SPECTRA PRECISION®

FOCUS® 6 TOTAL STATION

SPECSHEET

DISTANCE MEASUREMENT

Reflectorless mode (white target)[1] . . . . . 1.5 m to 300 m (4.9 ft to 984 ft)
Range with specified prisms
Good conditions (No haze, visibility over 40 km (25 miles))
With reflector sheet 5 cm x 5 cm (2 in x 2 in)
2" . . . . . 1.5 m to 270 m (4.9 ft to 886 ft)
5" . . . . . 1.5 m to 300 m (4.9 ft to 984 ft)
With single prism 6.25 cm (2.5 in)
2" . . . . . 1.5m to 3,000 m (4.9 ft to 9,843 ft)
5" . . . . . 1.5 m to 5,000 m (4.9 ft to 16,404 ft)
Accuracy[2] (Precise mode)
2" Prism . . . . . ±(2+2 ppm x D) mm
2" Reflectorless . . . . . ±(3+2 ppm x D) mm
5" Prism . . . . . ±(3+2 ppm x D) mm
5" Reflectorless . . . . . ±(3+2 ppm x D) mm
Measuring interval[3]
Prism mode
2" Precise mode . . . . . 1.6 sec.
5" Precise mode . . . . . 1.5 sec.
Normal mode . . . . . 0.8 sec.
Reflectorless mode
2" Precise mode . . . . . 2.1 sec.
5" Precise mode . . . . . 1.8 sec.
2" Normal mode . . . . . 1.2 sec.
5" Normal mode . . . . . 1.0 sec.
Least count
Precise mode . . . . . 1 mm (0.002 ft)
Normal mode . . . . . 10 mm (0.02 ft)

ANGLE MEASUREMENT

DIN 18723 accuracy (horizontal and vertical) . . . . . 2"/0.5 mgon
5"/1.5 mgon
Reading system . . . . . Absolute encoder
Circle diameter . . . . . 62 mm (2.4 in)
Horizontal angle . . . . . Diametrical
Vertical angle . . . . . Single
Minimum increment (Degree, Gon, MIL6400) . . . . . Degree: 1/5/10"
Gon: 0.2/1/2 mgon
MIL6400: 0.005/0.02/0.05 mil

TELESCOPE

Tube length . . . . . 125 mm (4.9 in)
Image . . . . . Erect
Magnification . . . . . 30x (18x/36x with optional eyepieces)
2" Effective diameter of objective . . . . . 40 mm (1.6 in)
2" EDM diameter . . . . . 45 mm (1.8 in)
5" Effective diameter of objective . . . . . 45 mm (1.8 in)
5" EDM diameter . . . . . 50 mm (2.0 in)
Field of view . . . . . 1°20'
Resolving power . . . . . 3"
Minimum focusing distance . . . . . 1.5 m (4.9 ft)
Laser Pointer . . . . . Coaxial Red Light

TILT SENSOR

Type . . . . . Dual-axis
Method . . . . . Liquid-electric detection
Compensation range . . . . . ±3.5'

1 White objects with high reflectivity (KGC 90%). Measuring distance may vary depending on targets and measuring conditions.
2 ±(3+3 ppm x D) mm –20 °C to –10 °C, +40 °C to +50 °C (–4 °F to +14 °F, +104 °F to +122 °F)
3 Measuring time may vary depending on measuring distance and conditions. For the initial measurement, it may take a few more seconds.
4 Battery life specification at 25 °C (77 °F). Operation times may vary depending on the condition and deterioration of the battery.

Specifications subject to change without notice.

COMMUNICATIONS

Communication ports . . . . . 1 x serial (RS-232C)
Wireless communications . . . . . Optional integrated Bluetooth

POWER

Internal Li–ion battery (x2)
Output voltage . . . . . 3.8 V DC
Operating time[4]
2" . . . . . approx. 19 hours (continuous distance/angle measurement)
approx. 57 hours (distance/angle measurement every 30 seconds)
approx. 62 hours (continuous angle measurement)
5" . . . . . approx. 10 hours (continuous distance/angle measurement)
approx. 26 hours (distance/angle measurement every 30 seconds)
approx. 31 hours (continuous angle measurement)
Charging time
Full charge . . . . . 4 hours

GENERAL SPECIFICATIONS

Level vials
Sensitivity of Circular level vial . . . . . 10'/2 mm
Optical plummet
Image . . . . . Erect
Magnification 3x
Field of view . . . . . 5°
Focusing range . . . . . 0.5 m (1.6 ft) to ∞
Display . . . . . Single side, backlit, graphic LCD (128x64 pixel)
Laser plummet (optional) . . . . . 4 levels
Point memory . . . . . 10,000 records
Dimensions (W x D x H) . . . . . 149 mm x 145 mm x 306 mm
(5.8 in x 5.7 in x 12.0 in)
Weight (approx.)
2" Main unit (without battery) . . . . . 3.8 kg (8.4 lb)
5" Main unit (without battery) . . . . . 3.6 kg (8.0 lb)
Battery . . . . . 0.1 kg (0.2 lb)
Carrying case . . . . . 2.3 kg (5.1 lb)

ENVIRONMENTAL

Operating temperature range . . . . . –20 °C to +50 °C (–4 °F to +122 °F)
Storage temperature range . . . . . –25 °C to +60 °C (–13 °F to +140 °F)
Atmospheric correction
Temperature range . . . . . –40 °C to +60 °C (–40 °F to +140 °F)
Barometric pressure . . . . . 400 mmHg to 999 mmHg/533 hPa to 1,332 hPa/15.8 inHg to 39.3 inHg
Dust and water protection IP66

CERTIFICATION

Class B Part 15 FCC certification, CE Mark approval. C-Tick.
Laser safety IEC 60825-1 am2:2007
2" Reflectorless / Laser Pointer: Class 3R laser
2" Prism mode: Class1 laser
5" Reflectorless / Prism mode: Class 1 laser
5" Laser Pointer: Class 2 laser
Laser Plummet (optional): Class 2 laser
Bluetooth type approvals are country specific.

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