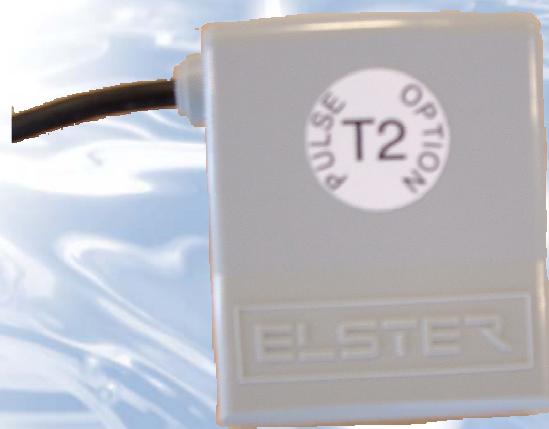


Q4000 Pulse Output Unit



Specifications

Operating temperature	-10 °C to +55 °C
Pulse output signal	Open drain
Maximum load current	20mA
Maximum load voltage	30V DC
Power	Battery powered, 10 years
Maximum pulse transmitting distance	200 metres
Standard cable length	10 metres (30m optional)
Waterproof structure	IP 68
Dimensions (mm)	H 35 x W 55 x D 70
Weight	Approx. 500 grams (with 10m cable)

Operation. The Q4000 pulse unit 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 pulser is via an infra-red LED and is unaffected by dirty water environments.

Installation. The pulse unit can be fitted at any time to the Q4000 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 can be suitable for use in flooded pits up to a water depth of 10 metres.

Pulse output. The Q4000 pulser features a dual channel, bi-directional pulse output and alarm indicator.

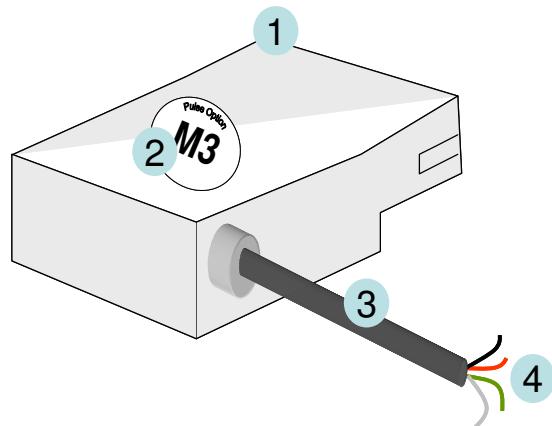




Q4000 Pulse Output Unit

Pulse features

- 1 The Q4000 pulser is a 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 length. 30m 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 Option setting changed

Pulse Output Options & Ordering Codes

Pulse Option	Red Channel 1	White Channel 2	Black Channel 3	Green Channel 4	Ordering Codes	
	1 litre* Fwd-Rev	1 litre* Fwd-Rev	Alarm	Common	10m Cable	30m Cable
P1	1 litre* Fwd-Rev	1 litre* Fwd-Rev	Alarm	Common	SPA7001	SPA7005
P2	10 litre Fwd-Rev	10 litre Fwd-Rev	Alarm	Common	SPA7002	SPA7006
P3	100 litre Fwd-Rev	100 litre Fwd-Rev	Alarm	Common	SPA7003	SPA7007
P4	1000 litre Fwd-Rev	1000 litre Fwd-Rev	Alarm	Common	SPA7004	SPA7008
M1	1 litre* Fwd-Rev	10 litre Fwd-Rev	Alarm	Common	SPA7009	SPA7013
M2	10 litre Fwd-Rev	100 litre Fwd-Rev	Alarm	Common	SPA7010	SPA7014
M3	10 litre Fwd-Rev	1000 litre Fwd-Rev	Alarm	Common	SPA7011	SPA7015
M4	100 litre Fwd-Rev	1000 litre Fwd-Rev	Alarm	Common	SPA7012	SPA7016
M5	1 litre* Fwd-Rev	100 litre Fwd-Rev	Alarm	Common	SPA7077	SPA7080
M6	1 litre* Fwd-Rev	1000 litre Fwd-Rev	Alarm	Common	SPA7078	SPA7081
M7	1 litre* Fwd-Rev	10,000 litre Fwd-Rev	Alarm	Common	SPA7079	SPA7082
B1	1 litre* Fwd+Rev	Direction Flag	Alarm	Common	SPA7025	SPA7029
B2	10 litre Fwd+Rev	Direction Flag	Alarm	Common	SPA7026	SPA7030
B3	100 litre Fwd+Rev	Direction Flag	Alarm	Common	SPA7027	SPA7031
B4	1000 litre Fwd+Rev	Direction Flag	Alarm	Common	SPA7028	SPA7032
T1	1 litre* Fwd	1 litre* Rev	Alarm	Common	SPA7033	SPA7037
T2	10 litre Fwd	10 litre Rev	Alarm	Common	SPA7034	SPA7038
T3	100 litre Fwd	100 litre Rev	Alarm	Common	SPA7035	SPA7039
T4	1000 litre Fwd	1000 litre Rev	Alarm	Common	SPA7036	SPA7040

*1 litre output automatically changes to 10 litres when fitted to larger sizes: DN150-300 Low-Flow, DN125-200 High Flow

Fwd-Rev = Forward pulses net of any reverse flow using compensation method

Fwd+Rev = Forward pulses AND Reverse Pulses (Direction Flag indicates flow direction, high = forward flow)

All outputs have variable pulse width. Users should check compatibility with any connected devices eg dataloggers, AMR/I equipment etc