

MAT-1

Lowell Instruments Orientation Acceleration Temperature Data Logger

Records absolute orientation, acceleration & temperature

Suitable for a wide range of land and sea applications, the MAT-1 logger features a long-lasting battery life to simultaneously record absolute orientation (tilt), acceleration (including vibration), and temperature, for months to years.

Important Information

Requires Domino for Windows® Software (Free Download) and compatible computer. MAT-1 Data Sheet



Supported Measurements

Tilt/Acceleration (water)

Features

- 300 meter depth rating

Contact Us

Sales (8am to 5pm ET, Monday through Friday)

- Email sales@onsetcomp.com
- Call 1-508-759-9500
- In U.S. toll free 1-800-564-4377
- Fax 1-508-759-9100

Technical Support (8am to 5pm ET, Monday through Friday)

- Contact Product Support www.onsetcomp.com/support/contact
- Call 1-508-759-9500
- In U.S. toll free 1-877-564-4377

Onset Computer Corporation
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Bourne, MA 02532

Lowell Instruments Orientation Acceleration Temperature Data Logger (MAT-1) Specifications

Sensors

	Magnetometer	Accelerometer	Thermistor
<i>Type</i>	3-axis magneto-inductive	3-axis MEMS Accelerometer	NTC Thermistor with 16-bit A/D Converter
<i>Filtering</i>	Hardware Averaging	1600 Hz averaging: up to 32 values per measurement	Hardware: low-pass filter
<i>Range</i>	+/- 10 Gauss	+/- 2 g standard +/- 4 g optional	-20 to 50 °C
<i>Accuracy</i>	+/- 5 degrees compass bearing typical	0.01 g, < 1 degrees of orientation	+/- 0.1 °C (-5 to 30 °C) +/- 0.2 °C (-20 to -5, 30 to 50°C)
<i>Resolution</i>	< 0.001 Gauss	< 0.001 g, 0.05 degrees of orientation	< 0.01 °C
<i>Maximum Rate</i>	64 Hz	64 Hz	1 Hz

Logger

Environmental

Operating Temperature -20 to 50 °C

Depth Rating PVC: 300 m

Electronics

Memory 8 GB micro SDHC flash card, hundreds of millions of magnetometer, accelerometer and temperature records

Communications Full speed USB micro-B port, USB cable supplied

Battery Type 3.6 V, size "A", user replaceable lithium (from Lowell Instruments)

Battery Life Months to years depending on operating mode

Internal Clock +/- 1 minute per month

Operating Modes

Recording Rates Magnetometer and Accelerometer to 64 Hz
Temperature to 1 Hz

Start and Stop Start and Stop at user defined times

Burst Mode Variable rate logging at user defined interval

Mechanical

Dimensions 27 mm (1.05") diameter x 213 mm (8.39") length

Weight 143 g (5.1 oz)

Construction Housing: Grey PVC

Mounting 5/16-18 x 0.5" threaded mounting hole on axis
5/16" hole in end cap for zip ties
Typically secured with hose clamps or zip ties.

Other

Software Domino for Windows® - Free Download

USB USB 2.0 compliant MSC and CDC Classes

Firmware Field upgradable via USB cable