



Ω OMEGA[®] User's Guide



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OM-EL-WiFi-T-PLUS
High Accuracy WiFi Temperature
Data Logging Sensor



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It is the policy of OMEGA Engineering, Inc. to comply with all worldwide safety and EMC/EMI regulations that apply. OMEGA is constantly pursuing certification of its products to the European New Approach Directives. OMEGA will add the CE mark to every appropriate device upon certification.

The information contained in this document is believed to be correct, but OMEGA accepts no liability for any errors it contains, and reserves the right to alter specifications without notice.

WARNING: These products are not designed for use in, and should not be used for, human applications.

OM-EL-WiFi-T-PLUS

High Accuracy WiFi Temperature Data Logging Sensor



FEATURES

- Temperature data logging sensor with integrated display
- Easy sensor set-up using the free PC software application (Downloadable from www.omega.com)
- Wirelessly stream data to PC or Cloud* via WiFi
- View and analyze multiple sensors, including immediate graphing of historic data
- Selectable measurement scale °C / °F
- Temperature accuracy $\pm 0.1^{\circ}\text{C}$ (-10 to $+60^{\circ}\text{C}$)
- Temperature measurement resolution to 0.01°C
- Temperature display resolution to 0.01°C
- Temperature measurement range -20 to $+60^{\circ}\text{C}$ (-4 to $+140^{\circ}\text{F}$)
- Operating temperature range -20 to $+60^{\circ}\text{C}$ (-4 to $+140^{\circ}\text{F}$)
- Configurable high and low alarms with indicator
- Maximum and Minimum readings
- Low battery indicator
- WiFi connection indicator
- Signal strength indicator
- 802.11b compliant
- Protection rating IP55
- Rechargeable internal lithium polymer battery
- Fully featured LCD segment display
- Sensor memory stores all data even if WiFi is temporarily disconnected
- USB port used for recharging (can only be recharged when unit is between 0 - 40°C)
- Firmware upgradable via USB (Downloadable from the Omega website)
- PC can be switched off without loss of data
- Supplied with wall bracket and micro USB lead

The OM-EL-WiFi-T-PLUS sensor measures the temperature of the environment in which it is situated. This high accuracy version is accurate to $\pm 0.1^{\circ}\text{C}$. Data is streamed wirelessly over any WiFi network and can be viewed on a PC using our free software package or on the OM-EL-WiFi-Cloud*. During configuration, the sensor will search for an existing wireless network while 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 cloud service (max 120 days at 10 second sample interval). Although the OM-EL-WiFi sensors have an impressive range, this can be increased by using WiFi extenders.

* OM-EL-WiFi-Cloud due to be released late 2013

www.omega.com

The OM-EL-WiFi-T-PLUS is a low powered battery device. When configured using typical transmission periods (e.g. once every 5 minutes) the sensor will operate for over one year (*at room temperature*). The battery can then be recharged via a PC or USB +5V wall adapter using the USB lead provided or can be permanently powered by the USB wall adapter.

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 to download for free from www.omega.com.

The sensor is a freestanding unit, however, it can be attached to a wall or vertical surface using the bracket and screws / sticky pad provided.

Specifications	Minimum	Typical	Maximum	Unit
Battery life		>1*		Year
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 (0.01)		°C (°F)
Temperature display resolution		0.01 (0.01)		°C (°F)
Temperature accuracy (-10 to +60 °C)		±0.1 (±0.2)		°C (°F)
Temperature accuracy (-20 to +60 °C)		±0.15 (±0.3)		°C (°F)

* Dependant on transmission rate, may be less with frequent transmissions

Warning - do not exceed operating temperatures

PHYSICAL DIMENSIONS

All dimensions in millimetres (inches)



WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA's WARRANTY adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components in which wear is not warranted, include but are not limited to contact points, fuses, and triacs.

OMEGA is pleased to offer suggestions on the use of its various products. However, OMEGA neither assumes responsibility for any omissions or errors nor assumes liability for any damages that result from the use of its products in accordance with information provided by OMEGA, either verbal or written. OMEGA warrants only that the parts manufactured by the company will be as specified and free of defects. OMEGA MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED, EXCEPT THAT OF TITLE, AND ALL IMPLIED WARRANTIES INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. LIMITATION OF LIABILITY: The remedies of purchaser set forth herein are exclusive, and the total liability of OMEGA with respect to this order, whether based on contract, warranty, negligence, indemnification, strict liability or otherwise, shall not exceed the purchase price of the component upon which liability is based. In no event shall OMEGA be liable for consequential, incidental or special damages.

CONDITIONS: Equipment sold by OMEGA is not intended to be used, nor shall it be used: (1) as a "Basic Component" under 10 CFR 21 (NRC), used in or with any nuclear installation or activity; or (2) in medical applications or used on humans. Should any Product(s) be used in or with any nuclear installation or activity, medical application, used on humans, or misused in any way, OMEGA assumes no responsibility as set forth in our basic WARRANTY/DISCLAIMER language, and, additionally, purchaser will indemnify OMEGA and hold OMEGA harmless from any liability or damage whatsoever arising out of the use of the Product(s) in such a manner.

RETURN REQUESTS/INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence.

The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:

1. Purchase Order number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR **NON-WARRANTY** REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

1. Purchase Order number to cover the COST of the repair,
2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.

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