EL-WiFi-TH
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

<table>
<thead>
<tr>
<th>Specifications</th>
<th>Minimum</th>
<th>Typical</th>
<th>Maximum</th>
<th>Unit</th>
</tr>
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<tbody>
<tr>
<td>Battery life</td>
<td>&gt;6</td>
<td></td>
<td></td>
<td>Months</td>
</tr>
<tr>
<td>USB supply voltage (@500mA)</td>
<td>4.5</td>
<td>5.0</td>
<td>5.5</td>
<td>Vdc</td>
</tr>
<tr>
<td>Operating temperature range</td>
<td>-20 (-4)</td>
<td>+60 (+140)</td>
<td>°C (°F)</td>
<td></td>
</tr>
<tr>
<td>Logging period (user configurable)</td>
<td>10 sec</td>
<td>10 min</td>
<td>12 hrs</td>
<td></td>
</tr>
<tr>
<td>Transmission period (user configurable)</td>
<td>1 min</td>
<td>1 hr</td>
<td>24 hrs</td>
<td></td>
</tr>
<tr>
<td>Temperature measurement range</td>
<td>-20 (-4)</td>
<td>+60 (+140)</td>
<td>°C (°F)</td>
<td></td>
</tr>
<tr>
<td>Temperature measurement resolution</td>
<td>0.1 (0.2)</td>
<td></td>
<td></td>
<td>°C (°F)</td>
</tr>
<tr>
<td>Temperature display resolution</td>
<td>0.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temperature tolerance</td>
<td>±0.3°C/±0.6°F** (+5 to +60°C/ +41 to +140°F)</td>
<td>°C/°F</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humidity measurement range</td>
<td>0</td>
<td>100</td>
<td>%RH</td>
<td></td>
</tr>
<tr>
<td>Humidity measurement resolution</td>
<td>1</td>
<td></td>
<td>%RH</td>
<td></td>
</tr>
<tr>
<td>Humidity display resolution</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humidity tolerance (@25°C)</td>
<td>±2%RH** (20 to 80%RH)</td>
<td>%RH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IP Rating</td>
<td>IP55</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimensions</td>
<td>82 x 70 x 23mm (3.22 x 2.75 x 0.91&quot;)***</td>
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</tr>
</tbody>
</table>

ACCESSORIES

- PSU-SVDC-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

* MAC Address starting 98:8B:AD:2....... only.
** Please refer to the charts in this datasheet for more detailed accuracy specifications.
*** Excluding mounting bracket.

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. For more information please see www.lascarelectronics.com.
EL-WiFi-TH

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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.

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

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.

www.lascarelectronics.com/data-loggers