



Gas volume Converter Connected and ATEX

SM@RT FLOW



Flow computers

Measuring systems

Remote Terminal Unit

Supervisory system

The SM@RT FLOW is a connected volume converter for custody transfer metering of all types of gas for the use in hazardous area and isolated site.
The SM@RT FLOW can be equipped with its internal modem and integrated in an instrumented box with manifold.

An exceptional autonomy

Thanks to its «ultra-low power» concept, the SM@RT FLOW allows exceptional use for more than 10 years.

Connected to MyMECI Cloud

The connected SM@RT FLOW offers an all in one solution for metering and remote operation.
Thanks to its internal modem, it can ensure secure retransmission.



Technical data - Gas volume converter

Model		SM@RT FLOW		
Applications		Pure, natural gas, biogas, biomethane, LNG and other fluids Delivery station, stand, production station, Isolated station, Post Biomethane		
Functions		Acquisition of measurements, calculation of base volume, mass and energy, management of alarms Monitoring of analog and digital I / O, states, secure recording Communication with PLC and supervision, remote and wireless server		
Metrology	Meter	Any type of low-frequency counter BF (10 Hz) (turbine, rotary piston, ultrasonic ...)		
	Gas quality	Fixed or by serial link		
	Calculations	Calculation of the compressibility factor: Z Table, ISO12213-3 2009 (or SGERG-88), AGA8 GR1, GR2, DC 1992, ISO12213-2 2009, AGA NX19 BRKORR 1962, Density, Zb, SCV, Relative density by ISO6976: 2016 Conversion of reference conditions ISO13443		
Equipment	User interface	LCD alphanumeric display 2 lines of 16 characters Customizable dedicated menus, 2-key keypad for navigation Bluetooth connection LE 4.0 for wireless operation		
	Enclosure	Dimensions L x W x H: 202 x 186 x 90mm (including antenna and cable glands) Material: Polycarbonate, Weight: 900g		
	Lights	2 LEDs Used for start-up and diagnostics of Bluetooth and GSM / GPRS communications Dedicated pressure sensor: ¼ " male gas		
	Connection	Removable screw terminal blocks		
Inputs/Outputs		Number	Accuracy to reference conditions	
	Low frequency metering	Potential dry contact Maximum Frequency: 10 Hz	1	Flow < 1% : typical 0.06%
	Pressure, metrological range	Dedicated digital pressure sensors: 0.9-4 / 2-10 / 4-30 / 20-100 bar abs. 50 mbar / 500 mbar / 10/30 bar relative	2	<0.2%
	Temperature, metrological range	Inputs Class A PT100, 24-bit resolution, -40°C / 70°C	2	<0.03%
	Digital inputs	Inputs to monitor a STATE or Dry contact for measuring flow	2	<1%
		Intrusion or Meter alarm	1	-
	Pulse output or Analog output	For copying of digital data (volumes) Open Collector Type For copying of flow, pressure, temperature ... PWM type	2 1	- -
Communication		1 integrated modem GSM / GPRS / 3G / ... 4 band multi-slot class 10. Internal or remote antenna 1 Bluetooth link 4.0 Low Energy dedicated to local operation 1 RS485 dedicated to communication with Modbus master device (SM@RT U, others.)		
Memorizing	On saved RAM			
	Monthly registration	36 months		
	Daily recording	6 months		
	Event log	8000		
	Programmable recording	Sampling table, according to configuration		
	Programmable archive	8640		
	Hourly Recording	6 months		
Hourly and daily time averages	Pressure; Temperature; Z; C; SCV			
Languages		French, English, on request for other languages		
Operating conditions	Temperature	-25°C to + 65°C (operation) / - 25°C to + 65°C (storage) Below -20°C, the readability of the display is not guaranteed		
	Relative humidity	< 95% without condensation		
Installation	ATEX certification IECEX	ⒺII 2 G Ex ib IIB T3 Gb	LCIE 16 ATEX 3061 X IECEX LCIE 16.0047X	
	Protection class	IP 66, IP20 (open enclosure), IK08		
Power supply		Single internal battery with an autonomy of more than 10 years IS external long battery pack (L x W x H: 191x125x90mm) External power supply 24V DC installed in safe area		
Custody transfer approval		2014/32/UE (MID); NF EN 12405-1+A2 ; NF EN 12405-2 ; OIML R140 ; Guide Welmec 7.2		

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