

ENERGY AND COMFORT

## Indoor Air Quality Instruments



Model 7545

### Features and Benefits

- Low-drift NDIR CO<sub>2</sub> 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 % outside air from either CO<sub>2</sub> or temperature
- Directly calculates dew point and wet bulb temperatures
- Electrochemical sensor measures CO (Model 7545)
- Models 7525 and 7545 display up to three parameters
- Model 7515 displays CO<sub>2</sub>

### IAQ-CALC™ Indoor Air Quality Meters

#### Models 7515, 7525, and 7545

TSI's IAQ-CALC™ Meters are outstanding instruments for investigating and monitoring indoor air quality (IAQ). The Model 7515 is a cost-effective meter for carbon dioxide (CO<sub>2</sub>) measurements. The Models 7525 and 7545 simultaneously measure and data log multiple parameters. The Model 7525 measures CO<sub>2</sub>, temperature, humidity, and calculates dew point, wet bulb temperature, and % outside air. The Model 7545 adds 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

#### Data Logging-Models 7525 and 7545

- 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™

## Models 7515, 7525, 7545

**CO<sub>2</sub>**

<b>Sensor Type</b>	Dual-wavelength NDIR (non-dispersive infrared)
<b>Range</b>	0 to 5000 ppm
<b>Accuracy<sup>1</sup></b>	±3.0% of reading or ±50 ppm, whichever is greater
<b>Resolution</b>	1 ppm
<b>Response Time</b>	20 seconds

**Temperature (Models 7525 and 7545)**

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

**Relative Humidity (Models 7525 and 7545)**

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

**% Outside Air (Models 7525 and 7545)**

<b>Range</b>	0 to 100%
<b>Resolution</b>	0.1%

**CO (Model 7545 only)**

<b>Sensor Type</b>	Electro-chemical
<b>Range</b>	0 to 500 ppm
<b>Accuracy</b>	±3.0% of reading or ±3 ppm, whichever is greater
<b>Resolution</b>	0.1 ppm
<b>Response Time</b>	<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)**

<b>Ranges</b>	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
<b>Time Constant</b>	1 sec, 5 sec, 10 sec, 20 sec, 30 sec (user selectable)
<b>Log Intervals</b>	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)**

<b>Length</b>	2.75 in. (7.0 cm)
<b>Diameter</b>	0.75 in. (1.9 cm)

**Probe Dimensions (Models 7525 and 7545)**

<b>Length</b>	7.0 in. (17.8 cm)
<b>Diameter</b>	0.75 in. (1.9 cm)

**Weight (with batteries)**

0.6 lbs (0.27 kg)

**Power Requirements**

<b>Model 7515</b>	Four AA-size batteries
<b>Models 7525 and 7545</b>	Four AA-size batteries or AC adapter

<sup>1</sup> At 77°F (25°C). Add uncertainty of ±0.2%/°F (±0.36%/°C) away from calibrated temperature.<sup>2</sup> At 77°F (25°C). Add uncertainty of ±0.03% RH/°F (±0.05% RH/°C) away from calibrated temperature.

Specifications subject to change without notice.

	7515	7525	7545
CO <sub>2</sub>	•	•	•
CO			•
Temperature		•	•
Humidity		•	•
% outside air		•	•
Dew point		•	•
Wet bulb temperature		•	•
Data logging/downloading		•	•
Statistics	•	•	•
Review data		•	•
Certificate of Calibration	•	•	•

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