V 5.00
Display range	-	m^3	99,999.999	99,999.999
Temperature range	Cold water	°C	0.1-50	0.1-50
	Hot water		0.1-90	0.1-90
Operating pressure	MAP	bar		16
Pulse value	-	l/pulse		1
Pressure loss class at Q	Δp	bar		0.63
Flow profile sensitivity	-	-		U0/D0
Width approx.	B	mm		60
Height approx.	H1	mm		65
Weight approx.	-	kg	0.450	0.520

Max. Permission Error (for T30) The exactitude zone cannot be over $\pm 5\%$ The precision zone cannot be over $\pm 2\%$

Max. Permission Error (for T90) The exactitude zone cannot be over $\pm 5\%$ The precision zone cannot be over $\pm 3\%$



- a. In the lower zone ($Q_1 \leq Q < Q_2$): maximum permission error is $\pm 5\%$
b. In the upper zone ($Q_3 \leq Q \leq Q_4$): maximum permission error is $\pm 2\%$ ($T \leq 30^\circ C$), maximum permission error is $\pm 3\%$ ($30^\circ C < T \leq 90^\circ C$)

Wireless m-bus Module for Single jet water meter SJ-CHW

Application:

Wireless M-bus module ECMv1 is suitable for mounting on THS series water meters, model SJ-CHW. The module allows transmission of the consumption data via Wireless M-bus standard.

Stored data

- current accumulated reading and old readings for 12 months
- water meter serial number
- Metered consumable: cold or hot water
- current date and time
- data transmission period on air
- encryption key AES-128, Mode 5
- manipulation protection: date of last manipulation, and total number of manipulation attempts
- total hours of operation and start date
- firmware version, error codes

Programmable data

The following can be set using **ThermoSet**® software parameters:

- serial number of the water meter (8 digits) and measured consumable
- current date and time
- initial reading of the total counter
- transmission interval
- individual AES-128 key
- encryption on or off

Technical data

Basic data

Constant flow (MID) : Q_3 2.5m³ /h - 6.3m³ /h³
Nominal flow (EWW) : Q_n 1.5m³ /h - 3.5m³ /h³
Pulse constant: l/pulse (1 l = 1 resolution)
Operating temperature 5C° to 55 C°
Storage temperature: -20C° to +70C°
Protection class: IP65

Radio interface data

Frequency: 868.95 MHz
Communication: one-way, M-bus protocol
Encryption: AES-128, Mode 5 or Mode 7
Transmission standard: EN 13757-4, T1/C1 mode
Transmission interval: 10 - 120 s, step 10s
Period of transmission: 24/7



Function:

Radio module ECM v1 detects the rotation of a metal disk on the water meter by optical (v1) or inductive path (v2). The metal disc is rotates proportional to the water passing through, ECMv1 registers and records the number of rotations made, which corresponding to a specific amount of water passed. The ECMv1 can also determine the direction of opposite rotation, which means that water meters installed in the opposite direction are easily detected. The data is transmitted via Wireless m-bus protocol, T1 or C mode. The meter runs on a battery designed for 12+ years of operation, without no matter what the allowed transmission interval will be set to. Supports encrypted transmission, with individual key. Setting the transmission period, initial data, encryption etc. is performed by means of an optical head and a dedicated THS ThermoStyle software. The software has versions for Windows OS and Android OS. Version 2 will offer other setup/installation options.

Compliance



Acc. To RED 2014/53/EU

Memory type

FRAM - real-time recording

Electrical parameters

Power supply: lithium battery metal type, 3.6Vdc
Battery life : 12+1 years maximum

Optical interface

Protocol: EN 60870-5
Interface speed: 2400bps or 4800bps

