

SM250

SmartMeter™

Intelligent Water Meters

SmartMeter™ water meters address the global need for economic smart metering technology. Solid state water meters provide accurate measurement of water flows throughout the entire product lifetime, by the employment of fluidic oscillation technology.

With no moving parts, SmartMeter is not negatively affected by the wear and subsequent inaccuracy problems that are caused by sand and grit.

The unique air detection system prevents measurement of air flow, which can occur at high points in the water network and at the start of water delivery. SmartMeter's advanced sensing technology delivers extended operational life with long term accuracy and replaceable battery options.

SmartMeters are available in a fully AMR enabled format using inductive pads, radio communications device or any form of automatic meter reading technology (AMR device) connecting to the direct read interface through the encoded or pulse meter application.



SmartMeter Technology

Features

- Uses fluidic oscillation technology
- Clear LCD display and / or advanced communication technology versions available.

Extended Data Features

- Tamper / fraud / leakage detection
- Air event monitoring
- Continuous flow / no flow monitoring
- Meter diagnostics
- High resolution measurement by volumetric unit / decimal point position
- Programmable serial number

Benefits

- Unaffected by grit or particulates
- Does not measure air
- Retains accuracy throughout its entire lifetime
- Outlasts more conventional meters
- Economically brings smart technology benefits to metering systems

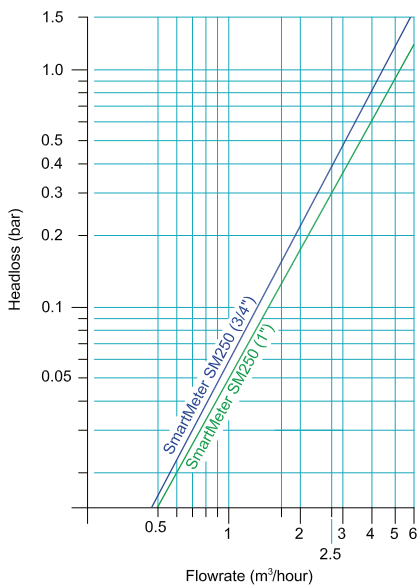
Approvals

- UK Pattern approval
- Australian Pattern approval pending
- OIML R49 approval
- Potable water materials WRAS listed
- ISO:9001 manufacturing certification
- ISO:14001 environmental compliance certification

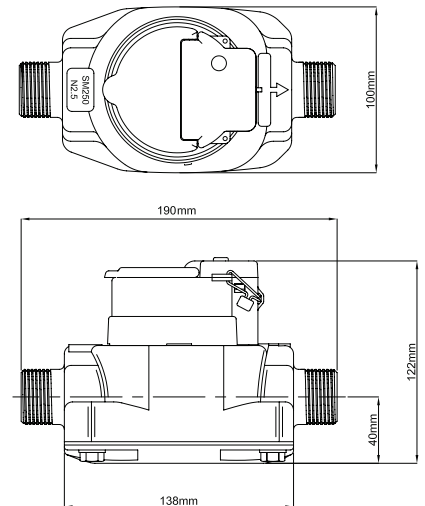
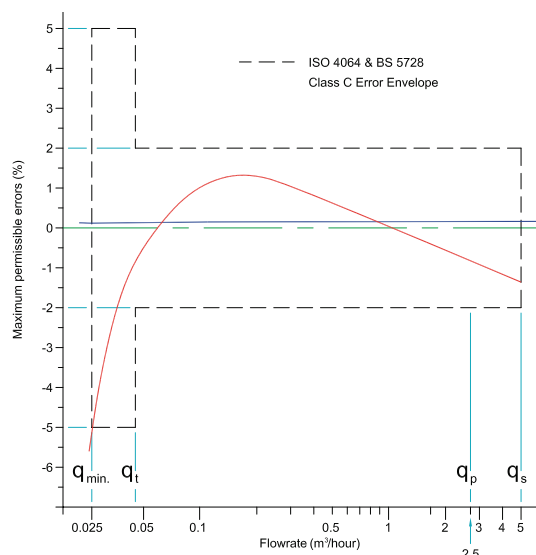


Technical Specification

Head Loss Curve



Meter Accuracy



Technical Specification

Model	Thread size	Distance across threads	Weight	Ingress protection	Ambient temp	Max water temp	Display resolution	Max display	Display orientation	Battery Life
SM250E, SM250P	1GB	190 +0/-2mm	1.9 kg	IP68	-10°C to 85°C	50°C	0.00001m ³ to 1m ³	9,999 or 99,999 option	90° to flow direction (viewed from inlet)	>10 years *
SM250E, SM250P	G3/4B	190 +0/-2mm	1.9 kg	IP68	-10°C to 85°C	50°C	0.00001m ³ to 1m ³	9,999 or 99,999 option	90° to flow direction (viewed from inlet)	>10 years *

A number of options are available for different variations of LCD resolution, pulse output rates and encoded output. All models are available in Class C or Class D versions.
* replaceable battery

Performance Data SM250E/P - OIML R49 / ISO 4064-1:2005 / BS EN 14154-1				
	SM250E/P - G ³ / ₄ B		SM250E/P - G1B	
Q ₃ /Q ₁ (ratio)	160	200	160	200
Q ₄ (m ³ /h)	5.0	5.0	5.0	5.0
Q ₃ (m ³ /h)	4.0	4.0	4.0	4.0
Q ₂ (l/h)	40	32	40	32
Q ₁ (l/h)	25	20	25	20
Typical Pressure Loss at Q ₃ (bar)	<0.65	<0.65	<0.65	<0.65
Pressure rating (working)	10 bar		10 bar	
Pressure rating (max)	16 bar		16 bar	

Performance Data SM250 - All Models	SM250 Class C 1" Thread	SM250 Class D 1" Thread	SM250 Class C 3/4" Thread	SM250 Class D 3/4" Thread
q _{min} Minimum flowrate (l/h) ± 5%	25	18.75	25	18.75
q _t Transitional flowrate (l/h) ± 2%	37.5	28.75	37.5	28.75
q _p Permanent flowrate (m ³ / h) ± 2%	2.5	2.5	2.5	2.5
q _s Overload flowrate (m ³ / h) ± 2%	5.0	5.0	5.0	5.0
Pressure loss at q _s	<1 bar	<1 bar	<1.2 bar	<1 bar
Pressure rating (working)	10 bar	10 bar	10 bar	10 bar
Pressure rating (max)	16 bar	16 bar	16 bar	16 bar

Model	Meter Reading
SM250E	Encoded output
SM250P	Pulse output

Elster is one of the world's largest electricity, gas and water measurement and control providers. Our offerings include distribution monitoring and control, advanced smart metering, demand response, networking and software solutions, and numerous related communications and services – key components for enabling consumer choice, operational efficiency and conservation. Our products and solutions are widely used by utilities in the traditional and emerging Smart Grid markets.

Elster has one of the most extensive installed revenue measurement bases in the world, with more than 200 million metering devices deployed over the course of the last 10 years. It sells its products and services in more than 130 countries across electricity, gas, water and multi-utility applications for residential, commercial and industrial, and transmission and distribution applications.

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