

FlowPulse

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FLOWPULSE INDUCTIVE SENSOR

The FlowPulse and FlowPulse M-Bus are electronic inductive sensors for detecting water consumption. They mount onto Maddalena positive displacement water meters.

The FlowPulse has a 5-wire cable and is designed for transmitting data to a remote digital input reading unit.

The FlowPulse M-Bus has 2-wire cable and is designed for transmitting data to a standard M-Bus master (EN 13757).

The FlowPulse is equipped with inductive sensors designed for detecting and counting the revolutions of the meter's pointer. The sweep hand is made of a conductive material especially designed for signal dumping.

The device detects the flow direction and is unaffected by vibrations, thus ensuring that the electronic and mechanical reading match.

The use of the inductive sensors combined with a microprocessor enable detection of sensor removal.

The FlowPulse is also insensitive to magnetic fields.

TECHNICAL FEATURES

TYPE	Microprocessor, inductive sensor	
POWER SUPPLY	3 V, lithium battery	
BATTERY SERVICE LIFE	12 years (average battery service life under standard conditions, not guaranteed). Average battery service life:	
	Temperature	% of service life
	-15 °C to 0 °C	10%
	0 °C to +30 °C	80%
	+31 °C to +55 °C	10%
MAX. PULSE FREQUENCY	10 Hz	
CERTIFICATES/APPROVALS	CE in compliance with the European Directive on Electromagnetic Compatibility (EMC)	
ENVIRONMENTAL CONDITIONS	Working temperature: -10 °C ÷ 55 °C Storage temperature: -20 °C ÷ 70 °C	
ENVIRONMENTAL CLASS	C	
ELECTROMAGNETIC CLASS	E2	
PROTECTION CLASS	IP68	

OUTPUTS

FLOWPULSE (5 WIRES)	DIGITAL OUTPUTS	5 wires: <ul style="list-style-type: none"> • Pulse output • Flow direction • Fraud • Ground • Forward pulse counter
	MAX PULSE FREQUENCY	10 Hz
	OUTPUT TYPE	NPN open collector
		30 Vdc
		50 mAdc
PULSE DURATION	With flow > 4 pulses/sec: 50% period With flow ≤ 4 pulses/sec: 125 ms	
CALBLE LENGTH	2 m	
FLOWPULSE M-BUS (2 WIRES)	M-BUS OUTPUT	2 wires (EN 13757): <ul style="list-style-type: none"> • M-Bus • M-Bus
	PULSE FACTOR	0.1, 1, 10, 100 depending on the meter size
	CALBLE LENGTH	2 m

CABLE CONECTIONS

FLOWPULSE (5 wires)

Wire	Signal	Description
WHITE	Pulse output	Pulse signal both with forward and return flow
YELLOW	Flow direction	Closed contact = return flow
GREEN	Fraud	Open contact = fraud
BROWN	Ground	Common ground signal
GREY	Forward pulse counter	In the event of reverse flow, the meter will count internally the volume flowed. A maximum of 1000 pulses is allowed for. When the forward flow is restored, no pulses are generated until the value of the volume flowed is zero.

FLOWPULSE M-BUS (2 wires)

Wire	Signal	Description
WHITE	M-Bus	M-Bus connection (polarity independent)
BROWN	M-Bus	M-Bus connection (polarity independent)