

QuadraPlus

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QUADRAPLUS PULSE EMITTER

The QUADRAPLUS is a STATIC pulse emitter that utilizes Hall effect sensors. It mounts onto Maddalena single jet and multi-jet water meters (CD-ONE and DS) to detect water consumption. Data are transmitted to a remote reading unit via a 5-wire cable.

The emitter detects the flow direction and is not affected by vibrations, thus ensuring that the electronic and the mechanical reading match. The Hall effect sensors in combination with a microprocessor enable the detection of magnetic fraud or sensor removal.

Flow return and vibrations are the main factors that may affect remote water metering.

Flow return causes the meter to run backwards and a decrease in the totalizer registration. In such cases it is necessary to restore the correct value in the remote reading unit.

Vibrations (caused by water hammers, pressure variations in pipes, etc.) produce false pulses causing a wrong reading value in the remote unit (usually higher than the value registered by the mechanical totalizer).

In order to ensure the total coherence between registration of the mechanical totalizer and the remote reading unit, Maddalena has developed a device that utilizes only electronic components thus eliminating the drawback of electromechanical devices such as reed switch sensors.

TECHNICAL FEATURES & OUTPUTS

TYPE	Microprocessor
POWER SUPPLY	Lithium battery; service life: 15 years
MAX PULSE FREQUENCY	4 Hz
CERTIFICATES/APPROVALS	CE in accordance with the European Directive on Electromagnetic Compatibility (EMC)
AMBIENT CONDITIONS	Storage temperature: -20 °C ÷ 70 °C Working temperature: -10 °C ÷ 55 °C
PROTECTION CLASS	IP68
LENGTH	1.5 m
OUTPUT	NPN open collector
MAX. TENSION	30 V (dc)
MAX. CURRENT	100 mA (dc)
PULSE DURATION	With flow > 4 pulses/sec: 50% period With flow ≤ 4 pulses/sec: 150 ms

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.

