FOCUS® 6+ Total Station

NEW FOR 2015

DISTANCE MEASUREMENT

Range with specified prisms (Good conditions[1])
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" . . . . . 1.5 m 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)
Range Reflectorless Mode[2]

2"	Good[1]	Normal[4]	Difficult[5]
KGC[3] (18%)	350 m (1,148 ft)	250 m (820 ft)	200 m (656 ft)
KGC (90%)	500 m (1,640 ft)	400 m (1,312 ft)	250 m (820 ft)
5"	Good	Normal	Difficult
KGC (18%)	280 m (920 ft)	250 m (820 ft)	200 m (656 ft)
KGC (90%)	500 m (1,640 ft)	500 m (1,640 ft)	300 m (984 ft)

Shortest possible range . . . . . 1.5m (4.9 ft)
Accuracy[6] (Precise mode) ISO 17123-4
Prism . . . . . ±(2+2 ppm × D) mm
Reflectorless. . . . . ±(3+2 ppm × D) mm
Measuring interval[7]

Prism mode	Precise mode	Normal mode
2"	1.6 sec	0.8 sec
5"	1.5 sec	0.8 sec
Reflectorless mode[8]	Precise mode	Normal mode
2"	2.1 sec	1.2 sec
5"	1.8 sec	1.0 sec
Least count	1 mm (0.002 ft)	10 mm (0.02 ft)

ANGLE MEASUREMENT

DIN 18723 accuracy
(horizontal and vertical) . . . . . .2"/0.6 mgon
5"/1.5 mgon
Reading system . . . . . .Absolute encoder
Circle diameter. . . . . 62 mm (2.4 in)
Horizontal/Vertical angle. . . . . .2": Diametrical/Diametrical
5": Diametrical/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 . . . . 30× (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'

COMMUNICATIONS

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

POWER

Internal Li–ion battery (x2)
Output voltage . . . . . 3.8 V DC
Operating time[9]
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 . . . . . 3×
Field of view . . . . . .5°
Focusing range . . . . . .0.5 m (1.6 ft) to ∞
Display face 1 . . . . . backlit, graphic LCD (128×64 pixel)
Display face 2 (2" only) . . . . . backlit, graphic LCD (128×64 pixel)
Laser plummet (optional) . . . . . .4 levels
Point memory. . . . . 25,000 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). . . . . 3.7 kg (8.1 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)
FOCUS 6W+ . . . . . .–30 °C to +50 °C (–22 °F to +122 °F)
Storage temperature range. . . . . .–25 °C to +60 °C (–13 °F to +140 °F)
FOCUS 6W+ . . . . . .–30 °C to +60 °C (–22 °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 IEC60825-1 Ed. 2.0 : 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.

1 Good conditions (good visibility, overcast, twilight, underground, low ambient light).
2 Measuring distance may vary depending on targets and measuring conditions.
3 Kodak Gray Card, Catalog number E1527795.
4 Normal conditions (normal visibility, object in the shadow, moderate ambient light).
5 Difficult conditions (haze, object in direct sunlight, high ambient light).
6 ±(3+3 ppm × D) mm –20 °C to –10 °C, +40 °C to +50 °C (–4 °F to +14 °F, +104 °F to +122 °F).
7 Measuring time may vary depending on measuring distance and conditions. For the initial measurement, it may take a few more seconds.
8 Measured to KGC 90% at 20 m (65 ft).
9 Battery life specification at 25 °C (77 °F). Operation time may be shorter in low temperatures or if the battery is not new.

Bluetooth®

LASER RADIATION
AVOID DIRECT EYE EXPOSURE
CLASS 3R LASER PRODUCT
Wavelength: 630-680nm
Maximum output power: 5mW
This product complies with IEC 60825-1: 2007 and 21 CFR 1040.10 and 1040.11 Except for deviations pursuant to Laser Notice no.50, dated June 24, 2007

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Please visit www.spectraprecision.com for the latest product information and to locate your nearest distributor. Specifications and descriptions are subject to change without notice.