



PERFORMANCE

Angle measurement

Sensor type Absolute encoder with diametrical reading
 Accuracy (Standard deviation based on DIN 18723) 1" (0.3 mgon)
 2" (0.6 mgon), 3" (1.0 mgon), or 5" (1.5 mgon)
 Angle Display (least count) 0.1" (0.01 mgon)
 Automatic level compensator
 Type Centered dual-axis
 Accuracy 0.5" (0.15 mgon)
 Range ± 5.4' (±100 mgon)

Distance measurement

Accuracy (ISO)
 Prism mode
 Standard 1. mm + 2 ppm
 Accuracy (RMSE)
 Prism mode
 Standard 2 mm + 2 ppm
 Tracking 4 mm + 2 ppm
 DR mode
 Standard 2 mm + 2 ppm
 Tracking 4 mm + 2 ppm
 Extended Range 10 mm + 2 ppm

Measuring time

Prism mode
 Standard 1.2 sec
 Tracking 0.4 sec
 DR mode
 Standard 1–5 sec
 Tracking 0.4 sec

Measurement Range

Prism mode (under standard clear conditions)
 1 prism 2500 m
 1 prism Long Range mode 5500 m (max. range)
 Shortest range 0.2 m
 DR mode

	Good (Good visibility, low ambient light)	Normal (Normal visibility, moderate sunlight, some heat shimmer)	Difficult (Haze, object in direct sunlight, turbulence)
White card (90% reflective) ³	1,300 m	1,300 m	1,200 m
Gray card (18% reflective) ³	600 m	600 m	550 m

Reflective foil 20 mm 1000 m
 Shortest range 1 m
 DR Extended Range Mode
 White Card (90% reflective) 2200 m

EDM SPECIFICATIONS

Light source Pulsed laser diode 905 nm, Laser class 1
 Beam divergence
 Horizontal 4 cm/100 m
 Vertical 8 cm/100 m

1 Standard deviation according to ISO17123-4.
 2 Standard clear: No haze. Overcast or moderate sunlight with very light heat shimmer.
 3 Range and accuracy depend on atmospheric conditions, size of prisms and background radiation.
 4 Kodak Gray Card, Catalog number E1527795.
 5 The capacity in -20 °C (-5 °F) is 75% of the capacity at +20 °C (68 °F).
 6 Bluetooth type approvals are country specific. Contact your local Trimble Authorized Distribution Partner for more information.
 7 Dependent on selected size of search window.
 8 Solution acquisition time is dependent upon solution geometry and GPS position quality.
 9 Functionality and availability dependent on region.

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SYSTEM SPECIFICATIONS

Leveling

Circular level in tribrach 8/2 mm
 Electronic 2-axis level in the LC-display
 with a resolution of 0.3" (0.1 mgon)

Servo system

MagDrive servo technology, integrated servo/angle sensor electromagnetic direct drive
 Rotation speed 115 degrees/sec (128 gon/sec)
 Rotation time Face 1 to Face 2 2.6 sec
 Positioning time 180 degrees (200 gon) 2.6 sec
 Clamps and slow motions Servo-driven, endless fine adjustment

Centering

Centering system Trimble 3-pin
 Optical plummet Built-in optical plummet
 Magnification/shortest focusing distance 2.3×/0.5 m-infinity

Telescope

Magnification 30×
 Aperture 40 mm
 Field of view at 100 m 2.6 m at 100 m
 Shortest focusing distance 1.5 m-infinity
 Illuminated crosshair Variable (10 steps)

Power supply

Internal battery Rechargeable Li-Ion battery 11.1 V, 5.0 Ah
 Operating time
 One internal battery Approx. 6.5 hours
 Three internal batteries in multi-battery adapter Approx. 20 hours
 Robotic holder with one internal battery 13.5 hours

Weight

Instrument (Autolock) 5.4 kg
 Instrument (Robotic) 5.5 kg
 Trimble CU controller 0.4 kg
 Tribrach 0.7 kg
 Internal battery 0.35 kg
 Trunnion axis height 196 mm

Other

Communication USB, Serial, Bluetooth
 Operating temperature -20° C to +50° C
 Tracklight built in Not available in all models
 Dust and water proofing IP65
 Humidity 100% condensing
 Laser pointer coaxial (standard) Laser class 2
 Security Dual-layer password protection, Locate2Protect

ROBOTIC SURVEYING

Autolock and Robotic Range
 Passive prisms 500 m–700 m
 Trimble MultiTrack Target 800 m
 Trimble Active Track 360 Target 500 m
 Autolock pointing precision at 200 m (Standard deviation)
 Passive prisms <2 mm
 Trimble MultiTrack Target <2 mm
 Trimble Active Track 360 Target <2 mm
 Shortest search distance 0.2 m
 Type of radio internal/external 2.4 GHz frequency-hopping, spread-spectrum radios
 Search time (typical) 2–10 sec

GPS SEARCH/GEOLock

GPS Search/GeoLock 360 degrees (400 gon) or defined horizontal and vertical search window
 Solution acquisition time 15–30 sec
 Target re-acquisition time <3 sec
 Range Autolock & Robotic range limits



Specifications subject to change without notice.

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