Economical Wall-Mount Environmental Sensors and Transmitters

OMEGA®

EWS Series

1 YEAR WARRANTY | **EMC SERVICES**

✔ **Thermocouple, RTD, or Thermistor Sensor Models**
✔ **Connects to Computer, Data Logger, or Industrial Controller/Meter**
✔ **RoHS 2 Compliant**

OMEGA's low-cost environmental wall mount sensors keep your office, computer room, or laboratory looking great. They are compatible with most process meters, controllers, recorders, data loggers, and data acquisition systems. Thermocouple, RTD, and thermistor models come with 1 m (40") leads. Temperature, temperature/humidity, and pressure units come with industry-standard, user-selectable 4 to 20 mA or 1 to 5 Vdc output.

Specifications

Enclosure Material: Acrylonitrile butadiene styrene
Dimensions: 45 H x 54 W x 79 mm L (1.78 x 2.12 x 3.12")

Thermocouple Sensors

Max Temperature: 60°C (140°F)
Accuracy: ±1.1°C (1.98°F)
Sensor Types: J, K, T, E
Sensor Lead Length: 1 m (40")
Lead Material: 24 AWG, PFA coated

RTD Sensor

Max Temperature: 60°C (140°F)
Accuracy: ±1°C (1.8°F)
Sensor Type: 100 Ω Pt 0.00385
Sensor Lead Length: 1 m (40")
Lead Material: PFA insulated, 3-conductor 26 AWG stranded nickel-plated copper

Thermistor Sensor

Max Temperature: 60°C (140°F)
Accuracy: ±0.2°C (0.36°F)
Sensor Type: OMEGA® 400 Series 2252 Ω @ 25°C
Sensor Lead Length: 1 m (40")
Lead Material: PVC insulated, 2-conductor 22 AWG stranded nickel-plated copper

Temperature Transmitter

Range: -18 to 57°C (0 to 135°F)

Accuracy@ 25°C:
  In Still Air: ±0.7°C (±1.2°F) @ 25°C; ±1.4°C (±2.5°F) across full range
  In Moving Air: ±1.4°C (±2.5°F) @ 25°C; ±1.7°C (±3°F) across full range
Note: Not recommended for fast-moving-air applications.
Repeatability: ±0.3°C (±0.5°F)
Output: 4 to 20 mA or 1 to 5 Vdc (user selectable)
Temp Time Constant (for 63.2% Response): 9 s in moving air (1m/s), 30 s in still air
Power: 12 to 24 Vdc
Max Loop Resistance:
$\Omega = (V \text{ supply} - 8 \text{ V})/0.02 \text{ A}$
Sensor Type: Solid state

Temperature/Humidity Transmitter

Range: 5 to 95% (non-condensing)
Accuracy@ 25°C: From 5 to 20%, ±4% RH; from 20 to 80%, ±3% RH; from 80 to 95%, ±4% RH
Repeatability: ±1% RH; ±0.3°C (±0.5°F)
Range: -15 to 60°C (5 to 140°F)
Accuracy@ 25°C:
  In Still Air: ±0.7°C (±1.2°F) @ 25°C; ±1.4°C (±2.5°F) across full range
  In Moving Air: ±1.4°C (±2.5°F) @ 25°C; ±1.7°C (±3°F) across full range
Output: 4 to 20 mA or 1 to 5 Vdc (scaled for 0 to 100% RH)
Power: 12 to 24 Vdc
Max Loop Resistance:
$\Omega = (V \text{ supply} - 8 \text{ V})/0.02 \text{ A}$

EWS-TX shown smaller than actual size.

RH Time Constant: 100 s from 20 to 90%, 60 s from 90 to 20%
Sensor Type: Thin-film polymer capacitor (see **Temperature Transmitter** for temperature specifications)

Barometric Pressure Transmitter

Pressure Range: 20.8 to 32 inHg (10.2 to 15.7 psi)
Temp Compensation: Across full range
Accuracy: ±1% of span @ 25°C (77°F) ±0.11%/°C (0.06%/°F)
Operating Temp Range: 0 to 60°C (32 to 140°F)
Output: User-selectable 4 to 20 mA, 1 to 5 Vdc
Power: 12 to 24 Vdc
Max Loop Resistance:
$\Omega = (V \text{ supply} - 8 \text{ V})/0.02 \text{ A}$
Media Compatibility: Clean, dry air and non-corrosive gases

OMEGACARE℠ Extended Warranty Program

OMEGACARE℠ extended warranty program is available for models shown on this page. Ask your sales representative for full details when placing an order. OMEGACARE℠ covers parts, labor and equivalent loaners.

To Order

Model No.	Description
EWS-TC-(*)	Thermocouple sensor
EWS-RTD	RTD sensor (100 Ω Pt 0.00385)
EWS-TH	400 Series thermistor sensor
EWS-TX	Temperature transmitter
EWS-RH	Temperature/humidity transmitter
EWS-BP-A	Barometric pressure transmitter
EWS-MB	Conduit box mounting bracket/wall plate adaptor kit
PSR-24S	Regulated power supply, US plug, 90 to 264 Vac input, 24 Vdc output, 400 mA, screw terminals, UL
PSR-24L	Regulated power supply, US plug, 90 to 264 Vac input, 24 Vdc output, 400 mA, stripped leads, UL
PSR-24L-230	Regulated power supply, European plug, 230 Vac input, 24 Vdc output, 400 mA, stripped leads
TX4-100	Shielded 4-conductor transmitter cable, 30.5 m (100')

*★ Insert thermocouple Type **J, K, T** or **E***
Note: *"-TC" and "-TH" models come with 1 m (40") of lead wire. For longer lead wire, add suffix "-(#)FT" for additional cost per foot (over 3') to price. For "-RTD" models, additional cost per foot to the price.*
***Example: EWS-TC-K-8FT**, wall mount Type K thermocouple sensor with 8' lead wire.*
***Ordering Examples: EWS-TX,** temperature transmitter **EWS-MB**, bracket/wall plate, **PSR-24S**, power supply, **TX4-100** transmitter cable.*
***OCW-3** OMEGACARE℠ extends standard 1-year warranty to a total of 4 years.*