EL-WiFi-TH
WiFi Temperature & Humidity Data Logging Sensor

FEATURES

- Temperature and humidity data logging sensor
- WiFi capability and integrated display
- Wireless connectivity to PC via WiFi
- Easy sensor set-up using free PC software
- View and analyse multiple sensors using the PC application, including immediate graphing of historic data
- Measurement range from -20 to +60°C (-4 to +140°F)
- Humidity Measurement range from 0 to 100%
- 802.11b compliant
- Capable of logging greater than 500,000 data set entries
- Sensor memory stores all data even if WiFi is temporarily disconnected
- IP55
- Rechargeable internal lithium polymer battery
- Configurable high and low alarms with indicator
- Max & Min readings
- Low battery indicator
- WiFi connection indicator
- USB port used for recharging
- Supplied with wall bracket and micro USB lead

The EL-WiFi-TH sensor measures the temperature and humidity of the environment in which it is situated. Data is transmitted wirelessly via a WiFi network to a PC and viewed using a free software package. During configuration the sensor will search for an existing wireless network whilst physically connected to the PC. It can then be placed anywhere within range of the network. If the sensor temporarily loses connectivity with the network, it will log readings until it is able to communicate again with the PC application (max 60 days at 10 second sample interval). The range of the sensor can be increased by using WiFi extenders.

This EL-WiFi-TH is a low powered battery device. When configured using typical sampling periods (e.g. once every 60 seconds) the sensor will operate for over one year. The battery can then be recharged via a PC or USB +5V wall adapter using the USB lead provided.

The battery is safely charged when the unit is operating between 0 to +40°C (+32 to +104°F). It is protected against charging outside this temperature range. Sensor readings may be inaccurate during battery charging.

The software installed on the PC will allow set-up, data logging and data review. Set-up features will include sensor name, °C/°F, sample rate, and high/low alarms. Once configured, historic data can be viewed via the graphing tool or exported into Excel. This software is available for free from www.lascarelectronics.com.

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This sensor stands alone by itself on a horizontal surface and comes with a wall bracket that can be screwed onto a wall or flat surface. The sensor clips into the bracket.

All EL-WiFi sensors are thoroughly tested pre-release but the sensor may experience compatibility issues with certain WiFi networks. In this instance we recommend the use of network accessories available on the Lascar website.

Specifications	Minimum	Typical	Maximum	Unit
Battery life		>1*		Year
USB supply voltage	4.5v		5.5v	V d.c.
Temperature measurement range	-20 (-4)		+60 (+140)	°C (°F)
Humidity measurement range	0		100	%RH
Internal resolution		+/- 0.5		°C
Temperature accuracy (overall error between -10°C and +60°C)		+/- 1.0		°C
Humidity accuracy (overall error between 20%RH and 80%RH)		+/- 3.0		%RH
Logging rate (user configurable)	Every 10s	30 seconds	Every 12hrs	Transmisson rate
Operating temperature range	-20 (-4)		+60 (+140)	°C (°F)

* Typical but will be less if frequent transmissions

Warning - do not exceed operating temperatures

EL-WiFi CONNECTED VIA USB FOR INITIAL SETUP

HARDWARE

• Battery: Rechargeable via USB connection.
• ARM MCU.
• 1x microUSB Type B (bottom of unit) for connection of unit to PC. 0.5m USB cable supplied.

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LCD SCREEN SHOTS

1) NORMAL DISPLAY - CURRENT TEMPERATURE

SOLID IF SIGNAL STRENGTH >0 OTHERWISE FLASHING

FLASHES IF ALARM EVENT

LOW + BATTERY SYMBOL FLASHING IF BATTERY <2

MAX
MIN
LOW
23.5 °C
45 %RH
EL-WiFi-TH

2) MAXIMUM RECORDED VALUES SINCE LAST RESET

MAX
35 °C
86 %RH
EL-WiFi-TH

3) MINIMUM RECORDED VALUES SINCE LAST RESET

MIN
-03.5 °C
12 %RH
EL-WiFi-TH

4) RECEIVED SIGNAL STRENGTH INDICATOR (RSSI) (VALUE BETWEEN 0 & 10)

SOLID IF >0 OTHERWISE FLASHING

8
EL-WiFi-TH

OR

5) DATA SYNCING

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PHYSICAL DIMENSIONS
All dimensions in millimetres (mm)

ADDITIONAL FUNCTIONALITY

When the user cycles through to the Recieved Signal Strength Indicator (RSSI) screen the unit automatically transmits a dummy message every 2 seconds to enable an RSSI reading to be displayed. If there is any outstanding data waiting to be transmitted, this data will be sent at the same time but if not it'll just send the dummy message and the next data package will be sent as per the unit configuration.

When on Max or Min screen, holding the button for 3 seconds will clear the stored values.

The sensor can be restarted by holding the button for 10 seconds until the screen blanks and LOW is shown flashing in the top right hand corner of the display. The sensor will retain all settings but will lose any data that has not been transferred to the PC. The sensor can be reset to factory state by holding the button for 20 seconds but this will delete all settings and stored data.

Note: neither the restart or the reset will delete data already transferred to your PC.

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THE EASYLOG USB RANGE

Each EL-USB data logger features the direct-to-USB connection and easy-to-use functionality that the range is known for. The range comprises of the following data loggers:

Part No	Function	Range	Accuracy (overall error) Typ.	Accuracy (overall error) Max.	Readings	Battery	Battery Life*
EL-USB-1	Temperature	-35 to +80°C (-31 to +176°F)	±1°C (±2°F)		16,382	3.6V ½AA	1 Year
EL-USB-1-LCD	Temperature with LCD	-35 to +80°C (-31 to +176°F)	±0.5°C (±1°F)	±1.5°C (±3°F)	16,382	3.6V ½AA	1 Year
EL-USB-1-PRO	High Temperature	-40 to +125°C (-40 to +257°F)	±0.2°C (±0.4°F)	±0.5°C (±1°F)	32,510	3.6V ⅔AA	3 years
EL-USB-1-RCG	Temperature with rechargeable battery	-20 to +60°C (-4 to +140°F)	±1°C (±2°F)		32,510	Lithium Ion	1 month (rechargeable)
EL-USB-2	Temperature, humidity & dew point	-35 to +80°C (-31 to +176°F) / 0 to 100%RH	±0.5°C (±1°F) / ±3%RH	±2°C (±4°F) / ±6.0%RH	16,382	3.6V ½AA	1 year
EL-USB-2+	Increased accuracy temperature, humidity & dew point	-35 to +80°C (-31 to +176°F) / 0 to 100%RH	±0.3°C (±0.6°F) / ±2.0%RH	±1.5°C (±3°F) / ±4.0%RH	16,382	3.6V ½AA	1 year
EL-USB-2-LCD	Temperature, humidity & dew point with LCD	-35 to +80°C (-31 to +176°F) / 0 to 100%RH	±0.5°C (±1°F) / ±3.0%RH	±2°C (±4°F) / ±6.0%RH	16,379	3.6V ½AA	1 year
EL-USB-2-LCD+	Increased accuracy temperature, humidity & dew point with LCD	-35 to +80°C (-31 to +176°F) / 0 to 100%RH	±0.3°C (±0.6°F) / ±2.0%RH	±1.5°C (±3°F) / ±4.0%RH	16,379	3.6V ½AA	1 year
EL-USB-3	Voltage	0 to 30V d.c.	±1%		32,510	3.6V ½AA	1 year
EL-USB-4	Current loop	4 to 20mA	±1%		32,510	3.6V ½AA	1 year
EL-USB-5	Counter, Event & State	N/A		±3 secs/24 hrs	32,510	3.6V ½AA	1 year
EL-USB-TC	Thermocouple (J, K and T-type) K-type probe included	-200 to +1350°C (-328 to +2462°F) (K-type) / -200 to +1190°C (-328 to +2174°F) (J-type) / -200 to +390°C (-328 to +734°F) (T-type)	±1°C (±2°F)		32,510	3.6V ½AA	6 months
EL-USB-TC-LCD	Thermocouple with LCD (J, K and T-type) K-type probe included	-200 to +1350°C (-328 to +2462°F) (K-type) / -200 to +1190°C (-328 to +2174°F) (J-type) / -200 to +390°C (-328 to +734°F) (T-type)	±1°C (±2°F)		32,510	3.6V ½AA	6 months
EL-USB-CO	Carbon monoxide	0 to 1000ppm **NOT A LIFE SAVING DEVICE**	±6ppm		32,510	3.6V ½AA	3 months
EL-USB-CO300	Carbon monoxide	0 to 300ppm **NOT A LIFE SAVING DEVICE**	±4ppm		32,510	3.6V ½AA	3 months
EL-USB-LITE	Low cost temperature	-10°C to +50°C (+14 to +122°F)	±1°C (±2°F)		4,080	CR1620 Lithium coin cell	1 month
EL-USB-RT	Real-time temperature & humidity monitor	-20 to +70°C (-4 to +158°F)	±1.5°C (±3°F) / ±4.5%RH		7 days	N/A	N/A

*Depending on logging rate, ambient temperature, and use of alarm LED

Module House
Whiteparish, Salisbury
Wiltshire SP5 2SJ
UK
T +44 (1794) 884567
F +44 (1794) 884616
E sales@lascar.co.uk

4258 West 12th Street
Erie
PA 16505
USA
T +1 (814) 835 0621
F +1 (814) 838 8141
E us-sales@lascarelectronics.com

8th Floor, China Aerospace Centre
143 Hoi Bun Road
Kwun Tong, Kowloon
HONG KONG
T +852 2797 3219
F +852 2343 6187
E saleshk@lascar.com.hk

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