Knowledge Beyond Measure.

OmniTrak™
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
Cl Module	7591-10
HCHO Module	7591-07
O_3 Module	7591-08
NH_3 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

VOC-PID (PPB) Module

Model 7591-03

VOC Sensor Specifications		
Sensor Type	PID (Photo Ionization Detector)	
Range	0-20000	ppb
Resolution	1	ppb
*Response Time	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

Carbon Monoxide (CO) Module

Model 7591-06

Carbon Monoxide Sensor Specifications		
Sensor Type	Electrochemical	
Range	0- 400	ppm
Accuracy	15% + 2	ppm
Resolution	0.1	ppm
*Response Time	45	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

Chlorine (Cl_2) Module

Model 7591-10

Chlorine Sensor Specifications		
Sensor Type	Electrochemical	
Range	0- 20	ppm
Accuracy	5% + 0.8	ppm
Resolution	0.01	ppm
*Response Time	90	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

Formaldehyde (HCHO) Module

Model 7591-07

Formaldehyde Sensor Specifications		
Sensor Type	Electrochemical	
Range	0- 10	ppm
Accuracy	2% + 1 ppm	ppm
Resolution	0.01	ppm
*Response Time	300	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

Ozone (O_3) Module

Model 7591-08

Ozone Sensor Specifications		
Sensor Type	Electrochemical	
Range	0 - 20	ppm
Accuracy	15% + 1.5	ppm
Resolution	0.01	ppm
*Response Time	60	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

Ammonia (NH_3) Module

Model 7591-11

Ammonia Sensor Specifications		
Sensor Type	Electrochemical	
Range	0 - 100	ppm
Accuracy	+/- 10	ppm
Resolution	0.1	ppm
*Response Time	300	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

VOC Modules

Models: 7591-02 VOC-PID (ppm) Module, 7591-04 PM + VOC-PID (ppm) Module

VOC Sensor Specifications		
Sensor Type	PID (Photo Ionization Detector)	
Ionization Energy (PID Lamp electron voltage)	10.6	eV
Concentration Range	0-2000	ppm
Resolution	0.1	ppm
Response Time	<10	seconds

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

PM Modules

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

PM Sensor Specifications			
Particle Counter			
Concentration Range	0 to 3,000 (0 to 84,950,000)	—	#/cm³ (#/ft³)
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[1] for PM0.5, PM1, and PM2.5[2]	0 to 1,000 #/cm³ (0 to 28,320,000 #/ft³)	±100 (±2,832,000)	#/cm³ (#/ft³)
	1000 to 3000 #/cm³ (28,320,000 to 84,950,000 #/ft³)	±10	% m.v.
Concentration Precision[1] for PM4, PM10[3]	0 to 1000 #/cm³ (0 to 28,320,000 #/ft³)	±250 (±7,080,000)	#/cm³ (#/ft³)
	1000 to 3000 #/cm³ (28,320,000 to 84,950,000 #/ft³)	±25	% m.v.
Particulate Mass			
Concentration Range	0 to 1,000	—	µg/m³
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[1] for PM1, and PM2.5[2]	0 to 100 µg/m³	±10	µg/m³
	100 to 1000 µg/m³	±10	% m.v.
Mass Concentration Precision[1] for PM4, PM10[3]	0 to 100 µg/m³	±25	µg/m³
	100 to 1000 µg/m³	±25	% m.v.

[1] Also referred to as "between-parts variation" or "device-to-device variation".
[2] 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.
[3] PM4 and PM10 output values are calculated based on distribution profile of all measured particles.

Specifications

OmniTrak™ 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

* Applies to both Smart Station and Modules
** Range is dependent on many variables (i.e. wireless traffic, metal, etc.) and can not be guaranteed.

Knowledge Beyond Measure.

TSI Incorporated - Visit our website **www.tsi.com** for more information.

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

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