

# The Kent Range of Bulk Meters

SPECIFICATION SHEET

Cold Water

## Q4000 Remote Display 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 distance between meter and remote	50 metres
Maximum pulse transmitting distance	200 metres
Standard cable length	10 metres (30m optional)
Waterproof structure	IP 63
Dimensions (mm)	H 165 x W 100 x D 50
Weight	Approx. 300grams

**Operation.** The Q4000 remote display unit provides the ability to see the actual readings from the meter in a more accessible location. The remote unit is self powered using its own batteries and does not affect the meter life.

An encoded, electronic statement signal is used to communicate between the meter and the remote to ensure that the two displays are always identical.

**Installation.** The remote display unit can be fitted at any time to the Q4000 meter either pre-shipment or in-the-field. Simply connect the 2-wire cable between the meter & remote unit and the display will update automatically. There is no complex commissioning process required.

**Pulse output.** The Q4000 remote display features a dual channel pulse output giving the ability to connect to multiple data management outlets including AMR/AMI, data-loggers and SCADA systems.





# Q4000 Remote Display Unit

## Display functions

- 1 The net volume of water measured is permanently displayed in units of m<sup>3</sup>
- 2 The sub-units of m<sup>3</sup> (test dials) are permanently displayed
- 3 The flow rate is permanently displayed in forward or reverse; minus sign will be displayed for reverse flow
- 4 The no water / measurement stopped indicator will display if there is no conductivity between the electrodes (eg empty pipe)
- 5 The meter low battery will flash when there is approx 3months working life remaining. After this time it is displayed permanently to indicate measurement has stopped and the time elapsed is shown in the flow rate display
- 6 Error codes will display intermittently to indicate any of the following alarms
  - ---- Communication error (meter/remote)
  - E--1 Cable connection error
  - E--6 Remote display battery low

## Wiring Details

Remove the front cover (slide up & off) to access the wiring connection terminals. A wiring diagram is on the reverse of the cover (see below)

Wiring & Connection Details								
Number	1	2	3	4	5	6	7	8
Colour of wire	White	Black						
Mark	+	-	+	-(Common)	+			
Description	Meter Input	Pulse Output 1	Pulse Output 2	NC				

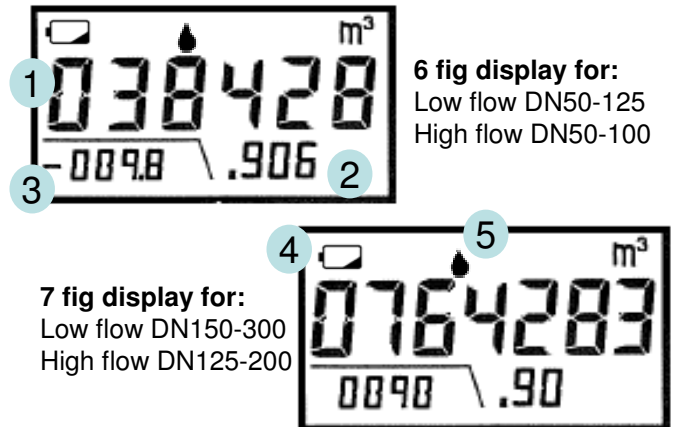
## Pulse Output Options & Ordering Codes

	Pulse Option	Low-Flow Size (DN)	High-Flow Size (DN)	Channel 1		Channel 2		Ordering Codes	
				Output Pulse	Pulse Width	Output Pulse	Pulse Width	with 10m Cable	with 30m Cable
Standard Version	S1	50-125	50-100	10 litre Fwd-Rev	40ms	10 litre Fwd-Rev	40ms	SPA7047	SPA7059
	S2	50-125	50-100	Direction Flag	-	10 litre Fwd+Rev	40ms	SPA7048	SPA7060
	S3	50-125	50-100	10 litres Fwd	40ms	10 litres Rev	40ms	SPA7049	SPA7061
	S4	50-125	50-100	10 litre Fwd-Rev	40ms	100 litre Fwd-Rev	40ms	SPA7065	SPA7066
High-Speed	L1	150-200	125-200	100 litre Fwd-Rev	40ms	100 litre Fwd-Rev	40ms	SPA7050	SPA7062
	L2	150-200	125-200	Direction Flag	-	100 litre Fwd+Rev	40ms	SPA7051	SPA7063
	L3	150-200	125-200	100 litres Fwd	40ms	100 litres Rev	40ms	SPA7052	SPA7064
	L4	150-200	125-200	100 litre Fwd-Rev	40ms	1000 litre Fwd-Rev	40ms	SPA7067	SPA7068
High-Speed	R2	50-125	50-120	1 litre Fwd-Rev	5ms	100 litre Fwd-Rev	300ms	SPA7041	SPA7053
	H3	150-200	125-200	10 litres Fwd-Rev	5ms	1000 litres Fwd-Rev	300ms	SPA7045	SPA7057

Fwd-Rev = Forward pulses net of any reverse flow using compensation method  
 Fwd+Rev = Forward pulses AND Reverse Pulses (Direction Flag indicates flow direction)  
 All outputs have fixed pulse width. Users should check compatibility with any connected devices eg dataloggers, AMR/I equipment etc



## Normal mode



## Error mode

