

EL-WiFi-TH - www.pel.eu

WiFi Temperature & Humidity Sensor



- -20 to +60°C (-4 to +140°F) temperature and 0 to 100% humidity measurement range
- Wirelessly stream and view data on the EasyLog Cloud, App or on a PC
- Easy sensor set-up using free PC software application
- View and analyse multiple sensors, including graphing of historic data
- Configurable high and low alarms with indicator
- Sensor memory stores all data even if WiFi is temporarily disconnected



The EL-WiFi-TH measures the temperature and humidity of the environment in which it is situated. Data is streamed wirelessly over any compatible WiFi network and can be viewed on a PC using free software or on the EasyLog Cloud or App.

To configure the sensor for use on a given wireless network, either connect it via USB to a PC running EasyLog WiFi software on the network, or configure wirelessly using the EasyLog Cloud app on a mobile phone with access to the network. The sensor can then be placed anywhere within range of the network, it will log readings until it is able to communicate again with the PC application or EasyLog Cloud (max 30 days at 10 second sample interval).

The sensor is IEEE 802.11bgn* (2.4GHz) compliant, supports WEP, WPA/WPA2 encryption and enterprise networks (PEAP, TTLS, FAST).

EL-WiFi-TH has a protection rating of IP55. The unit is freestanding, but it can be attached to a wall or surface using the bracket provided. The unit can be clipped in and out of the bracket as required.

SPECIFICATIONS

	Minimum	Typical	Maximum	Unit
Battery life		>6		Months
USB supply voltage	4.5	5	5.5	Vdc
Operating temperature range	-20 (-4)		+60 (+140)	°C (°F)
Logging period (user configurable)	10 sec	10 min	12 hrs	
Transmission period (user configurable)	1 min	1 hr	24 hrs	
Temperature measurement range	-20 (-4)		+60 (+140)	°C (°F)
Temperature measurement resolution		0.1 (0.2)		°C (°F)
Temperature display resolution		0.1		
Temperature tolerance		±0.3°C/±0.6°F** (+5 to +60°C/ +41 to +140°F)		°C/°F
Humidity measurement range	0		100	%RH
Humidity measurement resolution		1		%RH
Humidity display resolution		1		
Humidity tolerance (@ 25°C)		±2%RH** (20 to 80%RH)		%RH
IP Rating	IP55 (Bung fully inserted, not permanently powered, device mounted vertically.)			
Dimensions	82 x 70 x 23mm (3.22 x 2.75 x 0.91")***			

* MAC Address starting 98:8B:AD:2..... only.

** Please refer to the charts in this datasheet for more detailed accuracy specifications.

*** Excluding mounting bracket.

ACCESSORIES

PSU-5VDC-USB-USA	USB Mains Power Adapter for USA
PSU USB-UK	USB Mains Power Adapter for UK
PSU USB-EU	USB Mains Power Adapter for EU
EL-WiFi-Alert	Audible and Visual Alarm for EL-WiFi Data Logging Sensors

INCLUDED IN THE BOX

EL-WIFI WALL BRACKET	Wall mounting bracket for EL-WiFi sensors
CABLE USB A-MICRO B	USB Type A to Micro B



CALIBRATION CERTIFICATES NOW AVAILABLE

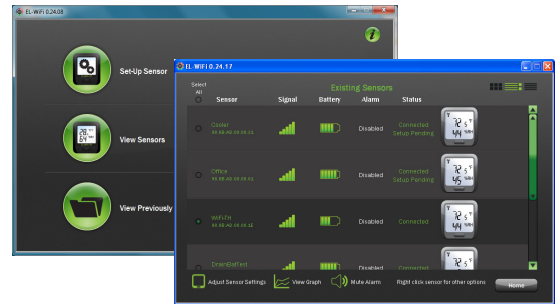


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EL-WiFi-WIN

Lascar's WiFi software* is available as a free download from: www.lascarelectronics.com/software/easylog-wifi. Easy to install and use, EL-WiFi-WIN allows easy connection of sensors to a WiFi network. The user can select where data is stored - the PC or the Cloud.



EasyLog Cloud Your Data. Anytime. Anywhere.

EasyLog Cloud harnesses the power of IoT to automate data logging and alert notifications, enabling you to monitor and manage multiple data logging devices in different locations completely remotely. The system easily scales to meet your needs. Perfect for compact systems with just a few measuring points, or corporate solutions with thousands of devices around the globe.

You will need to create an account at www.easylogcloud.com before setting up your cloud-connected data logger.



Features at a glance*



Store your data logging records securely on the Cloud



Connect multiple users with variable account privileges



Connect data loggers from multiple sites in a single account



Easily access your most important data, anywhere



Remotely manage all of your data logging devices



Never miss a critical event with flexible advanced notifications



Review and analyse your data with powerful graphing functionality



Keep track of data events and system activity with a detailed event log

*Features depend on account type.

BATTERY LIFE AND POWER SUPPLY

The battery can be recharged (unit must be between 0 - 40°C) via a PC, a USB +5V wall adapter, or a portable USB battery pack using the USB lead provided. It can also be permanently powered by a USB wall adapter or USB battery pack. Readings may be affected while the internal battery is being charged. However, once charged, continued connection of the charger will have no effect.

Battery life is dependent on: transmission period, WiFi encryption method, WiFi encryption key rotation frequency (determined by the router/access point), signal strength between router/access point and WiFi device, presence volume and type of WiFi traffic from other devices, sample rate and operating temperature.

Specifications liable to change without prior warning

*Requires Windows 7, 8.1, 10

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SENSOR ACCURACY & INFORMATION

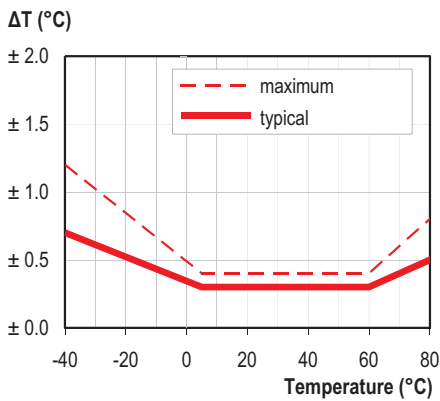
The humidity measuring element in the humidity data loggers can be contaminated through exposure to a variety of compounds. These products should not be kept in proximity to volatile chemicals such as solvents and other organic compounds. Generally speaking, if a material or compound emits a strong odour you should not keep your humidity data logger in close proximity to it. If you would like more information, please contact your local Lascar Electronics office.

Exposure to extreme conditions or chemical vapours will require the following reconditioning procedure to bring the internal sensor back to calibration state:

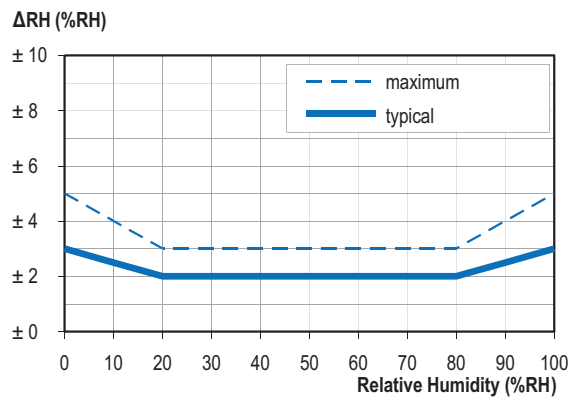
- Baking** 80°C (176°F) at < 5%RH for 36 hours.
- Re-hydration** 20 to 30°C (70 to 90°F) at > 74%RH for 48 hours.

High levels of pollutants may cause permanent damage to the internal sensor.

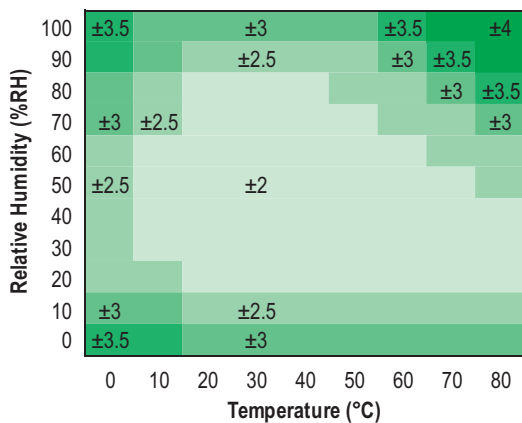
Typical and maximal tolerance for temperature sensor in °C.



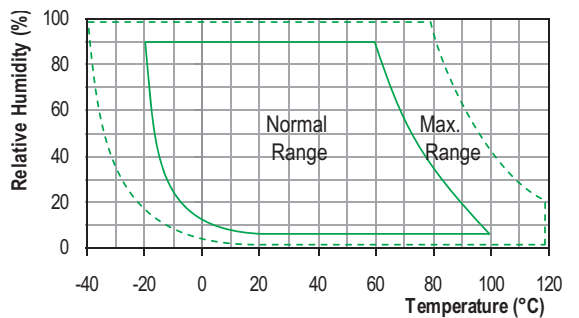
Typical and maximal tolerance at 25°C for relative humidity.



Typical accuracy of relative humidity measurements given in %RH for temperatures 0 to 80°C.



Operating conditions



Long term exposure to humidity levels outside of the 'normal' range may temporarily offset RH measurements (±3%RH after 60 hours). Once returned to less extreme conditions the device will slowly return towards calibration state.

When tracking changes in ambient conditions, the response time of the humidity sensor in your data logger is approximately 20 minutes to reach 90% of the reading. However, if you are measuring step changes in humidity (for example if calibrating the product) it is advised that you leave the unit for up to four hours to ensure that it has enough time to settle at the new level.

It is worth remembering that the value of relative humidity is of course sensitive to temperature variation. As an example, at a relative humidity of ~90%RH at ambient temperature, a variation in temperature of 1°C will result in a change of up to -5%RH. Therefore when comparing multiple devices or calibrating them, any temperature variations must be considered.



EL-WiFi

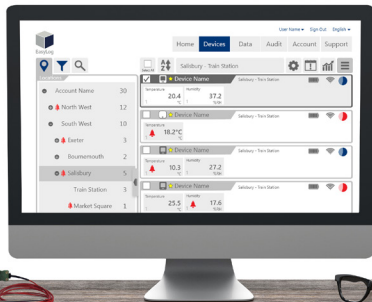


Quick Start Guide

Cloud - based Monitoring with EasyLog Cloud

EasyLog Cloud harnesses the power of IoT to automate data logging and alert notifications, giving you the ability to monitor and manage multiple data logging devices in different locations completely remotely. The system easily scales to meet your needs. Perfect for compact systems with just a few measuring points, or corporate solutions with thousands of devices around the globe.

- View data from multiple sensors
- Assign access to multiple users
- View, analyse and export data
- Set up email alerts providing alarm and status reports
- Broadcast daily summary emails



3 easy steps to get started with your EasyLog WiFi sensor

1. Charge your sensor

Your sensor will arrive partly charged, but for optimum performance you should charge it for 24 hours before use. The sensor will automatically start to recharge when connected to a PC or USB charger using the USB cable provided.

Battery states

The Symbols below show the range of battery states that your device may display.



Battery OK/Charged



Solid with bars

Battery Low



One bar flashes

Battery Charging



Bars cycling

2. Set up your sensor

Set up using the EasyLog Cloud App

- Sign up for an **EasyLog Cloud** account at www.easylogcloud.com.
- Install the **EasyLog Cloud App** from the **App Store** or **Google Play**.
- Run the App and sign in to your **EasyLog Cloud** account.
- Select **☰**, followed by **Set Up Device**, and then **WiFi Sensor**.
- Follow the in-app instructions to connect your sensor.
- Once connected, you can use the App to view your data and update sensor settings.



Set up using the PC software

- Download the latest **WiFi PC Software** from the Downloads section at easylogcloud.com/help.
- Install and run the software, accepting any firewall or security warnings.
- Select **Set-Up Device** and choose one of the following options:
 - **On The Cloud** - for remote access to your device and data. You can sign up for an **EasyLog Cloud** account at www.easylogcloud.com.
 - **On This PC** - to store data on your own PC.
- Follow the on-screen instructions to connect your sensor.

Note: The PC software also allows you to apply sensor firmware updates. We recommend updating to the latest firmware.



3. Position your sensor

When placing your sensors, use the signal icon to ensure the device remains within range of the network, consider local heat sources and radio obstructions when positioning your device. Any physical obstructions between the router/access point and sensor will affect the signal range. In this case WiFi extenders can be used to increase the range of your network.



Signal states

The Symbols below show the range of signal states that your device can display.

Signal icon not displayed



Sensor is not set-up

Signal icon flashes




Sensor is trying to communicate

Signal icon solid



Sensor is successfully communicating

Technical Support

Use the  button on the **EasyLog WiFi Sensor Software** home screen for more information on how to set up your devices. You can also view **Help Guides** and other support resources at www.easylogcloud.com.



Important safety information

WARNING: Failure to follow these safety instructions could result in fire, electrical shock, other injury or damage.

Sensor's battery replacement

The rechargeable battery should only be replaced by an authorised supplier.

Repairing or modifying

Never attempt to repair or modify Lascar's products. Dismantling Lascar's products, including the removal of external screws, may cause damage that is not covered under the warranty. Servicing should only be provided by an authorised supplier. If the Lascar product has been submerged in water, punctured, or seriously damaged do not use it and return it to an authorised supplier.

Charging

Only use a USB Power Adaptor or a USB port to charge Lascar products. Read all safety instructions for any third party products and accessories before use with this product. We are not responsible for the operation of any third party accessories or their compliance with safety and regulatory standards. We do not recommend charging the battery when the unit is at 40°C (104°F) or above. Some of our products employ safety features to prevent this.

Using connectors and ports

Never force a connector into a port; check for obstruction in the port, make sure that the connector matches the port and that you have positioned the connector correctly in relation to the port. If the connector and port do not join with reasonable ease they probably do not match and should not be used.

Disposal and recycling

You must dispose of Lascar's products according to relevant laws and regulations. Lascar's products contain electronic components and lithium polymer batteries and therefore they must be disposed of separately from household waste.

