

# MODULAR WEATHER STATION

WMS-16 Series  
Starts at

**\$2390**



- ✓ Durable Modular Design
- ✓ Wind Speed and Direction
- ✓ Air Temperature and Relative Humidity
- ✓ Barometric Pressure and Precipitation
- ✓ Datalogging Ability
- ✓ Tripod, Mast and Solar Radiation Shield

The OMEGA® WMS-16 Modular Weather Station is a computer-based meteorological system designed as a "user friendly" solution for data storage and real-time monitoring of weather conditions. The standard package includes: wind speed, wind direction, air temperature, relative humidity for temp/humidity, barometric pressure, precipitation, data logging, tripod and mast, solar radiation shield, cables and mounts. Additional sensor options include solar radiation, water or soil temperature, auxiliary air temperature, or rain gauge upgrade.

The unique modular system design provides plug-and-play functionality for adding or replacing sensors. The WMS-16 is supplied with an attractive desktop data acquisition module with a memory capacity of 128KB RAM (approximately 45 days at 15 minute intervals with 6 sensors). The WMS-16D data acquisition module includes selectable averaging intervals, 12-bit analog conversion, 0.1% FS accuracy, 2 alarm outputs, and optional modem communications. The standard system includes a 120 Vac power adaptor and RS232 serial port for connection to a personal computer. For outdoor or remote applications, a NEMA 4X enclosure and rechargeable battery option is offered.

All units shown  
smaller than  
actual size.

WMS-16NEMA-S,  
modular weather  
station with NEMA  
enclosure and solar  
power, \$3308.



WMS-16NEMA, modular  
weather station with  
NEMA enclosure, \$2794.



The optional software package provides a real-time text display, as well as a real-time graphical display, or an ASCII row and column format may be selected. In addition, the data acquisition module is compatible with Windows® HyperTerminal software and other terminal programs.

## SPECIFICATIONS

### Data Acquisition Module

#### Reporting Units:

English or metric, all measurements

**Operating Power:** 10 to 16 Vdc

**Power Consumption:** 60 mA max

**Serial Port:** 9-pin d-sub connector, selectable baud rate, flow control

**Memory:** 128KB RAM, non-volatile (45 days at 15 minute intervals with 6 sensors)

#### Operating Temperature

#### Transducers:

-40 to 60°C (-40 to 140°F)

**Data Acquisition Module:**

-40 to 60°C (-40 to 140°F)

#### Timekeeping Format:

MM/DD and HH:MM

**Accuracy:** ±30 seconds/month

#### Barometric Pressure

**Range:** 28.25 to 30.75 inches Hg

#### Measurement Span:

2.50 inches Hg (85 mbar)

**Resolution:** ±0.01 inch Hg  
or ±0.3 mbar

**Altitude Offset:** 0 to 3048 m

(0 to 10,000'), screwdriver adjustable

**Absolute Accuracy:** 0.05 inches Hg

#### Wind Speed

**Range:** 0 to 125 mph (0-57 m/s)

**Resolution:** > 0.1 mph

**Accuracy:** ±3% for sustained  
2 second average

**Starting Threshold:** 0.8 mph

**Time Constant:** 2 seconds

#### Wind Direction

**Range:** 0 to 360°

**Resolution:** > 1°

**Accuracy:** ±3%

#### Starting Threshold:

WMS-16-2E: 1.2 mph

WMS-16-5E: 0.5 mph

**Temperature Range:** -40 to 60°C  
(-40 to 140°F)

**Resolution:** > 0.1°F

**Accuracy:** ±1°F

#### Relative Humidity

**Range:** 0 to 100% RH

**Accuracy:** ±3% midscale,  
±6% @ 20% & 90% RH

#### Rain Gauge

**Resolution:** 0.01"/tip

**Accuracy:** ±2% up to 3"/hour

**Max Rate:** Unlimited

#### Solar Radiation (Optional)

**Sensor:** Photodiode detector

**Spectral Response:** 0.4 to 1.1 microns

**Sensitivity:** 100 mV/1000 w/m<sup>2</sup> approx

**Accuracy:** ±5%



WMS-16 modular weather station, \$2390



**MOST POPULAR MODEL HIGHLIGHTED!**

To Order (Specify Model Number)		
Model No.	Price	Description
<b>WMS-16</b>	<b>\$2390</b>	Modular weather station, includes desktop data acquisition module (WMS-16D), 115/230 Vac power supply (WMS-16P), wind speed/direction sensor (WMS-16-2E), temperature/RH sensor (WMS-16TH), radiation shield (WMS-16THS), barometric pressure sensor (WMS-16BP), rain gauge (WMS-16RC) and tripod/sensor mast (WMS-16TM)
WMS-16EPA	2485	WMS-16 with high sensitivity wind sensor (WMS165E replaces WMS-16-2E sensor)
WMS-16NEMA	2794	WMS-16 with NEMA 4X data acquisition module with 110/220 Vac charger and 7 A/hr battery (WMS-16N-B replaces WMS-16D and WMS-16P)
WMS-16NEMA-S	3308	WMS-16 with NEMA 4X data acquisition module with solar panel charger and 7 A/hr battery (WMS-16N-A replaces WMS-16D and WMS-16P)
WMS-18	2395	Portable weather station in a 9 kg (20 lb) 51 x 43 x 20 cm (20 x 17 x 8") carrying case. Includes sensors for wind speed/direction, temperature and a data logger with 128K RAM and 7 A/hour battery for up to 5 days between charging with 110/220 Vac charger

Comes complete with operator's manual.

### Individual Components for Custom Systems

Model No.	Price	Description
WMS-16D	\$995	Data acquisition module in desktop enclosure, includes a serial cable
WMS-16N-B	1585	Data acquisition module in NEMA 4X enclosure 110/220 Vac charger assembly and 7 A/hour battery
WMS-16N-A	1990	Data acquisition module in NEMA 4X enclosure 10 watt solar power charger assembly and 7 A/hour battery
WMS-16P	45	110/220 Vac power supply
WMS-16TM	125	1.5 m (5') tripod and 1.5 m (5') sensor mast [2.4 m (8') total]
WMS-16-2E	285	Wind speed/direction sensor, 12 m (40') cable (for WMS-16)
WMS-16-5E	380	High sensitivity wind sensor, 12 m (40') cable (for WMS-16EPA)
WMS-16TH	345	Outdoor temperature and relative humidity sensor, 12 m (40') sensor*
WMS-16THS	125	Solar radiation shield for temp/RH sensor
WMS-16BP	265	Barometric pressure sensor 0.45 m (18") cable (sensor always to be near base)
WMS-16RC	165	Rain gauge, includes mounting arm and 12 m (40') cable*
WMS-16SR	635	Solar radiation sensor, includes mounting arm and 12 m (40') cable*
WMS-16T	95	Auxiliary air temperature sensor, 12 m (40') cable*
WMS-16TWS	115	Water or soil temperature sensor, 12 m (40') cable*
RG-2501/40	390	Tipping bucket rain gauge, 12 m (40') cable
WMS-16MAC	235	Telephone modem, AC powered
WMS-16MDC	460	Telephone modem, DC powered
WMS-16STR	345	Windows graphical software package

\* Standard length for all cables between base unit and sensors are 12 m (40'). To order items with longer cable length add suffix "-XFT" where X is length in feet, and add \$1 per cable per foot per sensor.

**Ordering Examples:** WMS-16T-100FT, with 30 m (100') cable, \$95 + 60 = \$155. WMS-16NEMA, modular weather station with NEMA enclosure and 110/220 Vac charger, \$2794.

WMS-16NEMA-S, solar powered weather station with RG-2501/40 rain gauge, \$3308 + 390 = \$3698.



#### UNITED STATES

[www.omega.com](http://www.omega.com)  
1-800-TC-OMEGA  
Stamford, CT.

#### CANADA

[www.omega.ca](http://www.omega.ca)  
Laval(Quebec)  
1-800-TC-OMEGA

#### GERMANY

[www.omega.de](http://www.omega.de)  
Deckenpfronn, Germany  
0800-8266342

#### UNITED KINGDOM

[www.omega.co.uk](http://www.omega.co.uk)  
Manchester, England  
0800-488-488

#### FRANCE

[www.omega.fr](http://www.omega.fr)  
Guyancourt, France  
088-466-342

#### CZECH REPUBLIC

[www.omegaeng.cz](http://www.omegaeng.cz)  
Karviná, Czech Republic  
596-311-899

#### BENELUX

[www.omega.nl](http://www.omega.nl)  
Amstelveen, NL  
0800-099-33-44



## More than 100,000 Products Available!

### • Temperature

Calibrators, Connectors, General Test and Measurement Instruments, Glass Bulb Thermometers, Handheld Instruments for Temperature Measurement, Ice Point References, Indicating Labels, Crayons, Cements and Lacquers, Infrared Temperature Measurement Instruments, Recorders Relative Humidity Measurement Instruments, RTD Probes, Elements and Assemblies, Temperature & Process Meters, Timers and Counters, Temperature and Process Controllers and Power Switching Devices, Thermistor Elements, Probes and Assemblies, Thermocouples Thermowells and Head and Well Assemblies, Transmitters, Wire

### • Flow and Level

Air Velocity Indicators, Doppler Flowmeters, Level Measurement, Magnetic Flowmeters, Mass Flowmeters, Pitot Tubes, Pumps, Rotameters, Turbine and Paddle Wheel Flowmeters, Ultrasonic Flowmeters, Valves, Variable Area Flowmeters, Vortex Shedding Flowmeters

### • pH and Conductivity

Conductivity Instrumentation, Dissolved Oxygen Instrumentation, Environmental Instrumentation, pH Electrodes and Instruments, Water and Soil Analysis Instrumentation

### • Data Acquisition

Auto-Dialers and Alarm Monitoring Systems, Communication Products and Converters, Data Acquisition and Analysis Software, Data Loggers Plug-in Cards, Signal Conditioners, USB, RS232, RS485 and Parallel Port Data Acquisition Systems, Wireless Transmitters and Receivers

### • Pressure, Strain and Force

Displacement Transducers, Dynamic Measurement Force Sensors, Instrumentation for Pressure and Strain Measurements, Load Cells, Pressure Gauges, Pressure Reference Section, Pressure Switches, Pressure Transducers, Proximity Transducers, Regulators, Strain Gages, Torque Transducers, Valves

### • Heaters

Band Heaters, Cartridge Heaters, Circulation Heaters, Comfort Heaters, Controllers, Meters and Switching Devices, Flexible Heaters, General Test and Measurement Instruments, Heater Hook-up Wire, Heating Cable Systems, Immersion Heaters, Process Air and Duct, Heaters, Radiant Heaters, Strip Heaters, Tubular Heaters