

EL-IP67-12

12-Bit Data Logger with IP67 / NEMA 4X Protection

EL-IP67-12 is an easy to use data logging module capable of measuring, recording and displaying temperature (Pt 100), voltage and current. With a 12 bit A/D converter and a memory for 8000 readings, EL-IP67-12 can operate as a 'stand alone' logger or be permanently connected to a system. The data logger is housed in an IP67 / NEMA 4X rated enclosure to protect it from ingress of dirt and moisture. The PC software operates under Windows and does not require specialist skills to operate. Communication between PC and data logger can take place via the RS232 or InfraRed ports. The EL-WIN control software allows the data to be output in text format for easy integration into most popular spreadsheets. Graphical output is also possible under EL-WIN. Consult the EasyLog software manual for further details.

- IP67 / NEMA 4X Protection
- InfraRed Communications
- Easy to Use
- High Resolution Read-out
- Non-volatile Data Storage
- Battery Powered



CONTROL SOFTWARE

Stock Number - EL-WIN

Easy to install and use, the control software will run under Windows 98, 95 or 3.1 and enable the user to control one or more EasyLogs, operating them as a complete system. Supplied on a 3½" disk with a manual and serial link.

SENSOR SOURCING GUIDE

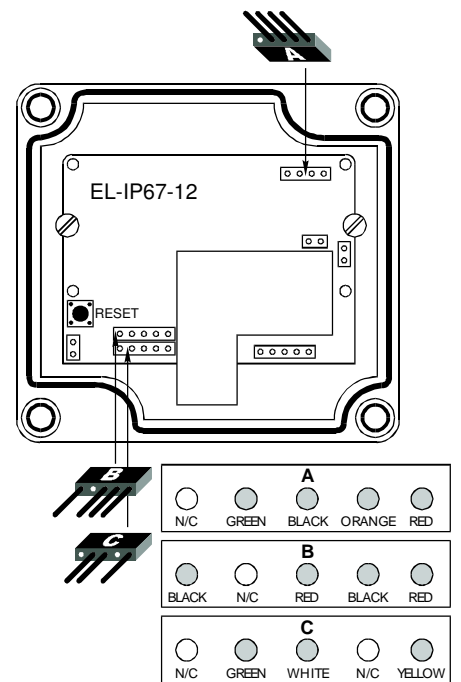
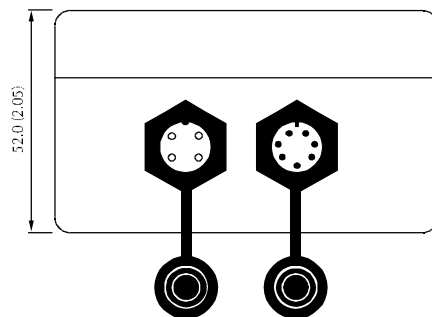
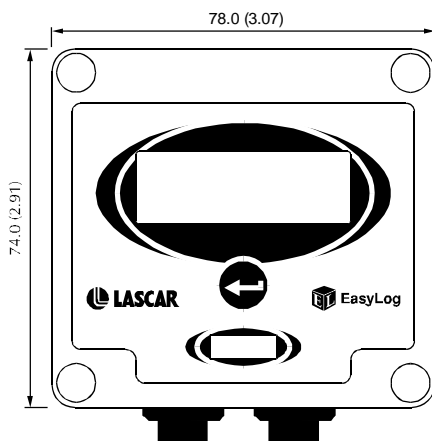
Sensor	Stock Number
Temperature (Pt100)	PT-TYPE PROBE

Input Impedance	200mV Range	> 1G?
	2V, 20V Range	0.5M?
	4-20mA Range	10?

Data Logger			Stock Number EL-IP67-12
Specification	Range	Resolution	Accuracy
Temperature measurement	-200 to + 200°C	0.1°C	± 0.5°C
Low Range *	-200 to + 200 °F	0.1°F	± 1°F
Temperature measurement	-200 to + 850°C	1°C	± 1°C
High Range *	-328°F to + 1562°F	1°F	± 2°F
Voltage measurement	0 to ± 200mV d.c.	100? V d.c.	± 0.05% ± 1 count
	0 to ± 2V d.c.	1mV d.c.	
	0 to ± 20V d.c.	10mV d.c.	
Current measurement	4 to 20mA d.c.	16? A d.c.	± 0.1% ± 1 count
Battery	3.6V C-size Lithium Thionyl Chloride		
Serial link	RS 232 or InfraRed		
Sensor connection	via 2,3 or 4 pins on main connector		
Memory	up to 8000 samples**		
Sample rate	1 sample per 5 seconds to 1 per 12 hours.		

* Sensor dependent ** Depending on sample rate

DIMENSIONS All dimensions in mm (inches)



Specifications liable to change without prior warning

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Issue 9

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Applies to EL-IP67-12/1



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PIN FUNCTIONS

Vin-	Voltage measurement Input. (see Applications below)
Vin+	Voltage measurement Input. (see Applications below)
Iout	Current loop connection. (see Applications below)
Iin	Current loop connection. (see Applications below)

CTS	RS232 Communications connection. (Connect to Pin 7 of 9-way D-Type)
DSR	RS232 Communications connection. (Connect to Pin 4 of 9-way D-Type)
TX	RS232 Communications connection. (Connect to Pin 2 of 9-way D-Type)
RX	RS232 Communications connection. (Connect to Pin 3 of 9-way D-Type)
GND	RS232 Communications connection. (Connect to Pin 5 of 9-way D-Type)

LINK FUNCTIONS

Lk2 & Lk3: Fit these jumpers as shown in the table below.

Measurement Range	Jumper Link Setting
200mV	Lk2 open, Lk3 open
2V	Lk2 closed, Lk3 open
20V	Lk2 closed, Lk3 open
4-20mA	Lk2 open, Lk3 closed
Temperature (Low Range)	Lk2 open, Lk3 open
Temperature (High Range)	Lk2 open, Lk3 open

OPERATING INSTRUCTIONS

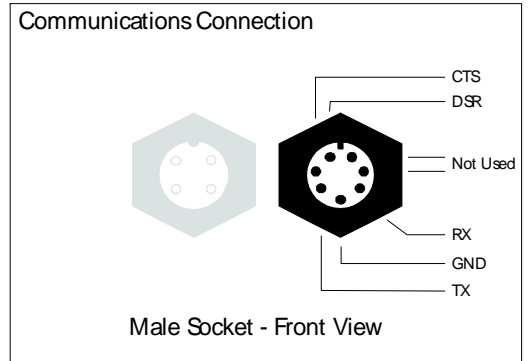
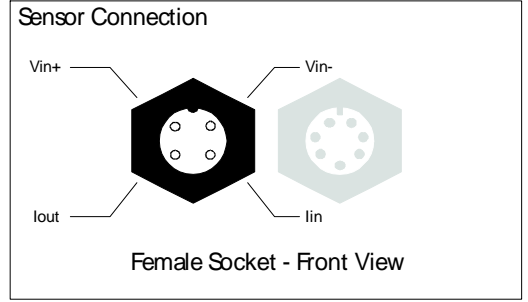
- Step 1:** Simply hold down the button for 2-3 seconds. The Activave symbol will flash once.
Step 2: Place the logger in line of sight of the IR port on your PC.
Step 3: That's it!

BATTERY REPLACEMENT

Only use 3.6V C-size Lithium Thionyl Chloride batteries. (e.g. Sonnenschein part number SL 770/S). Check with your supplier that the battery you are ordering is 'press fit' and is not fitted with solder tags or pins. When replacing the battery, remove the serial communications cable and ensure correct orientation of the battery.

WARNING: Handle lithium batteries carefully - observe warnings on battery casing. Dispose of in accordance with local regulations.

CE Complies with EN 61326-1 (1997) Electrical Equipment for Measurement, Control and Laboratory Use.



IP67 / NEMA 4X RATING

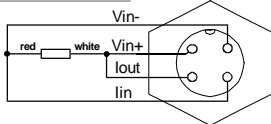
The connectors featured on EL-IP67-12 exceed enclosure rating IP17 when not mated or covered and IP67 when mated or covered (IEC 529). The abrasion resistant thermoplastic boot provides strain relief and accepts cable diameter between 0.195" and 0.265".

The paint coating on the metal housing of the EL-IP67-12 must be unscratched in order to achieve a NEMA 4X rating.

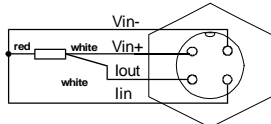
APPLICATIONS NOTE - It is possible to measure parameters other than those outlined below. Use an appropriate sensor and conditioning circuit to convert the parameter to be measured into an in-voltage or current and apply this signal to a suitably scaled EL-IP67-12 module.

Measurement signals must always be isolated from the communications signals.

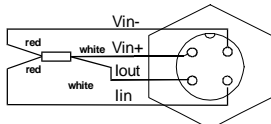
TEMPERATURE



2-wire Pt100 connection. (Lk2 and Lk3 open)

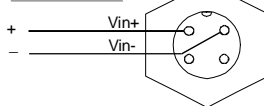


3-wire Pt100 connection. (Lk2 and Lk3 open)

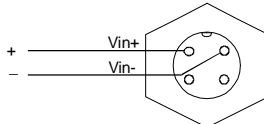


4-wire Pt100 connection. (Lk2 and Lk3 open)

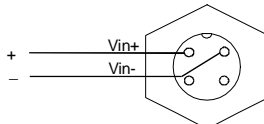
VOLTAGE



200mV d.c. connection. (Lk2 and Lk3 open)

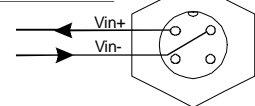


2V d.c. connection. (Lk2 closed, Lk3 open)

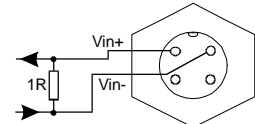


20V d.c. connection. (Lk2 closed, Lk3 open)

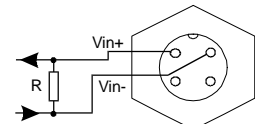
CURRENT



4-20mA Current Loop
Use 4-20mA range with default calibration.
(Lk2 open, Lk3 closed)



200mA d.c. connection. (Lk2 and Lk3 open)
Use 200mV range with annunciators set to mA.
Module will require calibration.



For higher ranges, use 200mV range and $R = \frac{0.2}{I}$
where I = 2A or 20A fsd.
(Lk2 and Lk3 open)
Module will require calibration.

Female Socket - Front View

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