

ENERGY AND COMFORT

Indoor Air Quality Instruments



Model 7545

Features and Benefits

- 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 % outside air from either CO₂ or temperature
- Directly calculates dew point and wet bulb temperatures
- Electrochemical sensor measures CO (Model 7545)
- Models 7525 and 7545 shows up to three parameters
- Models 7515 and 7535 shows only one parameter

IAQ-CALC™ Indoor Air Quality Meters

Models 7515, 7525, 7535, 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 (CO₂) measurements. The Model 7535 adds data logging of CO₂. The Models 7525 and 7545 simultaneously measure and data log multiple parameters. The Model 7525 measures CO₂, temperature, humidity, and calculates dew point, wet bulb temperature, and % outside air. The Model 7545 adds carbon monoxide (CO).

Applications

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



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Specifications

IAQ-CALC™

Models 7515, 7525, 7535, 7545

CO₂

Sensor Type	Dual-wavelength NDIR (non-dispersive infrared)
Range	0 to 5000 ppm
Accuracy¹	±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	0 to 60°C (32 to 140°F)
Accuracy	±0.6°C (±1.0°F)
Resolution	0.1°C (0.1°F)
Response Time	30 seconds (90% of final value, air velocity at 2 m/s [400 ft/min])

Relative Humidity (Models 7525 and 7545)

Sensor Type	Thin-film capacitive
Range	5% to 95% RH
Accuracy³	±3.0% RH
Resolution	0.1% RH
Response Time	20 seconds (for 63% of final value)

% 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, which is greater
Resolution	0.1 ppm
Response Time	<60 seconds to 90% step change

Operating Temperature

0 to 45°C (32 to 113°F)

Storage Temperature

-20 to 70°C (-4 to 158°F)

Logging Capability (Models 7525 and 7545)

Ranges	Model 7525 logs up to 24,200 data points with all measured parameters enabled Model 7535 logs up to 40,300 data points with all measured parameters enabled Model 7545 logs up to 22,000 data points with all measured parameters enabled
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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)

107 mm x 183 mm x 38 mm (4.2 in. x 7.2 in. x 1.5 in.)

Probe Dimensions (Model 7515)

Length	69 cm (2.7 in.)
Diameter	2.0 cm (0.76 in.)

Probe Dimensions (Models 7525, 7535, and 7545)

Length	15.1 cm (5.9 in.)
Diameter	1.9 cm (0.74 in.)

Weight (with batteries)

Models 7515 and 7535	0.27 kg (0.6 lbs)
Models 7524 and 7545	0.53 kg (1.16 lbs)

Power Requirements

Model 7515	Four AA-size batteries
Models 7525, 7535, and 7545	Four AA-size batteries or AC adapter

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

² For range of -5 to 95°C (23 to 203°F).

³ At 25°C (77°F). Add uncertainty of ±0.05% RH/°C (±0.03% RH/°F) away from calibrated temperature.

Specifications subject to change without notice.

Data Logging-Models 7525, 7535, and 7545

- Simultaneously records all parameters and logs samples with time and date stamp
 - Model 7525 logs up to 24,200 data points with all measured parameters enabled
 - Model 7535 logs up to 40,300 data points with all measured parameters enabled
 - Model 7545 logs up to 22,000 data points with all measured parameters enabled
- 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

	7515	7525	7535	7545
CO ₂	•	•	•	•
CO				•
Temperature		•		•
Humidity		•		•
% outside air		•		•
Dew point		•		•
Wet bulb temperature		•		•
Data logging/downloading		•	•	•
Statistics	•	•	•	•
Review data		•	•	•
Printer output	•	•	•	•
Calibration certificate	•	•	•	•

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