

VALEPORT 740 TIDE GAUGE



GENERAL DESCRIPTION

Valeport's popular Model 740 tide gauge has been designed to provide an accurate, easily deployed tide gauge for use in short or long term hydrographic survey operations. Low power consumption and user selectable sampling regime allow up to 2 years' autonomous operation, whilst the optional radio transmission package extends the capabilities for real time operations. Data output is compatible with the MIDAS Surveyor GPS Echo Sounder system.

TRANSDUCER

Type: Vented strain gauge, with stainless steel mounting bracket
Range: Standard 10dBar (approx 10m) with 20m cable. Other ranges and lengths available
Accuracy: +/-0.1% Full Scale
Calibration: Held within logging unit
Dimensions: 18mm diameter x 80mm

Comms: RS232 via 3m cable to PC, or via 1m cable to radio unit.
Dimensions: Housing 47mm x 110mm x 235mm.
Weight: 1.7kg (approx) including batteries.

RADIO

Frequency: Selectable frequency UHF synthesised radio transceiver, operating in UK licence exempt band (458.5 - 458.9MHz).
Power Output: Supplied as normal 100mW peak output.
RS232 Output: 4800 baud, 8, 1, N.

Aerials

Transmitter: ¼ wave 'rubber duck' (standard, ~2km)
3dB omni-directional (option, ~10km)
Receiver: 3dB omni-directional

Power Input

Transmitter: Takes power from Model 740 or from external 12vDC supply
Current: 0.04mA sleep, 120mA receive, 410mA transmit

Receiver: Requires external 12vDC input
Current: 120mA receive, 410mA transmit

Transmitter Physical

Materials: IP67 black anodised aluminium box
Size: 200mm x 200mm x 70mm
Connectors: To antenna, Model 740 & external power supply

Receiver Physical

Materials: Desktop style anodised aluminium box
Size: 200mm x 180mm x 70mm
Connectors: To antenna, 12vDC input & RS232 output

LOGGING UNIT

Housing: Black anodised aluminium, waterproof to IP67 (0.5m for 30 secs) but system includes transducer vent to atmosphere. The electronics are sealed from the vent.
Power: 4 "D" cells within housing. Alkaline cells provide power for over 900 days at 20minute sampling with burst length of 10 secs.
Memory: 128kbyte solid state, allowing over 65,000 data points. Equivalent to over 900 days at 20 minute sampling. New data file created every time unit is switched on by user.
Sampling: Raw data sampled at 4Hz and logged as average over burst. Burst length is selectable between 1 and 60 seconds. Cycle time is selectable from 1 minute or from 5 to 1440 minutes (1 day) in 5 minute steps.
Switching: Delay start time set by PC. Switch on by fitting waterproof plug or comms lead to comms port.
Resolution: Data logged to 1mm resolution. Raw data sampled at 14 bit (1:16384) resolution.



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OCEANSCAN LIMITED

DENMORE ROAD, BRIDGE OF DON, ABERDEEN,
SCOTLAND, U.K., AB23 8JW

TEL: +44(0)1224 707000, FAX: +44(0)1224 707001

Email: rental@oceanscan.co.uk, Website: www.oceanscan.co.uk

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