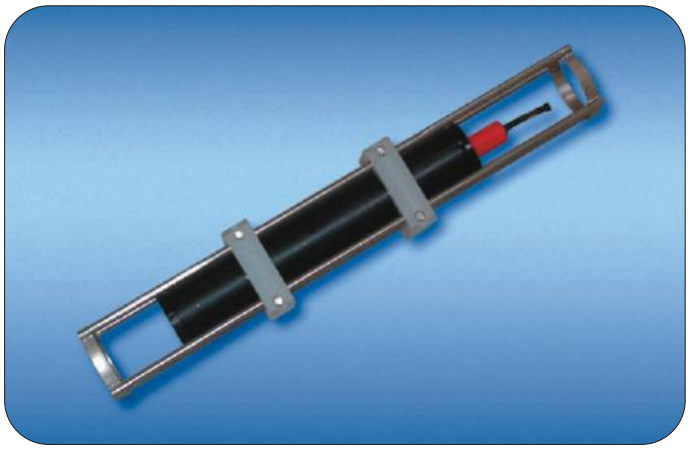
MIDAS WLR



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.

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 or 500 dBar
Precision:	±0.01%FS
Resolution:	0.001%FS

Temperature

Type:	Titanium housed PRT
Range:	-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 2.8million records. The memory is non-volatile, so data and configuration are retained in the event of power failure.

Power

Uses 8 x 1.5v alkaline or 3.6v Lithium C cells. Nominal power consumption at 12v is 20mA during sampling, dropping to less than 0.1mA during sleep mode. A typical regime of 40 second sampling every 10 minutes will allow a life in excess of 60 days with alkaline cells, extending to over 120 days with Lithium cells. External power input is 9 - 30vDC.

Communications

RS232, RS485 and RS422 communications as standard. Baud rate is selectable from 2400 to 460,800 (PC serial port permitting). Use RS232 comms for cable lengths up to 200m, extending to 1000m for RS485/RS422. FSK modem comms are optionally available for real time data output over 6km cable.

Software

DataLog Express PC software, allows instrument setup, data upload and display in tabular and graphical formats. All data is in ASCII text format allowing simple export to other packages.

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 MIDAS WLR in acetal housing with 0.01% pressure sensor & PRT temperature sensor. Supplied with mooring cage, 3m RS232 comms lead, transit case, software and manual.
Specify pressure range (100, 200, 300 or 500dBar)

0730046 MIDAS WLR in titanium housing with 0.01% pressure sensor & PRT temperature sensor. Supplied with mooring cage, 3m RS232 comms lead, transit case, software and manual.
Specify pressure range up to 6000dBar

0400005 FSK comms option, for use with up to 6000m cable.

Datasheet Reference Number: MIDAS WLR v1C

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