

DT-300

DT-300series

Digital Theodolite



Brand new design with laser pointer for efficient alignment setting work!

Lightweight, compact angular measurement with high-precision laser guidance and up to 30 workdays of power

- Long-lasting Li-ion or AA battery life with up to 30 workdays^{*2} of power
- Convenient high-precision laser guidance
- Brand new product design utilizing Topcon premium quality total station components
- Embedded tilt sensor in 5" model
- Ultra-rugged IP66 dust and heavy rain protection

*1 As of May, 2020 checked with Topcon as theodolite

*2 In case of measuring angle with DT-309G/DT-309GL for 8 hours per day

SPECIFICATIONS

| Model | | DT-305 | DT-305L | DT-309G | DT-309GL |
|-----------------------------------|-----------------------------|--|--------------------|---|--------------------|
| Telescope | Length | 149 mm | 152 mm | 149 mm | 152 mm |
| | Aperture | 45 mm | | | |
| | Magnification | 30X | | | |
| | Image | Erect | | | |
| | Field of view | 1°30' (26 m/1,000 m) | | | |
| | Resolving power | 2.5" | | | |
| | Minimum focus | 0.9 m | 1.0 m | 0.9 m | 1.0 m |
| | Stadia ratio | 100 | | | |
| | Stadia constant | 0 | | | |
| Angle measurement | Method | Rotary absolute encoder | | | |
| | Detecting | Horizontal: 1 sides | | | |
| | | Vertical: 1 sides | | | |
| | Minimum display | 1" (0.0002 gon/0.01 mil)/ 5" (0.001 gon/0.1 mil) (selectable) | | 10" (0.002 gon/0.05 mil)/ 20" (0.005 gon/0.1 mil) (selectable) | |
| Accuracy ^{*1} | 5" | | 9" | | |
| Display | Unit | 2 sides | | 1 sides | |
| | Type | Automatic vertical compensator | | — | |
| Tilt angle compensation | Range of compensation | ±3' (±0.0555 gon) | | — | |
| | Compensation constant | Can be changed (compensation is done at the same time with vertical angle 0 point) | | — | |
| | Magnification | 3X | | | |
| Optical plummet | Minimum focus | 0.5 m | | | |
| | Circular level | 10' / 2 mm | | | |
| Sensitivity of levels | Plate level | 30" / 2 mm | | | |
| | Operating temperature range | -20 to 50°C (-4 to 122°F) ^{*2} | | | |
| Temperature | Storage temperature range | -30 to 60°C (-22 to 140°F) (no condensation) | | | |
| | Dust and water protection | IP66 (IEC 60529: 2001) | | | |
| Environmental durability | Power source | 4 AA alkaline batteries | | | |
| | Power Supply (Standard) | Theodolite only | about 230 hours | | about 250 hours |
| Laser only | | — | about 80 hours | — | about 80 hours |
| Theodolite and laser | | — | about 55 hours | — | about 55 hours |
| Power Supply (Option) | Power source | BDC71 (Optional accessory) | | | |
| | Theodolite only | about 300 hours | | about 350 hours | |
| | Laser only | — | about 100 hours | — | about 100 hours |
| Working duration at 20°C (Option) | Theodolite and laser | — | about 70 hours | — | about 70 hours |
| | Tribrach | Type | Detachable | | Fixing |
| Laser-pointer | | Signal source | — | Red laser diode (633 nm) | — |
| | Maximum output | — | 0.6 mW | — | 0.6 mW |
| | Laser Class | — | Class 2 | — | Class 2 |
| | Laser beam range | — | 50 m (in daylight) | — | 50 m (in daylight) |
| Others | Size (with handle) | 173 (D) X 181 (W) X 318 (H) mm (Display on both sides) | | 173 (D) X 174 (W) X 318 (H) mm (Display on one side) | |
| | Weight | 4.1 kg (9.04 lb) (with batteries and battery holder) | | 4.0 kg (8.82 lb) (with batteries and battery holder) | |

*1: ISO 17123-3: 2001 *2: No direct sunlight for using high temperatures of 50°C (122 °F).

Standard components

- Main unit • DB-80 Battery holder • Lens cap • Tool pouch • Precision screwdriver • Lens brush • Hexagonal wrench (1.3 mm/2 mm/2.5 mm) • Adjusting pin • Wiping cloth
- Quick start manual • Carrying case • Carrying strap

Optional accessories

- Plumb bob • Model 13 Diagonal eyepiece • BDC71 Battery • CDC77 Charger



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