

# Q4000/Q4000B Electromagnetic Water Meter with Standard or Replaceable Battery Pack

## Product specification

The Q4000 offers unrivalled performance utilising electromagnetic measuring principles to calculate the volume of fluid passed through an unrestricted flow tube. A fast 0.5 second sampling rate is permanently used to ensure that every drop is accurately measured, even at the very lowest flow rates. Nominal battery life for all standard Q4000 meters at an ambient temperature of 30°C is 10 years. The Q4000B version with replaceable battery pack doubles and extends battery life by up to 20 years or more. Battery pack life for the Q4000B meter varies between 5 and 10 years depending on meter size. With no moving parts and minimal pressure loss, the Q4000 delivers consistent accuracy over a wide flow rate measuring range and can be adapted to suit either predominantly high or low flow rates. It is ideally suited for a variety of bulk flow metering applications such as network management, leakage monitoring and commercial billing of fluids with a minimum conductivity of 50  $\mu\text{S}/\text{cm.}$ , at a maximum working pressure of 1600 kPa and operating temperature range of -10°C to +55°C. The Q4000 complies with CEN pr14154, ISO4064 and OIML R49 standards with every meter individually tested for accuracy before despatch.

### Durability with Zero Maintenance

The Q4000's lightweight body makes storage, transportation and installation both simpler and safer. Expensive regular maintenance is a thing of the past, with a 10 year continuous battery life and no need for calibration.

The Q4000 features an innovative flangeless design that enables simple adaptation to suit a wide range of common pipe flange drillings. Installation is so simple, with no complex commissioning, no earthing rings - just fit and go!

### Register

A large, bright and easy to read IP68 rated LCD display, showing volume and instantaneous flow rate, is perfect for real-time network control and water management. The Q4000 also has alarm functions providing in situ status, to ensure no loss in measuring continuity.

Ability to measure both forward and reverse flow with bi-directional pulse outputs, the Q4000 provides dependable connectivity to critical water management and billing systems, including AMR and data logging devices.

### Communication

The Q4000 can be fitted with a pulse output featuring a variety of different output options and alarms.

Alternatively a remote LCD display can be connected. This unit also features pulse outputs for connection of ancillary devices including AMR and data-loggers.

Connecting the pulser or remote display can be done at any time, with no complex commissioning.



### Key features

- Fast 0.5 second sampling rate provides greater real meter registration particularly at low flow rates.
- Lightweight and durable stainless steel body with significant OHS advantages for site installations.
- 316 SS electrodes ensure consistently accurate performance throughout the meter's entire life span.
- Turndown ratio of 1:400.
- Innovative flangeless design enables simple installation.
- Available with either standard or replaceable batteries.
- IP68 waterproof rating guarantees internal electronics protection and reliability.
- Ideal for hot climate applications which are demanding on battery power.



## 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. A 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. (e.g. empty pipe).
- 5 The meter low battery will flash when there is approximately 3 months 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. Data is stored for up to 9 months.

### 6 Fig Display for: DN50 - DN100 Meters



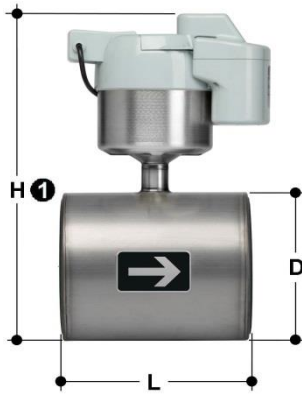
### 7 Fig Display for: DN125 - DN300 Meters



## Flow Performance to CEN pr14154, ISO4064, OIML R49 - (Low Flow options shown in red / High Flow options in black)

DN Pipe size (mm)		50	65	80	100	125	150	200	250	300	
Minimum flow Q1	m <sup>3</sup> /h	0.1 / 0.16	0.16 / 0.25	0.25 / 0.4	0.4 / 0.63	0.63 / 1.0	1.0 / 1.6	1.6 / 2.5	2.5	2.5	
Transitional flow Q2	m <sup>3</sup> /h	0.16 / 0.26	0.26 / 0.4	0.4 / 0.64	0.64 / 1.0	1.0 / 1.6	1.6 / 2.6	2.6 / 4.0	4.0	4.0	
Permanent flow Q3	m <sup>3</sup> /h	40 / 63	63 / 100	100 / 160	160 / 250	250 / 400	400 / 630	630 / 1000	1000	1000	
Maximum flow Q4	m <sup>3</sup> /h	50 / 79	79 / 125	125 / 200	200 / 313	313 / 500	500 / 788	788 / 1250	1250	1250	
Maximum registration	m <sup>3</sup>	999999.999					9999999.99				
Pressure loss at Q3	kPa	Less than 20								Less than 63	
Max. working pressure	kPa	1600									
Operating temp. range	°C	-10 to +55									
Bare meter weight	kg	4.5 / 4.5	5.0 / 5.0	5.5 / 6.0	6.5 / 7.5	7.5 / 9.5	9.5 / 15	15 / 20	55	75	

## Dimensions (mm)



DN (mm)	L	D	H ①
50	200 / 122	102 / 96	281 / 278
65	200 / 142	121 / 116	301 / 298
80	200 / 162	133 / 128	312 / 309
100	250 / 182	159 / 151	338 / 334
125	250 / 202	190 / 182	368 / 364
150	300 / 231	216 / 212	396 / 394
200	350 / 302	272 / 267	453 / 451
250	450	267	453
300	500	267	453

① Add 60mm to all above "H" dimensions for additional allowance for meters with lid open.

Elster Metering Pty Ltd  
Head Office  
55 Northcorp Boulevard  
Broadmeadows  
Victoria 3047  
Australia  
T: +61 3 9355 2000  
F: +61 3 9355 2001

Elster Metering Pty Ltd  
14/22 Northumberland Road  
Caringbah  
New South Wales 2229  
Australia  
T: +61 2 8536 7400  
F: +61 2 9526 2244

Elster Metering Pty Ltd  
12 Holland Street  
Northgate  
Queensland 4013  
Australia  
T: +61 7 3266 7733  
F: +61 7 3266 7695

Elster Metering Pty Ltd  
412 Hobart Road  
Launceston  
Tasmania 7250  
Australia  
T: +61 3 6344 2466  
F: +61 3 6343 0711

Elster Metering Pty Ltd  
3/19 Action Road  
Malaga  
Western Australia 6090  
Australia  
T: +61 8 9248 7899  
F: +61 8 9248 9499



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