# **OM-SL Series Portable** Low Cost Dataloggers Part of the **NOMAD<sup>™</sup> Family**





- Measure and Record DC Current, DC Voltage, Aac RMS, Vac RMS, Temperature
- Innovative Time **Extension Recording** Technique - Provides **Continuous Recording** for any Length of Time Without User Setup
- Auto Sampling up to 4096/hr - Provides for Maximum Data Capture
- Auto Scaling Provides for Best Resolution
- One Button Operation
- Stores up to 8000 Readings

The OM-SL Series are single channel, portable low cost NOMAD™ dataloggers that require no user setup. These dataloggers have the ability to automatically adjust both scale range and sample rate to optimise the recording session. OM-SL Series dataloggers operate in three modes: Record, Standby and Off. A red LED indicates the mode of operation. In the RECORD mode, the datalogger stores information; in the STANDBY mode, it retains the recorded information for transfer to a computer; in the OFF mode, the memory is cleared. However, if the datalogger is turned off by mistake, the cleared data can be easily recovered.

The unique method of scale autoranging employed by OM-SL Series dataloggers provides you with the best possible resolution for the recording session.

Datalogging always starts with the highest resolution and lowest scale range. The overall scale is divided into four ranges: 0-12.5% of full scale, 0-25% of full scale, 0-50% of full scale, and 0-100% of full scale. Whenever a recorded value crosses over to a higher scale range, the datalogger increases its scale range by a factor of two and repeats the reading. There are 250 steps in each scale range. Resolution can be calculated by dividing the scale range in use by 250. To permit the host computer to interpret the data correctly, the datalogger notes, during the recording process, when each change of scale takes place. Maximum resolution occurs when all the recorded samples stay within the lowest scale range. OM-SL Series dataloggers employ time extension recording which is an automatic process that updates the sample rate and number of stored data points based on the length of the recording. The maximum number of data points is 8192. When a datalogger starts a new recording session, it does so at its fastest sample rate of 4096 points per hour (0.88 seconds per point). The datalogger can record at this rate for two hours. If the recording session continues beyond two hours, the time extension recording technique becomes active.

PRES

LOGGER OPERATION:

Press to Stop Logging (Stand-By = One Blink)

Press & Hold 5 sec. to Shut Off

ning: All Data will be Deleted!

1. Press to Start Logging (Logging = Two Blinks)

(Off = No Blinks)

Shown larger than actual size.

NRS-232

Model OM-SL-L410

DC VOLTAGE MODULE L410

After the completion of two hours of recording, the datalogger continues recording by selectively overwriting previously stored data. The datalogger also halves its sample rate to 2048/hr (1.76 seconds per point) for the new stored values to be compatible with the previously recorded values. Recording continues for the next two hours at this new rate until the remaining 4096 storage points are filled. The time extension recording process of selectively overwriting previously stored data and halving the sample rate for new stored data continues every time the memory fills up. Like the automatic scaling feature, time extension recording is practically invisible to the user.

These dataloggers are the easiest tools to use to record data on-site and download it to your computer for analysis. A complete Windows based software package that can graph and analyse the data is included. Models are available to measure temperature, dc voltage, dc current, ac voltage and ac current. A clamp-on model for ac current measurement (OM-SL-CL600) is also available.

www.omega.co.uk



## RMS Current Input Models OM-SL-L100, OM-SL-L110

RMS current input dataloggers support current probes with voltage (OM-SL-L100) or current (OM-SL-L110) outputs. These dataloggers are ideal for many applications including machine load monitoring, load profiling and fault finding.

## RMS Voltage Input Models OM-SL-L205, OM-SL-L230, OM-SL-L260

RMS voltage input models are available for either 0-25 Vac (OM-SL-L205), 0-300 Vac (OM-SL-L230), or 0-600 Vac (OM-SL-L260) input. Typical applications include HVAC troubleshooting, line voltage monitoring, surge/sag monitoring, and stray voltage monitoring.

## 4-20 mA DC Current Input Model OM-SL-L320

Monitor and troubleshoot your 4-20 mA process loops using this dc

current input model. The current loop can represent temperature, pressure, flow or any other process parameter. Scale and units are programmable in software.

## DC Voltage Input Models OM-SL-L410, OM-SL-L430

DC voltage input models can be used for many applications including circuit design testing, battery testing, and monitoring process transducers. Models are available for 0-100 mV (OM-SL-L410) or 0-10 V (OM-SL-L430) input ranges. Scale and units are programmable in software.

## Thermistor Input Model OM-SL-L605

If you need to monitor ambient temperature in a computer room, food storage area, refrigerated freight compartment, or in a process, consider these thermistor input models. Model OM-SL-L605 measures temperatures via an internal or external thermistor.

## Thermocouple Input Models OM-SL-L610, OM-SL-L620, OM-SL-L630

Thermocouple input models are the perfect solution for process temperature monitoring applications. Any type J (OM-SL-L610), type K (OM-SL-L620), or type T (OM-SL-L630) thermocouple can be connected via convenient colour-coded subminiature thermocouple input jacks.

## Clamp-on RMS Current Model OM-SL-CL600

This is a portable handheld datalogger with integral clamp-on current jaw that is ideal for electrical or HVAC troubleshooting and load profiling applications. Simply clamp the unit over your conductor or bus bar and start taking readings.

## Specifications GENERAL

No. of Channels: 1

Sample Rate: 4096/hr max Data Storage: 8192 readings

Storage Technique: time extension recording

**Power:** 9 V alkaline battery **Battery Life:** up to 1 yr of recording at 25°C

**Output:** RS-232 via DB9 connector **Indicators:** red LED double flashes in RECORD, single flashes in STANDBY, and is off in OFF mode **Controls:** one membrane switch used to start/stop recording and turn logger on/off

**Operating Temperature:** -20 to 70°C (-4 to 158 °F)

Storage Temperature: -40 to 80°C (-40 to 174 °F)

**Relative Humidity:** 5 to 95% RH non-condensing

**Size:** all models except OM-SL-CL600; 73mmH x 59mmW x 41mmD (2.88 x 2.31 x 1.63"); OM-SL-CL600, 139mmH x 51mmW x 30mmD (5.47 x 2.0 x 1.8")

Weight (with battery): all models except OM-SL-CL600; 140 g (5 oz) OM-SL-CL600; 0.48 kg (17 oz)

RMS CURRENT INPUT MODELS OM-SL-L100, OM-SL-L110

Input: OM-SL-L100, 0-1 Vac; OM-SL-L110, 0-1 Aac

Measurement Range (based on current probe): OM-SL-L100; 0-10,000 Aac; OM-SL-L110, 0-3000 Aac

Input Connection: safety banana jacks

**Resolution:** 8 bit (max resolution depends on current probe)

#### Accuracy: 1% of rdg + resolution RMS VOLTAGE INPUT MODELS OM-SL-L205, OM-SL-L230, OM-SL-L260

Input: OM-SL-L205, 0-25 Vac; OM-SL-L230, 0-300 Vac; OM-SL-L260, 0-600 Vac

Input Connection: safety banana jacks Resolution: 8 bit; OM-SL-L205, 12.5 mV; OM-SL-L230, 250 mV; OM-SL-L260, 500 mV Accuracy: 1% of rdg + resolution





#### 4-20 MA DC CURRENT INPUT MODEL OM-SL-L320

Input: 0-25.5 mA Input Impedance: 100 ohms Working Voltage: 48 Vdc Input Connection: #10 screw terminal Resolution: 8 bit (12.5 μA max) Accuracy: 1% of rdg + resolution

#### DC VOLTAGE INPUT MODELS OM-SL-L410, OM-SL-L430

Input: OM-SL-L410, 0-100 mV; OM-SL-L430, 0-10 V Input Connection: safety banana jacks **Resolution:** 8 bit; OM-SL-L410, 50 μV max; OM-SL-L430, 5 mV max **Accuracy:** 1% of rdg + resolution **Thermistor Input Temperature Model OM-SL-L605** 

**Measurement:** OM-SL-L605, internal or external thermistor

Input: 10 Kohm thermistor @ 25°C Measurement Range: internal sensor, -20 to 70°C (-4 to 158°F); external sensor, -20 to 100°C

(-4 to 212°F)

Input Connection: phone jack Resolution: 8 bit; 0.075°C max Accuracy: 1% of rdg  $\pm 0.25$ °C

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#### THERMOCOUPLE INPUT TEMPERATURE Models OM-SL-L610, OM-SL-L620, OM-SL-L630

Input: OM-SL-L610, type J; OM-SL-L620, type K; OM-SL-L630, type T

#### Measurement Range:

OM-SL-L610 (type J), 0 to 750°C (32 to 1380°F); OM-SL-L620 (type K), -200 to 1250°C (-325 to 2280°F); OM-SL-L630 (type T), -200 to 350°C (-325 to 660°F)

Input Connection: miniature colour-coded thermocouple jacks

## Resolution:

12 bit; >0.5°C for all models Accuracy: 0.5% of rdg + thermocouple accuracy

### CLAMP-ON RMS CURRENT MODEL OM-SL-CL600

Input: 0-600 Aac RMS

Input Connection: integral split jaw Max Conductor Size:

30 mm dia cable; 30 mm x 4.8 mm dual bus bar

Resolution: 8 bit (0.5 A)

Accuracy (centred conductor): 2% of rdg  $\pm$  resolution (0-400A); 5% of rdg (400-600A)

## **To Order** (Specify Model Number)

Model No.	Price	Description		
OM-SL-L100	£229	RMS current logger, 0-1 Vac input		
OM-SL-L110	229	RMS current logger, 0-1 Aac input		
OM-SL-L205	237	RMS voltage logger, 0-25 Vac input		
OM-SL-L230	245	RMS voltage logger, 0-300 Vac input		
OM-SL-L260	245	RMS voltage logger, 0-600 Vac input		
OM-SL-L320	163	DC current logger, 4-20 mA input		
OM-SL-L410	171	DC voltage logger, 0-100 mV input		
OM-SL-L430	171	DC voltage logger, 0-10 V input		
OM-SL-L605	171	Temperature logger (internal/external thermistor sensor)		
OM-SL-L610	171	Temperature logger, type J t/c input		
OM-SL-L620	171	Temperature logger, type K t/c input		
OM-SL-L630	171	Temperature logger, type T t/c input		
OM-SL-CL600	303	Clamp-on RMS current logger, 0-600 Aac input		

All dataloggers are supplied with complete operator's manual, 9 V battery, Windows based graphing and analysis software, and 1.8 m (6 ft) DB9 RS-232 cable. All ac voltage and dc voltage input models also include a set of 1.5 m (5 ft) long test leads. Ordering Example: OM-SL-L620, type K thermocouple input temperature logger, and OMEGACARE<sup>SM</sup> 1-year extended warranty for OM-SL-L620 (adds 1 year to standard 1-year warranty). £171 + 20.50 = £191.50.

## Accessories

Model No.	Price	Description	
OM-SL-TH	£40.00	External 1.8 m (6 ft) thermistor with epoxy bead	
OM-SL-TH-SS	57.00	External 1.8 m (6 ft) thermistor with 10 cm (4") stainless steel sheath	
OM-SL-RS232-DB9	16.50	Replacement 1.8 m (6 ft) RS-232 cable with DB9F termination	
OM-SL-VL	33.00	Replacement test leads for ac or dc voltage input models	

#### Current Probes for RMS Current logger, model OM-SL-L100

Model No.	Price	Range	Output		
HHM806	£237	1-500 A	1 mV/A		
HHM808	245	1-1000 A	1 mV/A		
HHM812	467	10-6000 A	0.1 mV/A		
HHM812-36	550	10-6000 A	0.1 mV/A		
HHM814	630	10-10000 A	0.1 mV/A		
HHM814-36	715	10-10000 A	0.1 mV/A		
HHM814-48	795	10-10000 A	0.1 mV/A		

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