

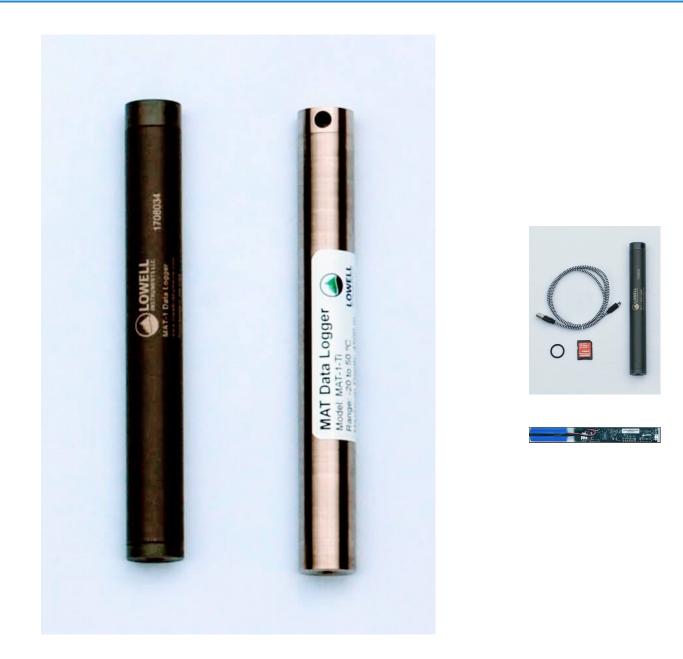
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Lowell Instruments MAT-1 Data Logger - incl. Magnetometer, Accelerometer & Thermistor

Product Images



Short Description

Contains an integrated 3-axis magnetometer, 3-axis accelerometer and a precision temperature sensor. The logger includes a microSD flash memory card, a long-life lithium battery, an O-ring sealed waterproof housing and a USB communication interface. The logger is capable of recording hundreds of millions of magnetometer and accelerometer records at up to 64 Hz as well as temperature records at 1 Hz.

Description

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Key Features

3-axis Accelerometer	Resolve static orientation to 1° Record dynamic acceleration at 64 Hz
3-axis Magnetometer	+/- 5° nominal compass bearing accuracy Temperature compensated
Precision Temperature	Accurate to +/-0.1 °C from -5 to 30 °C Accurate to +/-0.2 °C from -20 to -5, 30 to 50 °C
Large Memory	8 GB microSD flash card, upgradable to 32 GB
Long Battery Life	Hundreds of millions of records over a year+
Rugged Housing	O-ring sealed PVC or Titanium housing
USB 2.0 Interface	Connect with standard USB cables

The MAT-1 is ideal for determining the static orientation of vehicles, packages and assets. The MAT-1 can also be used for vibration analysis and motion studies. The internal thermistor provides a detailed record of temperature in the target environment. The logger's large memory, high recording rate, long battery life and rugged design make it suitable for a wide range of applications.

Additional Information

Country of Manufacture	United States					
	Applications					
		hic Tilt Current Meter	• A	Animal Tagging		
		Underwater Vehicle Heading		ehicle Dynami		
	• Equipment M	-		Shipping Monitoring Mooring Orientation & Tilt		
	Vibration An					
	The MAT-1 Data Logger includes Windows® software to con complete, the data file is transferred from the memory card processed for filtering, plotting and analysis.				ment. After the deployment is	
		Magnetometer			Thermistor	
		3-axis magnetoresistive s with 12-bit A/D Converter			NTC Thermistor with 16-bit A/D Converter	
	Filtering	None	1600 Hz averaging: u values per measurer	up to 32 ment	Hardware: low-pass filter	
			+/- 2 g standard +/- 4 g optional		-20 to 50 °C	
Accuracy +/-5° compass bearing typical 0.01		pical 0.01 g		+/-0.1 °C (-5 to 30 °C) +/-0.2 °C (-20 to -5, 30 to 50°C)		
	Resolution	<0.001 Gauss	<0.001 g		<0.01 °C	
	Maximum Rate	64 Hz	64 Hz		1 Hz	
	Environmental					
	Operating Ter	mperature	-20 to 50 °C			
Explanation	in Depth Rating PVC: 300 m		PVC: 300 m	Tita	nium: 4500 m	
	Electronics	Electronics				
	Memory	Memory 8 GB microSDHC flash			n card (upgradable to 32GB)	
	Communicatio	ons	Full speed USB micro-B port	i USB micro-B port		
	Battery Type		3.6 V, size "A", user replaceable l	"A", user replaceable lithium (from Lowell Instruments)		
	Battery Life		Aonths to years depending on operating mode minute per month			
	Internal Clock	c				
	Operating M	Operating Modes Recoding Rates Accelerometer and Magnetometer to 64 Hz Temperature to 1 Hz				
	Recoding Rate				to 64 Hz	
	Start and Stop	Start and Stop Start and Stop at user defined til Burst Mode Variable rate logging at user defined		Stop at user defined times		
	Burst Mode			ned interval		
	Mechanical Dimensions PVC: 27 mm (1.05") diame mm (8.39") length					
			PVC: 27 mm (1.05") diameter x 2 mm (8.39") length		nium: 25.4 mm (1.00") diameter x mm (8.78") length	
	Weight		PVC: 143 g (5.1 oz)	Tita	nium: 225g (8.39 oz)	
	Construction	Construction Hous O-rin		um)		
	Other					
	Software	Fr	ee Windows® Compatible Softw	vare		
	USB	US	5B 2.0 compliant MSC and CDC 0	Classes		
	Firmware	Fie	eld upgradable via USB cable			
Contents	• 8 GB microSD • Lithium Batter • 3 ft USB A to r	• MAT-1 Data Logger (PVC or Titanium) • 8 GB microSD Card (installed in logger) • Lithium Battery (installed in logger) • 3 ft USB A to micro-B Cable • Spare O-ring with Lubricant				
Brand	Lowell Instrume	ents				
Typical applications	Datalogging					
Measurements	Tilt					