



® Knowledge Beyond Measure.

# OmniCount™ Portable Water-Based Condensation Particle Counter

Models 3001 and 3002



## Water-based, Orientation Independent, Portable, Versatile

When you need accurate ultrafine particle (UFP) / nano-particle counts and concentration measurements, both **OmniCount™** Portable Water-based Condensation Particle Counters provide versatile, portable, and cost-effective solutions.

Built for real-world use, both **OmniCount™** PWPCs maintain measurement accuracy during movement and tilting and operate for more than four hours on battery power, making them suitable for both mobile and stationary applications where power may be limited. Bluetooth® LE connectivity enables seamless, wireless data monitoring for efficient workplace and field application, and lab workflows.

By using distilled water instead of butanol or isopropyl alcohol, the **OmniCount™** models simplify operation, reduce consumable costs, and improve safety and sustainability. This makes them cost-effective and affordable solutions that require minimal training, making them ideal for all monitoring applications, teaching laboratories, and expanding research teams seeking reliable UFP and nano particle measurements in a lightweight, easy-to-use instrument.

The dual-channel model 3002 allows simultaneous comparison of UFP concentrations in two nearby environments, making it ideal for applications like real-time respirator fit assessment in workplace or, Simulated Workplace Protection Factor Studies (WPFs/SWPFs), indoor/outdoor air quality assessments and more.

## Features and Benefits

- Single channel (3001), or dual-channel (3002)
- Lightweight, wearable/portable and battery-operated
- Detects particles ranging from <10-1,000 nm
- >4 hr battery operation (at 20 °C / 68 °F) and plug-in power options for flexibility
- Hot-swappable battery
- Easy data management with Bluetooth® LE and USB-C, on-board data storage with three different operation modes, PC software for data collection, access and export
- Suitable for various particle concentration levels (up to 200,000 particles/cm<sup>3</sup>)
- Cost-effective and environmentally friendly, uses distilled water, each CPC samples at 0.1 L/min
- Integrates seamlessly with the OmniTrak™ platform for multi-location and multi-parameter monitoring

## Applications

- Personal exposure monitoring
- Indoor and outdoor mobile monitoring
- Field and remote measurement campaigns
- Indoor air quality investigations
- Work area monitoring
- Point source location
- Cabin air quality investigations
- Academic research and teaching

Additional applications (model 3002 only):

- Fit assurance testing for respirators
- Filtration performance testing
- HVAC evaluation



## Specifications

# OmniCount™ Portable Water-Based Condensation Particle Counter

Models 3001 and 3002

### Number of Channels

1 (3001) or 2 (3002)

### Sample Flow Rate

0.1 L/min (each channel)

### Particle Size Detection ( $D_{50}$ )

<10 nm

### Particle Size Range

10-1000nm

### Concentration Range:

0 to 200,000 #/cm<sup>3</sup>

### Concentration Accuracy\*

±20%

### Channel to Channel Agreement

±15% (wicks at equivalent saturation states)

### Zero Count Performance

<0.01 #/cc, for  $T_{Mod} < T_{Sample Dew}$  ~75% RH

### Response Time

$t_{10-90}$  <2s

### Environmental Operating Conditions

8-38°C (46-100°F)

75-105 kPa / 0.75-1.05 bar / 10.9-15.2 psi

0-90% RH (non-condensing)

### Wick Life

Typically > 8 h, but dependent on sample RH

### Battery Life

>4 hours at 20°C (68°F)

### Data Storage Capacity

| Mode / Model        | 3001     | 3002     |
|---------------------|----------|----------|
| Standard Mode       | 29 hours | 24 hours |
| Fit Test Mode       | N/A      | 19 hours |
| High Frequency Mode | 20 hours | 11 hours |

### Weight

3001: 0.85 kg (1.87 lbs)

3002: 1 kg (2.2 lbs)

### Dimensions

16 cm x 12 cm x 8 cm (6.6 in. x 4.7 in. x 3.1 in.)

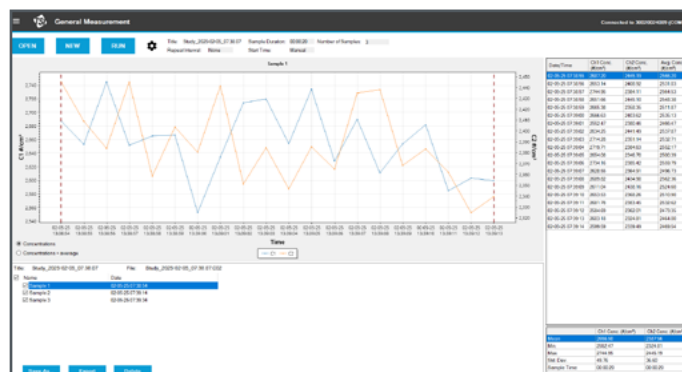
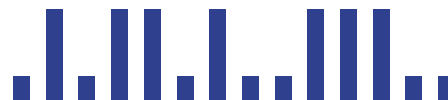
\*At 25°C, with fully saturated wicks. Absolute accuracy decreases with two or more of the following occurring simultaneously: partially saturated wicks, elevated temperatures, and elevated concentrations, as indicated by pulse ratio status.



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|         |                        |           |                       |
|---------|------------------------|-----------|-----------------------|
| 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    |           |                       |



TSI® OmniCount™ Software

### Bluetooth® LE Module Specifications for Taiwan Compliance:

|                      |                      |
|----------------------|----------------------|
| RF Module Brand Name | u-blox               |
| RF Module Model      | NINA-B306            |
| RF Frequency Range   | 2400-2480 MHz        |
| RF Band              | 2.4 GHz, 40 channels |
| NCC ID               | CCA19LP1670T0        |

### To Order Specify

| Specify         | Description                                                                          |
|-----------------|--------------------------------------------------------------------------------------|
| 3001            | Single-channel OmniCount™ Portable Water-based Condensation Particle Counter (PWPCP) |
| 3002            | Dual-channel OmniCount™ Portable Water-based Condensation Particle Counter (PWPCP)   |
| 300X-WICKKIT    | Set of two replacement wicks                                                         |
| 3002-BATTERY    | Spare battery pack                                                                   |
| 3002BATTCHARGER | 2 port external battery charger                                                      |

Specifications are subject to change without notice.

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