MIDAS WLR
Water level recorder

The MIDAS WLR is a precision water level recorder, designed for use in both autonomous, or real time deployments. Fitted with a 0.01% accuracy pressure sensor and accurate PRT temperature sensor as standard, the MIDAS WLR features a variety of operating modes from rapid 8Hz continuous sampling to power saving burst modes for long term monitoring. The instrument is available in both shallow water acetal or deep water titanium versions, and is suitable for fixed or in-line mooring, with a variety of communications options built in.

Specifications

Product	MIDAS WLR Water level recorder
Country of origin	UK
Manufacturer	Valeport Limited

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Sensors

The MIDAS WLR comes with a choice of pressure sensor ranges to suit the depth requirement of the operator. The sensor used is a revolutionary piezo-resistive cell with internal temperature compensation, giving the accuracy and resolution levels normally associated with a resonant quartz sensor, but with increased durability, stability and recalibration intervals.

Pressure

Type	Temperature compensated piezo-resistive cell
Ranges	100, 200, 300, 500, 1000, 3000 or 6000 dBar
Precision	±0.01%FS
Resolution	0.001%FS

Temperature

Type	Titanium housed PRT
Ranges	-5°C to +35°C
Accuracy	±0.01°C

Data acquisition

In line with other Valeport "MIDAS" series instrumentation, the MIDAS WLR samples data points at up to 8Hz, and has a variety of operating modes including continuous data output, triggered sampling, and data bursting. The typical configuration for this instrument is to sample data in a burst mode for a user defined integration period, selectable from a single sample up to 600 seconds. This data burst may then be repeated at a suitable regular interval, from once per minute to once per day.

Sampled data may either be recorded in its entirety, or simply averaged and recorded along with standard deviation data. It is usually recommended that data is averaged over an integration period of 40 seconds to filter the effects of any wave activity.

Note that Valeport's distributed processing concept allows the pressure data to be automatically converted into the user's choice of units, including Metres or Feet of water.

Memory

Standard memory is 16Mbyte FLASH, which is capable of storing approximately 2.7 million records. The memory is non-volatile, so data and configuration are retained in the event of power failure.

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Communications

RS232	Up to 200m cable, direct to serial port via USB adaptor
RS485	Up to 1000m cable, addressable half duplex comms
Baud Rate	2400 - 115200 (FSK fixed at 19200, USB 460800)
Protocol	8 data bits, 1 stop bit, No parity, No flow control

Electrical

Internal	8 x C cells, 1.5v alkaline or 3.6v lithium
External	9 - 30vDC
Power	0.3W (sampling), <1mW (sleeping)
Battery life	90 days operation (alkaline) or 215 days (lithium) based on a 40 second burst sample every 10 minutes
Connector	Subconn MCBH10F

Software

System is supplied with DataLog Express Windows based PC software, for instrument setup, data extraction and display. DataLog Express is license free.

Physical

Instrument	88mmØ x 550mm, 7kg (acetal), 11kg (titanium)
Cage	750mm x 140mm x 120mm
Depth Rating	500m (acetal), 6000m (titanium), Sensor range permitting.
Shipping	100 x 18 x 49cm, 20kg (acetal), 24kg (titanium)

Ordering

0730043-XX	MIDAS WLR in acetal housing with 0.01% pressure sensor & PRT temperature sensor. Supplied with mooring cage, Subconn switch plug, 3m communications lead, USB adaptor, DataLog Express software, manual, tool kit and transit case.
Note	XX denotes pressure transducer range. Select from 100, 200, 300 or 500dBar)
0730046-XX	MIDAS WLR in titanium housing with 0.01% pressure sensor & PRT temperature sensor. Supplied with mooring cage, Subconn switch plug, 3m communications lead, USB adaptor, DataLog Express software, manual, tool kit and transit case.
Note	XX denotes pressure transducer range. Select from 1000, 3000 or 6000dBar

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