# SIEMENS



SIEMECA™

# Electronic Water Meters in measuring cell design

# WMC... WMH...

Electronic, mains-independent meters to acquire water consumption in autonomous domestic water plants.

Storage and display of the cumulated consumption values on a selectable set day.

Available as multi-jet meters in «combined» all-in-one or split version Nominal flow rates of multi-jet meters 1.5 m<sup>3</sup>/h.

The electronic Siemeca water meter is a component of the Siemeca AMR System and Siemeca M-Bus Metering.

### Use

The electronic Siemeca water meters are used for measuring water consumption. Their major field of use are central domestic water plants, where water is delivered individually to several consumers.

Plants of this type are used in buildings such as

- multi-family houses
- office and administrative buildings

Typical users are:

- Private building owners
- Property associations
- Building maintenance companies
- Housing estate agents

- Acquisition of water consumption
- Cumulation of the consumption values
- Storage of the cumulated consumption values on the set day
- Display of the consumption values
- Display of the key operational data
- Self-supervision, with fault indication
- Data transmission via M-bus or radio

#### Type summary

# List of electronic multi jet cold water meters (Max. water temperature: 30 °C)

Nominal flow rate q <sub>n</sub>	Communication	Type reference **
1,5 m³/h	via M-bus *	WMC21.D
1,5 m³/h	via radio 868 MHz	WMC26.D

\* Prepared for communication via M-bus

\*\* Short-form

# List of electronic single jet cold water meters (Max. water temperature: 90 °C)

Nominal flow rate q <sub>n</sub>	Communication	Type reference **
1,5 m³/h	via M-bus *	WMH21.D
1,5 m³/h	via radio 868 MHz	WMH26.D

\* Prepared for communication via M-bus

\*\* Short-form

## List of accessories

Accessory	Description, scope of delivery	Type reference
Meter body (EAT)	Meter body 1/2" external thread, 15mm solder, overall length 110mm	WME.L15/H
15mm solder		
Meter body (EAT)	Meter body ¾" external thread, 18mm solder, overall length 110mm	WME.L18/H
18mm solder		
Meter body (EAT)	Meter body without external thread, 22mm solder, overall length 130mm	WME.L22/H
22mm solder		
Meter body (EAT)	Meter body ¾" internal thread, overall length 80mm	WME.G20/H
80mm		
Adapter	Adapter for heat meter measuring cell, adaptable to meter body EAS	WME.DE
	and meter body VAS 2"	
Covering plate IV	Chromium-plated	WFZ.B4
M-bus connection kit	1 plug with cable (1 m long;1 adhesive label)	WFZ.MBUSSET

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	<ul> <li>When ordering, please give type reference according to «Type summary».</li> <li>The electronic Siemeca water meter comes standard with an M-bus output. If the water meter is connected to a Siemeca M-Bus Metering System, the M-bus connection kit is required.</li> <li>If a set day other than 31 December is required, the desired month is to be added to the type reference when ordering (normally, the last day of the month is the set day).</li> <li>Ordering example for a water meter, 110 mm mounting length, set day 30 April: WMC21.D, set day: April</li> </ul>
Technical design	
Measurement principle	The meter operates on the multi-beam measuring principle. Rotation of the impeller is sensed electronically without a magnetic field.
Storage of consump- tion values	The water energy consumption values are continuously cumulated. At 23.59 hours of the next set day, the actual meter reading will be stored.
	The set day is factory-set, the standard setting being 31 December (also refer to «Or-
	dering»). At the same time the annual consumption values are stored, the meter calculates a verification code. Tenants who make their own reading need to give this code to the billing centre, along with the set day reading. This enables the billing centre to verify the reading.
	The stored set day value will be retained for one year.
Display	The water meter has three display levels which show the following values and vari- ables:
	<ul> <li>Cumulated water consumption since the last set day</li> <li>Segment test</li> <li>Actual flow rate</li> </ul>
	<ul> <li>Meter's number of operating hours since it was first installed</li> <li>Set day and set month</li> </ul>
	<ul> <li>Stored water consumption of previous year</li> </ul>
	Stored water consumption of the last 13 month
	Verification code
	Cumulated water consumption since the meter was first installed
	• Indication of radius (also refer to section below) The units displayed are $m^3 m^3/h$ and hours
	Standard display is the cumulated water consumption.
Fault status signals	The meter monitors itself and can display faults it has detected. It differentiates be- tween two categories of faults.
	<ul> <li>Temporary faults: they have no impact on the correct functioning of the meter. A arrow is flashing under the field "Fehler" ("Error").</li> </ul>
	<ul> <li>Severe functional faults: the measurements have been stopped. In that case, the display alternates between error code and date the fault occurred the first time. The values that have been cumulated until the fault first occurred remain stored.</li> </ul>
Mechanical design	
	The water meter is comprised of flow measuring section and the electronic unit. The flow measuring section is installed in the single-duct connector located in the pipe. It is made of brass and contains the multi-beam measuring chamber with the flow meter. The water intake contains a filter to trap larger dirt particles.

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The meter is supplied as a compact all-in-one unit, but the electronic unit can be detached if required (split version).

**Electronic display unit** The electronic display unit houses the electronics and the eight-digit LCD. The operating voltage of DC 3 V is supplied by a lithium battery. Below the display, there is a button for advancing the display.

The electronic display unit on the flow measuring section can be swiveled through 270° and tilted by  $90^{\circ}$ .

## Sizing



### Mounting notes

- The local regulations for the use of water meters (mounting, sealing, operation, etc.) must be complied with
- To facilitate readout and service work, the meter should be easily accessible
- If the system is first used when it is commissioned, the single-duct connector with gasket and sealing cap can be installed beforehand.
- Before fitting the meter, the pipe must be thoroughly rinsed; the single-duct connector must be mounted for this.
- When installing the single-duct connector, the flow sign an arrow on the single-duct connector must be followed.
- The electronic display unit can be mounted away from the flow measuring section (split version). If the hole in the wall is too large for the display unit, it can be mounted with the help of the mounting cover. If required, a chromium-plated covering plate can be used
- The display unit should be located such that it is easy to read
- After mounting, the required test pressure must be applied to the plant
- The display unit and the fittings must be sealed to ensure protection against tampering.

If required, the M-bus service interface must also be sealed

### **Operating notes**

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• For recalibration, the local regulations must be observed.

Siemens Building Technologies Electronic Water Meters HVAC Products

Measurement accuracy class	
(DIN ISO 4064/1)	
horizontal	В
vertical	В
Unit	m <sup>3</sup>
Flow rates	<u>1.5 m³/h</u>
Min. flow rate Q <sub>min</sub> H / V	30 l/h
Lower limit of flow rate Qt	120 l/h
Nominal flow rate Q <sub>nenn</sub>	1500 l/h
Max. flow rate Q <sub>max</sub>	3000 l/h
Starting flow, horizontal	5 l/h
Max. perm operating pressure	10 bar
Range of use of flow measuring section	1 90 °C
Output signal	
under measuring conditions	optional M-bus (EN 1434)
in test mode	optional M-bus (EN 1434)
	optional voltage pulses (DC 3 V)
Behavior in the event of excessive flow	
flow rate = 2 q <sub>max</sub>	linear
flow rate > 2 $q_{max}$	constant
Perm. ambient temperature	
transport und storage	555 °C
operation	max. 55 °C
Degree of protection	IP 54
Battery life	>8 years (>7 years for units with radio-
	based data transmission)
Connection sizes and weights	
Pipe connection	Meter body (EAT)
Overall length	110mm
Weight	0.51 ka

# Dimensions



This data sheet contains only general descriptions for e.g. capability characteristics and other. In certain cases these characteristics could vary. Therefore it's absolutely essential to define the necessary details before signing the contract.

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