

IAQ-CALC™ INDOOR AIR QUALITY METERS MODEL 7515, 7525, & 7545

TSI IAQ-Calc™ Meters are outstanding instruments for investigating and monitoring indoor air quality (IAQ). Model 7515 is a cost-effective meter for carbon dioxide (CO₂) measurements. Models 7525 and 7545 simultaneously measure and data log multiple parameters. Model 7525 measures CO₂, temperature, humidity, and calculates dew point, wet bulb temperature, and percentage outside air. Model 7545 adds detection of carbon monoxide (CO).



Applications

- + Conduct IAQ evaluations
- + Verify building HVAC system performance
- + Examine building IAQ conditions to optimize worker productivity
- + Comply with regulations and guidelines

Features and Benefits - All Models

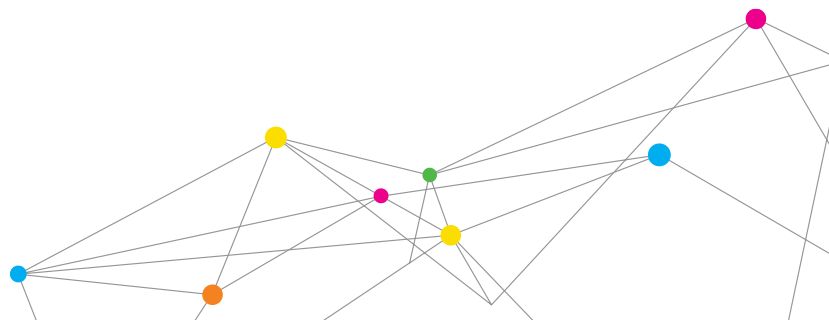
- + Low-drift NDIR CO₂ sensor for stable, accurate readings
- + Sampling function records multiple point measurements
- + Ergonomic, overmolded case design

Models 7525 and 7545

- + Temperature and relative humidity measurements help determine thermal comfort
- + Calculates percentage outside air from either CO₂ or temperature
- + Directly calculates dew point and wet bulb temperatures
- + Electrochemical sensor measures CO (Model 7545)
- + Displays up to three parameters
- + TSI LogDat2™ software permits easy transfer of data to a computer
- + Data can be reviewed on-screen, or downloaded to a computer for easy report generation
- + Statistics function displays average, maximum and minimum values, and the number of recorded samples



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SPECIFICATIONS

IAQ-CALC™ INDOOR AIR QUALITY METERS MODELS 7515, 7525 & 7545

CO₂

| | |
|-----------------------|--|
| Sensor Type | Dual-wavelength NDIR (non-dispersive infrared) |
| Range | 0 to 5,000 ppm |
| Accuracy ¹ | ±3.0% of reading or ±50 ppm, whichever is greater |
| Resolution | 1 ppm |
| Response Time | 20 seconds |

Temperature (Models 7525 and 7545)

| | |
|---------------|--|
| Sensor Type | Thermistor |
| Range | 32 to 140°F (0 to 60°C) |
| Accuracy | ±1.0°F (±0.5°C) |
| Resolution | 0.1°F (0.1°C) |
| Response Time | 30 seconds (90% of final value, air velocity at 400 ft/min [2 m/s]) |

Relative Humidity (Models 7525 and 7545)

| | |
|-----------------------|-------------------------------------|
| Sensor Type | Thin-film capacitive |
| Range | 5% to 95% RH |
| Accuracy ² | ±3.0% RH |
| Resolution | 0.1% RH |
| Response Time | 20 seconds (for 63% of final value) |

Percentage Outside Air (Models 7525 and 7545)

| | |
|------------|-----------|
| Range | 0 to 100% |
| Resolution | 0.1% |

CO (Model 7545 only)

| | |
|---------------|---|
| Sensor Type | Electro-chemical |
| Range | 0 to 500 ppm |
| Accuracy | ±3.0% of reading or ±3 ppm, whichever is greater |
| Resolution | 0.1 ppm |
| Response Time | <60 seconds to 90% step change |

Operating Temperature

40 to 113°F (5 to 45°C)

Storage Temperature

-4 to 140°F (-20 to 60°C)

Logging Capability (Models 7525 and 7545)

| | |
|---------------|--|
| Ranges | Model 7525 logs up to 30,300 data points with key (3) measured parameters enabled Model 7545 logs up to 26,900 data points with key (4) measured parameters enabled |
| Time Constant | 1 sec, 5 sec, 10 sec, 20 sec, 30 sec (user selectable) |
| Log Intervals | 1 second up to 1 hour (user selectable) |

Meter Dimensions (all models)

3.3 in. x 7.0 in. x 1.8 in. (8.4 cm x 17.8 cm x 4.4 cm)

Probe Dimensions (Model 7515)

| | |
|----------|-------------------|
| Length | 2.75 in. (7.0 cm) |
| Diameter | 0.75 in. (1.9 cm) |

Probe Dimensions (Models 7525 and 7545)

| | |
|----------|-------------------|
| Length | 7.0 in. (17.8 cm) |
| Diameter | 0.75 in. (1.9 cm) |

Weight (with batteries)

0.6 lbs (0.27 kg)

Power Requirements

| | |
|----------------------|--------------------------------------|
| Model 7515 | Four AA-size batteries |
| Models 7525 and 7545 | Four AA-size batteries or AC adapter |

| | 7515 | 7525 | 7545 |
|----------------------------|------|------|------|
| CO ₂ | + | + | + |
| CO | | | + |
| Temperature | | + | + |
| Humidity | | + | + |
| Percentage outside air | | + | + |
| Dew point | | + | + |
| Wet bulb temperature | | + | + |
| Data logging/downloading | | + | + |
| Statistics | + | + | + |
| Review data | | + | + |
| Certificate of Calibration | + | + | + |

¹ Accuracy with probe at 77°F (25°C). Add uncertainty of ±0.2%/°F (±0.36%/°C) away from calibrated temperature.

² Accuracy with probe at 77°F (25°C). Add uncertainty of ±0.1% RH/°F (±0.2% RH/°C) away from calibrated temperature.

Specifications are subject to change without notice.

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