

EL-WiFi-TH+

High Accuracy WiFi Temperature and Humidity Sensor



- -20 to +60°C (-4 to +140°F) and 0 to 100% humidity measurement range
- Wirelessly stream and view data on the FilesThruTheAir™ 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. This high accuracy sensor is typically accurate to $\pm 0.2^{\circ}\text{C} / \pm 0.4^{\circ}\text{F}$ (+5 to +60°C/+41 to +140°F) and $\pm 1.8\%RH$ (10 to 90%RH @ 25°C). Data is streamed wirelessly over any WiFi network and can be viewed on a PC using free software or on the FilesThruTheAir™ Cloud.

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 or FilesThruTheAir™ Cloud (max 30 days at 10 second sample interval).

The sensor is IEEE 802.11b compliant, supports WEP, WPA/WPA2 encryption and enterprise networks*.

The EL-WiFi-TH+ has a protection rating of IP55. The unit is freestanding, but can be attached to a wall or surface using the bracket provided.

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		0.01		°C
Temperature display resolution		0.5		°C
Temperature accuracy		$\pm 0.2^{\circ}\text{C} / \pm 0.4^{\circ}\text{F}$ (+5 to +60°C/ +41 to +140°F)	$\pm 0.8^{\circ}\text{C} / \pm 1.6^{\circ}\text{F}$ (-20 to +60°C/ -4 to +140°F)	°C/°F
Humidity measurement range	0		100	%RH
Humidity measurement resolution		0.1		%RH
Humidity display resolution		1.0		%RH
Humidity accuracy (@ 25°C)		$\pm 1.8\%RH$ (10 to 90%RH)	$\pm 4.0\%RH$ (0 to 100%RH)	%RH
Dimensions	82 x 70 x 36mm (3.22 x 2.75 x 1.41")			

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

Lascar now offers a Traceable Calibration Certificate Service on Temperature Data Loggers. Using reference equipment which has been calibrated by a UKAS/NIST accredited laboratory and using apparatus traceable to national or international standards.



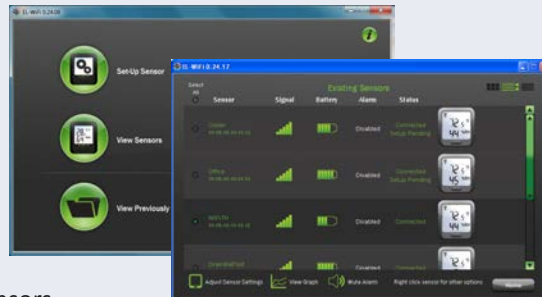
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EL-WiFi-WIN

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 - Powered by FilesThruTheAir™

Interact with sensors via any internet-enabled device. Manage and monitor sensors, access event logs and set up email alerts. A Cloud account is created during the WiFi sensor set-up process using EL-WiFi-WIN with the choice of three account types depending on which features are required.

FilesThruTheAir™ App

For users on-the-go, download the FilesThruTheAir™ app on the App Store and GooglePlay. This app extends Cloud access and visibility to smartphone and tablet users, delivering an enhanced user experience and features otherwise unavailable via the traditional mobile web interface.



Download the latest version of the software free of charge from www.lascarelectronics.com/software/easylog-wifi

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

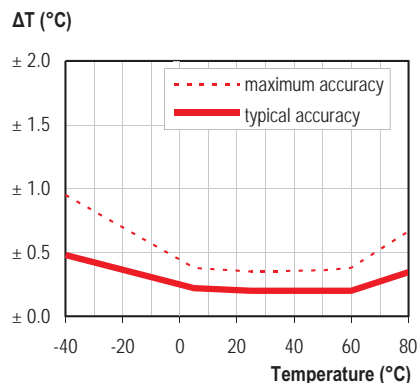
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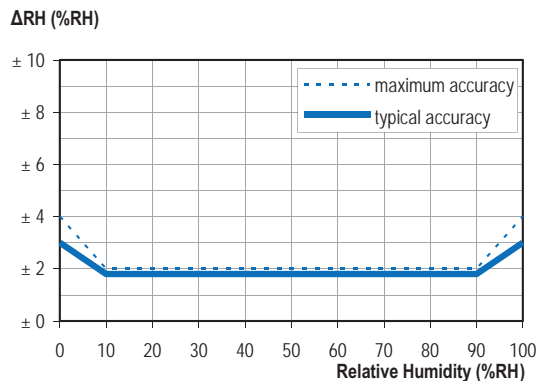


SENSOR ACCURACY & INFORMATION

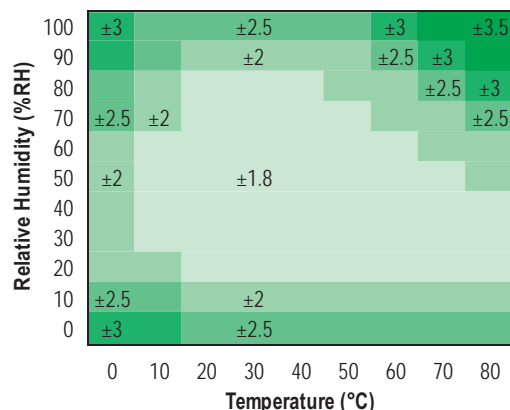
Typical and maximal tolerance for temperature sensor in °C.



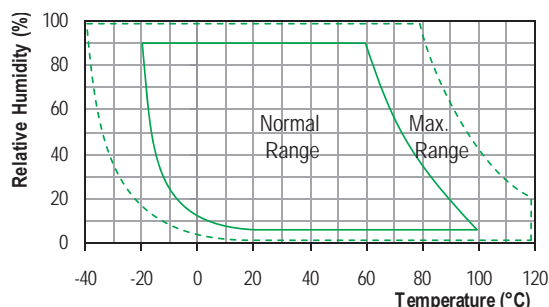
Typical and maximal tolerance at 25°C for relative humidity.



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 ($\pm 3\%$ 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 $\sim 90\%$ 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.