

# D-116-300

## 4-20mA Current Loop USB Data

This data logger measures and stores up to 32,000 current loop readings over a 4-20mA measurement range. The user can easily set up the logging rate and start time, and download the stored data by plugging the module straight into a PC's USB port and running the purpose designed software under Windows 98, 2000 or XP. The data can then be graphed, printed and exported to other applications. The data logger is supplied complete with a long-life lithium battery. Correct functioning of the unit is indicated by a flashing red and green LED. The data logger features a pair of screw terminals and is supplied complete with a set of measurement leads terminating in crocodile clips. The down loaded data produces a txt file with date, time and data. Easy to open in an excel file. The down load date also produces a chart.

### FEATURES

- 4-20mA Current Loop Measurement Range
- Logging Rates between 1s and 12hr
- Stores 32,000 readings
- Connection via two screw terminals
- USB Interface for Set-up and Data Download
- User-Programmable Alarm Thresholds
- Red and Green LED Status Indication
- Replaceable Internal Lithium Battery



### WINDOWS CONTROL SOFTWARE

Easy to install and use, the control software runs under Windows 98, 2000 and XP (Home and Professional Editions). It allows the user to set up and download any EL-USB-4. The latest version of the control software may be downloaded from [www.lascarelectronics.com](http://www.lascarelectronics.com).

### ORDERING INFORMATION

Standard Data Logger (Data Logger, Measurement Leads, Software on CD and Battery)	Stock Number D-116-300
Replacement Battery	BAT 3V6

### DATA LOGGER SET-UPS

- Logger Name
- Logging Rate (1 s, 10s, 1 m, 5m, 30m, 1 hr, 6hr, 12hr)
- High and Low Alarms
- Start Date and Start Time

### SPECIFICATIONS

3 Specification	Min.	Typ.	Max.	Unit
4-20mA d.c. measurement range		4-20		mA d.c.
Internal resolution		+ 0.05		mA d.c.
Accuracy (overall error)		+ 1		+
Logging rate	every 1s		every 12hr	-
Operating temperature range	-35 (-31)		+80 (176)	°C (°F)
1/2AA 3.6V Lithium Battery Life*	1			Year

- depending on ambient temperature, logging rate and use of alarm LEDs.

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### LED FLASHING MODES

EL-USB-4 features a red and a green LED.

The LEDs on an EL-USB-4 will flash in one of the following ways, assuming an alarm hold is turned off (exact timings to be confirmed).

- Green single flash, every 30 seconds	Logger primed and ready to start.
- Green single flash, every 10 seconds	Logging in progress, last stored value OK
- Red single flash, every 10 seconds	Logging in progress, the last stored reading is equal to or exceeds the low alarm level (If hold is turned on, then a stored value is equal to or exceeds the low alarm level)
- Red double flash every 10 seconds	Logging in progress, the last stored reading is equal to or exceeds the high alarm level (If hold is turned on, then a stored value is equal to or exceeds the high alarm level)
- Green single flash, every 20 seconds	Low battery, logging in progress, the last stored value OK
- Red single flash, every 20 seconds	Low battery, logging in progress, the last stored value is equal to or exceeds the low alarm level
- Red double flash, every 20 seconds	Low battery, logging in progress, the last stored value is equal to or exceeds the high alarm level
- Green double flash, every 20 seconds	Logger is full, last stored value OK
- Red/Green single flash, every 20 seconds, alarm hold turned on	Logger is full, last stored value is equal to or exceeds the low or high alarm level
- No LEDs flash	LEDs disabled during configuration to save battery power and increase logging duration. or Battery dead.

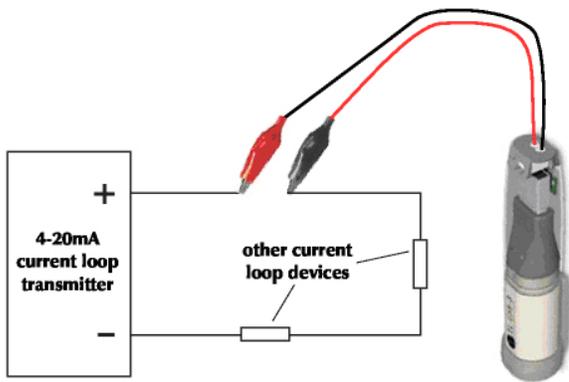
By default hold is disabled. In this mode the red LED will no longer continue to flash after the logged temperature has returned to normal from an alarm condition.

Hold can be turned on via the control software. In this mode the red LED that indicates an alarm condition will continue to flash, even after the logged temperature has returned to normal. The red LED will effectively have latched into its alarm condition. This feature ensures that the user is notified that an alarm level has been exceeded, without the need to download the data from the logger.

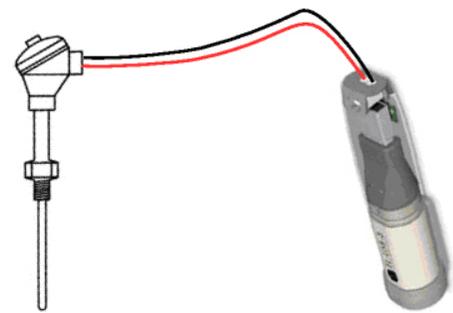
## CONNECTION



## APPLICATIONS



EL-USB-4 fitted to a 4-20mA current loop transmitter



EL-USB-4 fitted to a 4-20mA probe head