



Anemometers



Multi-Function Instruments Model TA460 Series

The TA460 series are portable, hand held, Multi-Function Thermal Anemometers. They are designed to measure air velocity, differential pressure, temperature, and humidity. Calculations include air flow, wet bulb, dew point, and turbulence. These instruments are compatible with a range of optional probes that have a versatile choice of features and functions.

Features and Benefits

- High accuracy over a wide velocity range
- Displays up to 5 measurements simultaneously
- Optional "smart" plug-in probes, including CO₂, VOC (volatile organic compounds), and rotating vane probes
- Large graphic display
- Manual or continuous data logging
- LogDat2 downloading software included
- Name test IDs meaningful to you
- Bluetooth® printer capability
- Fast calibration and repair service – just send in the probe

Applications

- HVAC commissioning and troubleshooting
- Clean room certification
- Testing and balancing
- Ventilation evaluations
- Thermal comfort studies
- IAQ investigations
- Process air flow testing

Accurate. Reliable. Every Time.



Specifications

Models TA460, TA460-A, TA460-P, TA460-X and Optional Probes

Velocity (Pitot Tube for Meter Models TA460, TA460-A, TA460-P)

Range ¹	1.27 to 78.7 m/s (250 to 15,500 ft/min)
Accuracy ²	±1.5% at 10.16 m/s (2,000 ft/min)
Resolution	0.01 m/s (1 ft/min)

Duct Size

Dimensions	2.5 to 1270 cm in increments of 0.1 cm (1 to 500 inches in increments of 0.1 in.)
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Volumetric Flow Rate

Range	Actual range is a function of velocity, pressure, duct size, and K factor
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Static/Differential Pressure (Meter Models TA460, TA460-A, TA460-P)

Range ³	-28.0 to +28.0 mm Hg, -3735 to +3735 Pa (-15 to +15 in. H ₂ O)
Accuracy	±1% of reading ±1 Pa, (±0.01 mm Hg, ±0.005 in. H ₂ O)
Resolution	0.1 Pa, 0.01 mm Hg (0.001 in. H ₂ O)

Barometric Pressure

Range	517.15 to 930.87 mm Hg (20.36 to 36.648 in. Hg)
Accuracy	±2% of reading

Instrument Temperature Range

Operating (Electronics)	5 to 45°C (40 to 113°F)
Operating (Probe)	-10 to 60°C (14 to 140°F)
Storage	-20 to 60°C (-4 to 140°F)

Data Storage Capabilities

Range	26,500+ samples and 100 test IDs
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Logging Interval

1 second to 1 hour

Time Constant

User selectable

External Meter Dimensions

9.7 cm x 21.1 cm x 5.3 cm (3.8 in. x 8.3 in. x 2.1 in.)

Meter Weight with Batteries

0.36 kg (0.8 lbs.)

Power Requirements

Four AA-size batteries or AC adapter

Optional Probes for TA460 Multi-Functional Anemometers

Model	Probe Description
966	Air Velocity, Temperature, and Humidity, articulating probe
962	Air Velocity and Temperature, articulating probe
964	Air Velocity, Temperature, and Humidity, straight probe
960	Air Velocity and Temperature, straight probe
995	100 mm (4 in.) Rotating Vane probe
496	35 mm (1.5 in.) Rotating Vane probe
980	Indoor Air Quality probe
982	Indoor Air Quality probe, with CO
792	Surface Temperature probe
794	Air Temperature probe
984	Low Concentration (ppb) VOC and Temperature
985	High Concentration (ppm) VOC and Temperature
986	Low Concentration (ppb) VOC, Temperature, CO ₂ , and Humidity
987	High Concentration (ppm) VOC, Temperature, CO ₂ , and Humidity

	TA460	TA460-A	TA460-P	TA460-X
Probe that measures velocity, temperature, and humidity	includes 964 probe	includes 966 probe	optional	optional
Pressure measurement	•	•	•	
Calculates flow, wet bulb, dew point, standard/actual	•	•	optional	optional
Optional velocity and temperature probe	•	•	•	•
Optional rotating vane probe	•	•	•	•
Optional IAQ probes (CO ₂ , temperature, humidity, CO)	•	•	•	•
Optional VOC probe	•	•	•	•
Data Logging (manual, auto save continuous)	•	•	•	•
Data logging software	•	•	•	•
Optional Bluetooth printer	•	•	•	•
Certificate of Calibration	•	•	•	•

¹ Pressure velocity measurements are not recommended below 5 m/s (1000 ft/min) and are best suited to velocities over 10.00 m/s (2,000 ft/min). Range can vary depending on barometric pressure.

² Accuracy is a function of converting pressure to velocity. Conversion accuracy improves when actual pressure values increase.

³ Overpressure range = 360 mmHg, 48 kPa (190 in. H₂O).

Probe Specifications

Models 966, 962, 964, 960, 995, 496, 980, 982, 792, 794, 984, 985, 986, and 987

Thermoanemometer Probe Models		Range	Accuracy	Resolution	Probe Dimensions
	966	0 to 50 m/s (0 to 9,999 ft/min) -10 to 60°C (14 to 140°F) 5 to 95% RH	±3% of reading or ±0.015 m/s (±3 ft/min), whichever is greater ^{4,5} ±0.3°C (±0.5°F) ⁶ ±3% RH ⁷	0.01 m/s (1 ft/min) 0.1°C (0.1°F) 0.1% RH	Length 101.6 cm (40 in.) Tip dia. 7.0 mm (0.28 in.) Base dia. 13.0 mm (0.51 in.) Articulating Section Length 15.2 cm (6 in.) Articulating Knuckle dia. 9.5 mm (0.38 in.)
	962	0 to 50 m/s (0 to 9,999 ft/min) -18 to 93°C (0 to 200°F)	±3% of reading or ±0.015 m/s (±3 ft/min), whichever is greater ^{4,5} ±0.3°C (±0.5°F) ⁶	0.01 m/s (1 ft/min) 0.1°C (0.1°F)	Length 101.6 cm (40 in.) Tip dia. 7.0 mm (0.28 in.) Base dia. 13.0 mm (0.51 in.) Articulating Section Length 15.2 cm (6 in.) Articulating Knuckle dia. 9.5 mm (0.38 in.)
	964	0 to 50 m/s (0 to 9,999 ft/min) -10 to 60°C (14 to 140°F) 5 to 95% RH	±3% of reading or ±0.015 m/s (±3 ft/min), whichever is greater ^{4,5} ±0.3°C (±0.5°F) ⁶ ±3% RH ⁷	0.01 m/s (1 ft/min) 0.1°C (0.1°F) 0.1% RH	Length 101.6 cm (40 in.) Tip dia. 7.0 mm (0.28 in.) Base dia. 13.0 mm (0.51 in.)
	960	0 to 50 m/s (0 to 9,999 ft/min) -18 to 93°C (0 to 200°F)	±3% of reading or ±0.015 m/s (±3 ft/min), whichever is greater ^{4,5} ±0.3°C (±0.5°F) ⁶	0.01 m/s (1 ft/min) 0.1°C (0.1°F)	Length 101.6 cm (40 in.) Tip dia. 7.0 mm (0.28 in.) Base dia. 13.0 mm (0.51 in.)
Rotating Vane Probe Models		Range	Accuracy	Resolution	Probe Dimensions
	995	0.25 to 30 m/s (50 to 6,000 ft/min) 0 to 60°C (32 to 140°F)	±1% of reading ±0.02 m/s (±4 ft/min) ±1.0°C (±2.0°F)	0.01 m/s (1 ft/min) 0.1°C (0.1°F)	Diameter 100mm (4 in.)
	496	0.50 to 15.00 m/s (100 to 3,000 ft/min) 0 to 60°C (32 to 140°F)	±3% of reading ±0.02 m/s (±4 ft/min) ±1.0°C (±2.0°F)	0.01 m/s (1 ft/min) 0.1°C (0.1°F)	Diameter 35mm (1.5 in.)
IAQ Probe Models		Range	Accuracy	Resolution	Probe Dimensions
	980	0 to 5000 ppm CO ₂ 5 to 95% RH -10 to 60°C (14 to 140°F)	±3% of reading or ±50 ppm, whichever is greater ⁸ CO ₂ ±3% RH ⁷ ±0.5°C (±1.0°F) ⁶	1 ppm CO ₂ 0.1% RH 0.1°C (0.1°F)	Length 17.8 cm (7.0 in.) Diameter 1.9 cm (0.75 in.)
	982	0 to 500 ppm CO 0 to 5000 ppm CO ₂ 5 to 95% RH -10 to 60°C (14 to 140°F)	±3% of reading or ±3 ppm, whichever is greater ⁸ CO ±3% of reading or ±50 ppm, whichever is greater ⁹ CO ₂ ±3% RH ⁷ ±0.5°C (±1.0°F) ⁶	0.1 ppm CO 1 ppm CO ₂ 0.1% RH 0.1°C (0.1°F)	Length 17.8 cm (7.0 in.) Diameter 1.9 cm (0.75 in.)
Thermocouple Probe Models		Range	Accuracy	Resolution	Probe Dimensions
	792	-40 to 650°C (-40 to 1200°F)	±0.056% of reading +1.1°C (±0.1% of reading +2°F)	0.1°C (0.1°F)	Length 15.0 cm (6 in.) Diameter 9.5 mm (0.375 in.)
	794	-40 to 650°C (-40 to 1200°F)	±0.056% of reading +1.1°C (±0.1% of reading +2°F)	0.1°C (0.1°F)	Length 15.0 cm (6 in.) Diameter 4.8 mm (0.188 in.)

⁴ Temperature compensated over an air temperature range of 5 to 65°C (40 to 150°F).

⁵ The accuracy statement begins at 0.15 m/s through 50 m/s (30 ft/min through 9,999 ft/min).

⁶ Accuracy with instrument case at 25°C (77°F), add uncertainty of 0.03°C/°C (0.05°F/°F) for change in instrument temperature.

⁷ Accuracy with probe at 25°C (77°F). Add uncertainty of 0.2% RH/°C (0.1% RH/°F) for change in probe temperature. Includes 1% hysteresis.


⁸ At 25°C (77°F). Add uncertainty of 0.36%/°C (±0.2%/°F) for change in temperature.

⁹ At calibration temperature. Add uncertainty of 0.5%/°C (±0.28%/°F) for change in temperature.

Anemometers

Multi-Function Instruments

Model TA460 Series

Volatile Organic Compound (VOC) Probe Models		Range	Accuracy	Resolution	Probe Dimensions
	984	10 to 20,000 ppb VOC* -10 to 60°C (14 to 140°F)	±0.5°C (±1.0°F)	Up to 10 ppb VOC 0.1°C (0.1°F)	Length 17.8 cm (7.0 in.) Base Diameter 1.9 cm (0.75 in.) Tip Diameter 2.54 cm (1.0 in.)
	985	1 to 2,000 ppm VOC* -10 to 60°C (14 to 140°F)	±0.5°C (±1.0°F)	Up to 1 ppm VOC 0.1°C (0.1°F)	Length 17.8 cm (7.0 in.) Base Diameter 1.9 cm (0.75 in.) Tip Diameter 2.54 cm (1.0 in.)
	986	10 to 20,000 ppb VOC* 0 to 5,000 ppm CO ₂ -10 to 60°C (14 to 140°F) 5 to 95% RH	±3% of reading or 50 ppm CO ₂ , whichever is greater ±0.5°C (±1.0°F) ±3% RH	Up to 10 ppb VOC 0.1 ppm CO ₂ 0.1°C (0.1°F) 0.1% RH	Length 17.8 cm (7.0 in.) Base Diameter 1.9 cm (0.75 in.) Tip Diameter 2.54 cm (1.0 in.)
	987	1 to 2,000 ppm VOC* 0 to 5,000 ppm CO ₂ -10 to 60°C (14 to 140°F) 5 to 95% RH	±3% of reading or 50 ppm CO ₂ , whichever is greater ±0.5°C (±1.0°F) ±3% RH	Up to 1 ppm VOC 0.1 ppm CO ₂ 0.1°C (0.1°F) 0.1% RH	Length 17.8 cm (7.0 in.) Base Diameter 1.9 cm (0.75 in.) Tip Diameter 2.54 cm (1.0 in.)

*isobutylene equivalent

Note: The 984 and 986 probes are designed to measure ppb concentrations of VOCs. The 10 to 20,000 ppb range corresponds to 0.01 to 20 ppm.

Specifications are subject to change without notice.

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