



# PM + tVOC-PID (PPM) Module

## Model 7591-04

### Operation Instructions

1. **Power On:** Hold down power button on left side of module for 1 second.
2. **Power Off:** Hold down power button on left side of module until you see a light sequence of green, yellow, red. That indicates module is off.
3. **Charging:** Plug USB-C into bottom of module and into power source. A blinking green light indicates module is charging.
4. **Connecting to a Smart Station:** Power on module by holding down the circle on the left for 1 second. A blue LED light will start to blink indicating Bluetooth® is on.
  - The module will appear in the list on the Smart Station.  
If not, hit Refresh.
  - Press desired module on screen to connect to Smart Station.  
A green check mark indicates a successful connection.
  - Press Done

### Now you're ready to take measurements.

The OmniTrak™ Smart Station 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.

Dispose of battery in accordance with local rules and regulations.

### What's Included in the Box

- Device
- USB-C Cable

**NOTE:** All modules, by default, are shipped in 'Sleep Mode' to protect the battery. It will not be possible to power on the Module, using the side button, until 'Sleep Mode' is disabled. To disable, plug the module into a power source and charge the module for a few minutes. This process is required only once.

### DISCLAIMER

The tVOC measurement sensor is sensitive to radio frequency interference. Electromagnetic fields produced by items including, but not limited to, microwave ovens, Wi-Fi® routers, cellular phones, and personal communication devices, i.e. walkie-talkie, two-way radios, etc. have the potential to adversely affect the measurement. To ensure a proper measurement these devices should be **TURNED OFF** or placed in a mode that does not transmit. If these devices are not turned off or placed in a mode that does not transmit, the accuracy of the measurement may be compromised if these devices are located within four meters of the sensor module.

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### Specifications

#### tVOC Sensor Specifications

|               |                                      |  |  |
|---------------|--------------------------------------|--|--|
| Sensor Type   | PID (Photo Ionization Detector)      |  |  |
| Range         | 0-2000 ppm                           |  |  |
| Resolution    | 0.1 ppm                              |  |  |
| Accuracy      | +/- (5ppm + 15% displayed value) ppm |  |  |
| Response Time | < 10 seconds                         |  |  |

#### PM Sensor Specifications

|  |                                |             |                   |
|--|--------------------------------|-------------|-------------------|
| Number Concentration Range                               | 0 to 3'000                     | —           | #/cm <sup>3</sup> |
|  | 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                |
| Number Concentration Precision for PM0.5, PM1, and PM2.5 | 0 to 1000 #/cm <sup>3</sup>    | ±100        | #/cm <sup>3</sup> |
|  | 1000 to 3000 #/cm <sup>3</sup> | ±10         | % m.v.            |
| Number Concentration Precision for PM4, PM10             | 0 to 1000 #/cm <sup>3</sup>    | ±250        | #/cm <sup>3</sup> |
|  | 1000 to 3000 #/cm <sup>3</sup> | ±25         | % m.v.            |
| Mass Concentration Range                                 | 0 to 1'000                     | —           | µg/m <sup>3</sup> |
|  | 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                |
| Number Concentration Precision for PM1, and PM2.5        | 0 to 100 µg/m <sup>3</sup>     | ±10         | µg/m <sup>3</sup> |
|  | 100 to 1000 µg/m <sup>3</sup>  | ±10         | % m.v.            |
| Number Concentration Precision for PM4, PM10             | 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.            |

#### AC and DC Power Requirements

|                    |                                   |
|--------------------|-----------------------------------|
| AC/DC Power Supply | 100 to 240 VAC,<br>50/60 Hz, 0.3A |
| Device Input Power | 5 VDC, 2A, 10W                    |

#### Environmental/Installation Requirements

|                       |                              |
|-----------------------|------------------------------|
| Maximum Altitude      | 3000 meters<br>(10,000 feet) |
| Pollution Degree      | 2                            |
| Installation Category | I                            |
| Operating Temperature | 5°C to 40°C                  |
| Storage Temperature   | -20°C to 60°C                |
| Humidity              | 0% - 95%<br>(non-condensing) |

#### Compliance

FCC ID: 2A22JOTMODULES IC ID: 28101-OTMODULES

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Per FCC 15.21 Changes or modifications not expressly approved by TSI will void the product warranty and may void the user's authority to operate the equipment.

#### Compliance

This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's license-exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

1. l'appareil ne doit pas produire de brouillage, et
2. l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

To satisfy RF exposure requirements, this device and its antenna may be operated near a person's body and the extremities, but must be operated with a separation distance of at least 20 cm from all person's head.

Pour satisfaire aux exigences d'exposition RF, cet appareil et son antenne peuvent être utilisés à proximité du corps et des extrémités d'une personne, mais doivent être utilisés avec une distance de séparation d'au moins 20 cm de la tête de toute personne.

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### WARNING

- **DO NOT** attempt to replace the battery in this instrument.
- **DO NOT** abuse the battery in any way as the battery may rupture or catch fire.
- **DO NOT** use a substitute or non-rechargeable battery in this instrument.
- **DO NOT** short-circuit, incinerate, dismantle or mutilate Lithium ion batteries
- **DO NOT** expose to water or heat.
- **DO NOT** use any battery which shows signs of damage, such as bulging, swelling, a swollen plastic wrap, liquid in the plastic wrap, etc.



### LASER WARNING

- OmniTrak™ Modules are Class 1 laser-based instruments.
- During normal operation, you will not be exposed to laser radiation.
- **DO NOT** open the OmniTrak™ Module when it is powered **ON**.
- You will not be exposed to the laser radiation when the OmniTrak™ Module is disassembled.
- The PM sensor has a laser inside it. **DO NOT** open the PM sensor inside OmniTrak Module when the OmniTrak Module is powered.



### AVERTISSEMENT LASER

- Les modules OmniTrak™ sont des instruments à base de laser de classe 1.
- Pendant le fonctionnement normal, vous ne serez pas exposé au rayonnement laser.
- N'ouvrez **PAS** le module OmniTrak™ lorsqu'il est sous tension.
- Vous ne serez pas exposé au rayonnement laser lorsque le module OmniTrak™ est démonté.
- Le capteur PM contient un laser. **NE PAS** ouvrir le capteur PM à l'intérieur du module OmniTrak lorsque ce dernier est alimenté.



Knowledge Beyond Measure.

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