

# Leica Absolute Tracker AT960

## Key features

The fully-portable AT960 6DoF laser tracker delivers fast, accurate and versatile measurement, setting a new standard in portable industrial metrology.

It represents a robust, single-unit solution for reflector, probe and non-contact handheld scanner inspection.

### Precise

#### AIFM

##### Absolute Interferometer

The AIFM combines the highest-precision dynamic measurements with absolute distance measurement in a single solution.



##### Orient-to-gravity function

Allows measurements to be taken with the Z-axis aligned to gravity, making it ideal for levelling and alignment tasks.



##### ISO certification

System specified according to ISO 10360-10 in a calibration lab certified according to ISO 17025.



##### Large volume

Up to 60 m probing and scanning volume in diameter, and up to 160 m in diameter for reflector-based measurement.

### Portable



##### Compact and lightweight

Designed for transport across quality rooms, production lines and remote sites.



##### Built-in Wi-Fi

For simple setup and communication with the PC and remote control operation.



##### Hot-swappable battery power

Quick and easy cable-free setup in almost any location.



##### IP54 protection

IEC-certified sealed unit guarantees ingress protection against dust and other contaminants.

### Versatile and fast



##### Multifunctionality

Compatible with:

> reflectors and Leica T-Probe for single-point measurement

> AS1 and AS1-XL scanners for non-contact measurement



##### PowerLock

Interrupted line of sight is automatically re-established with no user interaction.

### Fully automation-ready



##### Fully compatible with automated setups

Automated robotic installations.

#### RTFP

##### Real-time data output

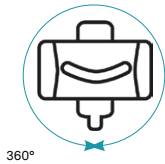
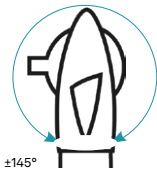
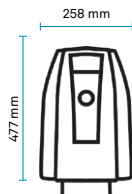
1,000 Hz low-latency EtherCAT or PROFINET data transfer with the optional Real-Time Feature Pack.



# Technical specifications

|                     |                                                                          |                                                                                            |
|---------------------|--------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| General information | Tracker size   weight                                                    | 477 x 258 x 238 mm   14.2 kg                                                               |
|                     | Controller size   weight                                                 | 249 x 148 x 59 mm   1.65 kg                                                                |
|                     | Measurement range                                                        | 3D: 0 to 80 m<br>6D: 1.2 to 30 m                                                           |
|                     | Measurement frequency                                                    | 1000 Hz                                                                                    |
|                     | Laser class                                                              | Class 2                                                                                    |
|                     | Overview Camera                                                          | 5MP                                                                                        |
| Environmental       | Operating temperature                                                    | 0°C to +40°C                                                                               |
|                     | Relative humidity                                                        | max. 95% non-condensing                                                                    |
|                     | Operating elevation                                                      | -700 m to +5500 m                                                                          |
|                     | Dust   water                                                             | IP54                                                                                       |
| Interface           | Cable                                                                    | Cat6                                                                                       |
|                     | Wireless                                                                 | WLAN (IEEE 802.11n)                                                                        |
| Power management    | Battery type                                                             | Lithium-ion battery   swappable                                                            |
|                     | Typical battery runtime (single charge)                                  | 6 hours                                                                                    |
|                     | Mains                                                                    | AC power supply                                                                            |
| Accuracy            | Angular performance $E_{\text{two-face,MPE}}^1$                          | $\pm 15 \mu\text{m} + 6 \mu\text{m/m}$                                                     |
|                     | Interferometer eIFM                                                      | $\pm 0.4 \mu\text{m} + 0.3 \mu\text{m/m}$                                                  |
|                     | Absolute Distance Meter eADM <sup>1</sup>                                | $\pm 10 \mu\text{m}$                                                                       |
|                     | Length measurement $E_{\text{distance,MPE}}^1$                           | $\pm 21 \mu\text{m} + 8.5 \mu\text{m/m}$                                                   |
|                     | Leica T-Probe uncertainty $U_{\text{xyz}}^2$                             | $\pm 35 \mu\text{m}$                                                                       |
|                     | Length measurement $E_{\text{distance,MPE}}$ using scanners <sup>3</sup> | Absolute Scanner AS1: $\pm 50 \text{ mm}$<br>Absolute Scanner AS1-XL: $\pm 150 \text{ mm}$ |
|                     | Inclination sensor                                                       | $\pm 1.0 \text{ arcsec}$                                                                   |
|                     | Orient to gravity $U_z$                                                  | $\pm 15 \mu\text{m} + 8 \mu\text{m/m}$                                                     |

<sup>1</sup> Maximum Permissible Error (MPE) specifications in accordance with ISO 10360-10:2021 using Leica 1.5" Red Ring Reflectors (RRR).  
<sup>2</sup> Additional Leica T-Probe uncertainty to be added to the existing Leica Absolute Tracker AT960 "U<sub>xyz</sub>" uncertainty for a complete "U<sub>xyz</sub>" uncertainty.  
<sup>3</sup> The stated values represent the overall system accuracy of Absolute Scanner AS1/AS1-XL used with Leica Absolute Tracker, in accordance with ISO10360-10.



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