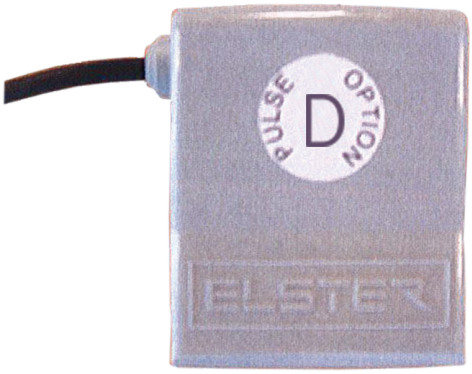
evoQ4
Pulse output module



Specifications

Operating temperature	15 °F to 120 °F, -10 °C to +55 °C
Pulse output signal	Open drain NPN current sink
Maximum load current	20mA
Maximum load voltage	30V DC
Power	Battery powered, 10 years
Maximum pulse transmitter distance	200 meters, 650 feet
Standard cable length	10 meters (30 feet), 30 meters optional (98 feet)
Environmental rating	IP 68 / NEMA 6P
Dimensions (mm, in)	H 35 x W 55 x D 70, 1.4" x 2.2" x 2.75"
Weight	17oz, approx. 500 grams with 10m cable (30ft)
Minimum pulse width	100ms ± 10ms.

Operation
The evoQ4 pulse module provides a reliable output communication for connection to all common data management devices, including data-loggers, AMR/I and SCADA systems. The pulse unit is self powered using its own batteries and does not affect the meter life.

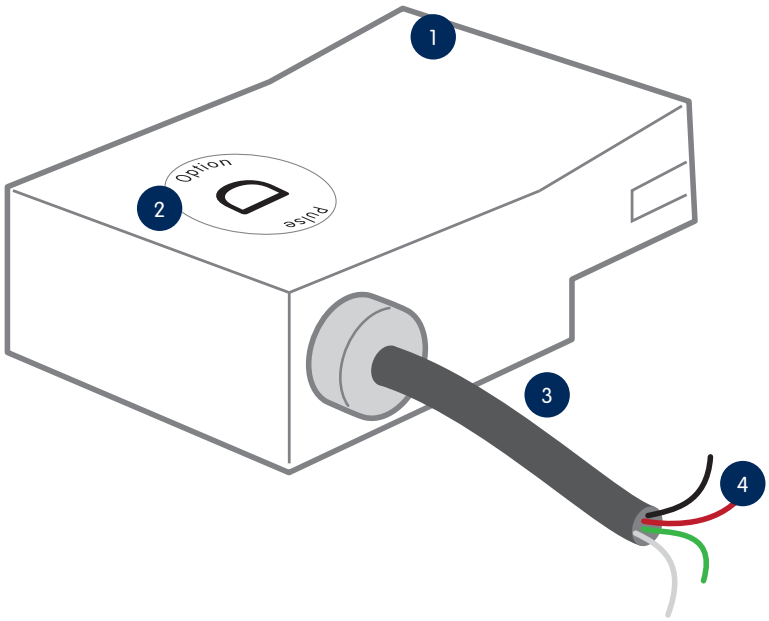
Communication between the meter and the pulse module is via an infra-red LED and an optical sensor. A rubber grommet maintains a clear pathway.

Installation
The pulse unit can be fitted at any time to the evoQ4 meter, either pre-shipment or in-the-field. Simply connect the pulser to the meter for instant functionality. The unit is fully hermetically sealed and is suitable for use in flooded pits up to a water depth of 30 feet. See evoQ4 installation operation manual for details.

Pulse output
The evoQ4 pulser features a dual channel, bi-directional capable pulse output and alarm indicator.

Pulser

1. The evoQ4 pulser is fully sealed, IP68 unit suitable for installation in flooded environments.
2. Pulse option label denotes the pulse configuration of the unit (see table below)
3. Robust communication cable in standard 10m (30 ft) length; 30m (98ft) version is also available.
4. 4-wire outputs:
   Red - Pulse channel 1
   White - Pulse channel 2
   Black - Alarm output*
   Green - Common.



*Alarm

The alarm output channel can provide an output signal to indicate:

- Meter low battery
- Pulser low battery
- Measurement stopped / No water
- Tamper (pulser removed from meter)

Pulse output options					
Wire color	Red	White	Black	Green	
Function	Channel 1	Channel 2	Alarm	Common / Ground	
Pulse option label	Pulse weight				Note
F	1 USG / 0.1 Cuft / 1 L	1 USG / 0.1 Cuft / 1 L	Alarm	Common / Ground	Net total (Fwd - Rev); Net total (Fwd - Rev)
K	10 USG / 1 Cuft / 10 L	10 USG / 1 Cuft / 10 L	Alarm	Common / Ground	Net total (Fwd - Rev); Net total (Fwd - Rev)
M	100 USG / 10 Cuft / 100 L	100 USG / 10 Cuft / 100 L	Alarm	Common / Ground	Net total (Fwd - Rev); Net total (Fwd - Rev)
P	1000 USG / 100 Cuft / 1000 L	1000 USG / 100 Cuft / 1000 L	Alarm	Common / Ground	Net total (Fwd - Rev); Net total (Fwd - Rev)
G	1 USG / 0.1 Cuft / 1 L	10 USG / 1 Cuft / 10 L	Alarm	Common / Ground	Net total (Fwd - Rev); Net total (Fwd - Rev)
D*	10 USG / 1 Cuft / 10 L	100 USG / 10 Cuft / 100 L	Alarm	Common / Ground	Net total (Fwd - Rev); Net total (Fwd - Rev)
L	10 USG / 1 Cuft / 10 L	1000 USG / 100 Cuft / 1000 L	Alarm	Common / Ground	Net total (Fwd - Rev); Net total (Fwd - Rev)
N	100 USG / 10 Cuft / 100 L	1000 USG / 100 Cuft / 1000 L	Alarm	Common / Ground	Net total (Fwd - Rev); Net total (Fwd - Rev)
H	1 USG / 0.1 Cuft / 1 L	100 USG / 10 Cuft / 100 L	Alarm	Common / Ground	Net total (Fwd - Rev); Net total (Fwd - Rev)
J	1 USG / 0.1 Cuft / 1 L	1000 USG / 100 Cuft / 1000 L	Alarm	Common / Ground	Net total (Fwd - Rev); Net total (Fwd - Rev)
E	1 USG / 0.1 Cuft / 1 L	Direction Flag	Alarm	Common / Ground	Ch1 Pulse Fwd AND Rev; Ch2 Direction flag
B	1 USG / 0.1 Cuft / 1 L	1 USG / 0.1 Cuft / 1 L	Alarm	Common / Ground	Ch1 Pulse Fwd; Ch2 Pulse Rev
S					Non Standard Configuration

*Standard configuration if no pulse weight specified
Fwd - Rev: Forward pulses net of any reverse flow using compensation method internal to pulse module
Fwd AND Rev: Forward and Reverse pulses (direction flag outputs high state on forward flow)
Users should check compatibility with electrical requirements of data loggers, SCADA systems, PLC etc.

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