



Knowledge Beyond Measure.

# OmniTrak™ Solution Modules



## Efficiency Meets Intelligence. Customizable, Scalable, and Affordable Monitoring.

The OmniTrak™ SmartStation can be used in conjunction with any OmniTrak™ module to provide immediate feedback as to the conditions in the immediate area. Take measurements, create reports, and analyze data provided to help improve conditions.

This instrument is a handheld device, not to be worn on the body, or near an individual's head.

Smart Station	7590-00
VOC-PID ppb Module	7591-03
CO Module	7591-06
CI Module	7591-10
HCHO Module	7591-07
O <sub>3</sub> Module	7591-08
NH <sub>3</sub> Module	7591-11
VOC-PID ppm Module	7591-02
PM Module	7591-01
PM + VOC-PID ppm Module	7591-04

### Features and Benefits

- Wireless connection for up to 10 modules simultaneously
- Large touch-screen with intuitive navigation used for recording studies, managing data, viewing historical data, real-time measurements, etc.
- Download data directly from the device onto your PC or uploaded data to our TSI Link™ cloud platform to manage and view data remotely
- Unique laser-based light scattering particle sensors – outputs mass concentration data (PM1, PM2.5, PM4, PM10) and particle number concentration data separated into 5 distinct bins
- Precise 10.6 eV PID (photo ionization detector) for monitoring various VOCs (volatile organic compounds) in the PPM range
- Modular design allowing for flexibility and connection to future next generation modules

### Applications

- Portable/fixed air filter and air purifier verification
- Ventilation effectiveness testing
- IAQ studies in commercial/residential buildings, schools, hospitals, industrial manufacturing, etc.
- Industrial/occupational hygiene surveys and indoor air quality investigations
- Engineering control evaluations



## Module Sensor Specifications

Sensor Model	Sensor Type	Range	Accuracy	Resolution	*Response Time
VOC-PID (PPB) Module <b>Model 7591-03</b>	PID (Photo Ionization Detector)	0-20000 ppb	—	1 ppb	15 seconds
Carbon Monoxide (CO) Module <b>Model 7591-06</b>	Electrochemical	0- 400 ppm	15% + 2 ppm	0.1 ppm	45 seconds
Chlorine (Cl <sub>2</sub> ) Module <b>Model 7591-10</b>	Electrochemical	0- 20 ppm	5% + 0.8 ppm	0.01 ppm	90 seconds
Formaldehyde (HCHO) Module <b>Model 7591-07</b>	Electrochemical	0- 10 ppm	2% + 1 ppm	0.01 ppm	300 seconds
Ozone (O <sub>3</sub> ) Module <b>Model 7591-08</b>	Electrochemical	0- 20 ppm	15% + 1.5 ppm	0.01 ppm	60 seconds
Ammonia (NH <sub>3</sub> ) Module <b>Model 7591-11</b>	Electrochemical	0- 100 ppm	+/- 10 ppm	0.1 ppm	15 seconds

Measurement specifications apply at ambient conditions of 21 +/- 5 °C temperature, 98.6 +/- 5 kPa pressure, and 50 +/- 10% relative humidity.

\* (Typical) time to 90% of final value

Sensor Model	Sensor Type	Ionization Energy (PID Lamp electron voltage)	Concentration Range	Resolution	*Response Time
VOC Modules <b>Models: 7591-02 VOC-PID (ppm) Module, 7591-04 PM + VOC-PID (ppm) Module</b>	PID (Photo Ionization Detector)	10.6 eV	0-2000 ppm	0.1 ppm	<10 seconds

Measurement specifications apply at ambient conditions of 21 +/- 5 °C temperature, 98.6 +/- 5 kPa pressure, and 50 +/- 10% relative humidity.

## PM Sensor Specifications

### PM Modules

**Models: 7591-01 PM Module, 7591-04 PM + VOC-PID (ppm) Module**

Particle Counter			
Concentration Range	0 to 3,000 (0 to 84,950,000)	—	#/cm <sup>3</sup> (#/ft <sup>3</sup> )
Particle Bins and Particle Size Range (NC = Number Concentration)	NC0.5	0.3 to 0.5	µm
	NC1.0	0.5 to 1.0	µm
	NC2.5	1.0 to 2.5	µm
	NC4	2.5 to 4.0	µm
	NC10	4.0 to 10.0	µm
Concentration Precision <sup>1</sup> for PM0.5, PM1, and PM2.5 <sup>2</sup>	0 to 1,000 #/cm <sup>3</sup> (0 to 28,320,000 #/ft <sup>3</sup> )	±100 (±2,832,000)	#/cm <sup>3</sup> (#/ft <sup>3</sup> )
	1000 to 3000 #/cm <sup>3</sup> (28,320,000 to 84,950,000 #/ft <sup>3</sup> )	±10	% m.v.
Concentration Precision <sup>1</sup> for PM4, PM10 <sup>3</sup>	0 to 1000 #/cm <sup>3</sup> (0 to 28,320,000 #/ft <sup>3</sup> )	±250 (±7,080,000)	#/cm <sup>3</sup> (#/ft <sup>3</sup> )
	1000 to 3000 #/cm <sup>3</sup> (28,320,000 to 84,950,000 #/ft <sup>3</sup> )	±25	% m.v.
Particulate Mass			
Concentration Range	0 to 1,000	—	µg/m <sup>3</sup>
Mass Concentration Bins and Particle Size Range	PM1.0	0.3 to 1.0	µm
	PM2.5	0.3 to 2.5	µm
	PM4.0	0.3 to 4.0	µm
	PM10.0	0.3 to 10.0	µm
Mass Concentration Precision <sup>1</sup> for PM1, and PM2.5 <sup>2</sup>	0 to 100 µg/m <sup>3</sup>	± [5 µg/m <sup>3</sup> + 5 % m.v.]	
	100 to 1000 µg/m <sup>3</sup>	±10	% m.v.
Mass Concentration Precision <sup>1</sup> for PM4, PM10 <sup>3</sup>	0 to 100 µg/m <sup>3</sup>	±25	µg/m <sup>3</sup>
	100 to 1000 µg/m <sup>3</sup>	±25	% m.v.

<sup>1</sup> Also referred to as "between-parts variation" or "device-to-device variation".

<sup>2</sup> Verification Aerosol for PM2.5 is a 3% atomized KCl solution. Deviation to reference instrument is verified in end-tests for every sensor after calibration.

<sup>3</sup> PM4 and PM10 output values are calculated based on distribution profile of all measured particles.

## Specifications

# OmniTrak™ Solution Modules

### Power Requirements \*

Input Power	10 W
Input Voltage	5 VDC
Charging Port	USB C

### Environmental/Installation Requirements \*

Maximum Altitude	3,000 m (10,000 ft)
Pollution Degree	2
Installation Category	I
Operating Temperature	5°C to 40°C
Storage Temperature	-20°C to 60°C
Humidity	0% to 95% (non-condensing)
BLE Range**	up to 100 m (328 ft)

### Battery Life

Modules	18 hrs.
Smart Station	14 hrs. (display brightness at 100%)

### Weight

Modules	.17 kg (.37 lbs)
Smart Station	.36 kg (.79 lbs)

### Dimensions

Modules	85 x 35 x 73 mm
Smart Station	85 x 35 x 175 mm

### Logging

Data Recording Interval	Every 1 sec
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\* Applies to both Smart Station and Modules

\*\* Range is dependent on many variables (i.e. wireless traffic, metal, etc.) and can not be guaranteed.



Specifications are subject to change without notice.

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<b>USA</b>	Tel: +1 800 874 2811	<b>India</b>	Tel: +91 80 67877200
<b>UK</b>	Tel: +44 149 4 459200	<b>China</b>	Tel: +86 10 8219 7688
<b>France</b>	Tel: +33 1 41 19 21 99	<b>Singapore</b>	Tel: +65 6595 6388
<b>Germany</b>	Tel: +49 241 523030		

