Pietro Fiorentini

H2-SSM

The **H2-SSM** smart meter by Pietro Fiorentini incorporates the latest ultrasonic measurement technology to measure both natural gases and 100% hydrogen, switching between gases without any additional interaction. Built with a valve inside the meter which can act as Excess Flow Valve to enhance customers and network safety. This device is used for residential applications on low pressure gas distribution networks.

Residential users

Features	Values
Measurement Range (Qmin - Qmax)	Natural gas: from 0.040 to 6 m^3/h | Hydrogen: from 0.130 to 20 m^3/h Natural gas: from 1.4 to 212 cfh | Hydrogen: from 4.6 to 706 cfh
Minimum Flow rate (Qstart)	Natural gas: 0.01 m^3/h | Hydrogen: 0.033 m^3/h Natural gas: 0.35 cfh | Hydrogen: 1.16 cfh
Maximum Operating Pressure*	up to 12.5 kPa up to 125 mbar
Ambient temperature*	from -25 °C to 55 °C from -13 °F to 131 °F
Gas temperature range*	from -25 °C to 55 °C from -13 °F to 131 °F
Accuracy	Class 1.5
Ingress protection	Compliant to IP65
Power supplies and operating lifetime	Lithium batteries 15 years for metrological battery (non-replaceable) Up to 15 years for communication battery (replaceable)
Remote communication interface	Zigbee 2.4 GHz and 868 MHz
ATEX classification	II 3G Ex ic IIC T3 Gc
Gas volume compensation	Temperature compensated (TC)
Nominal dimensions	Connection distance – 6” (152,4mm) Width 241.6 mm; Height 263.8 mm; Depth 146.8 mm
Connections	1” BS 746

(*) REMARK: Different functional features and/or extended temperature ranges available on request. Stated temperature ranges are the maximum for which the equipment’s full performance, including accuracy, are fulfilled. Standard product may have a narrower range.

Table 1 Features

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Materials and **Approvals**

Part	Material
Body	Metal
Electronic enclosure	Plastic polycarbonate
REMARK: The materials indicated above refer to the standard models. Different materials can be provided according to specific needs.	

Table 2 Materials

The H2-SSM is designed to meet OIML R137, EN 14236, SMETS2.
The product is certified according to CPA, European Directive 2014/34/EU (ATEX), European Directive 2014/32/EU (MID) and UKCA.

OIML R137 | EN 14236 | SMETS2*** | CPA** | ATEX | MID* | UKCA*

(*) at present time under certification
(**) planned for 2023
(***) under development

H2-SSM competitive advantages

- H_2 | CH_4 Natural gas and 100% Hydrogen compatibility
- Switching between gases without any additional interaction
- Temperature monitoring sensor
- EFV In built Excess Flow Valve function
- Valve for prepayment function
- 3 front keys (users interface)
- 15 years metrological battery
- Up to 15 years communication battery life
- Dual band: 2.4 GHz and 868 MHz

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