

MS 05AXII / MS 1AXII



Accuracy and Durability are Further Refined to Provide Highly Accurate Measurement

- Ultra High-precision Distance Measurement
- Precise Angle Accuracies 0.5" (MS05AXII) / 1" (MS1AXII)
- Auto Aiming Accuracy of 1"*
- Remote Control through on-line PC
- Exclusive Reflector Prescan technology
- Enforced Durability for Long Term Deformation / Monitoring Applications

* When measured with standard prism





SPECIFICATIONS

Model	MS05AXII	MS1AXII
Telescope		
Magnification / Resolving power	30x / 2.5"	
Objective aperture: 45mm (1.8 in.) (50mm (2.0 in.) for EDM), Image: Erect, Field of view: 1°30' (26 m/1,000 m), Minimum focus: 1.3 m (4.3 ft.)		
Angle measurement		
Display resolutions (selectable)	0.1" / 0.5" (0.0002 / 0.0001 gon, 0.0005 / 0.002 mil)	
Accuracy (ISO 17123-3:2001)	0.5"	1"
Dual-axis compensator / Collimation compensation	Dual-axis liquid tilt sensor, working range: ±6' / Collimation compensation available	
Advanced angle encoder technology	Provided	
Distance measurement		
Laser output ¹⁾	Reflectorless mode: Class 3R / Prism/sheet mode: Class 1	
Measuring range (under good conditions ²⁾)	One prism ³⁾ Reflective sheet RS50N-R ⁴⁾ Reflectorless ⁵⁾	1.3 to 3,500 m (4.3 to 11,480 ft.) 1.3 to 200m (4.3 to 640 ft.) 0.5 to 100 m (1.64 to 320 ft.)
Minimum display		0.5 to 400 m (1.64 to 1,310 ft.)
Accuracy (ISO 17123-4:2001) (D=measuring distance in mm)	Prism ³⁾ Reflective sheet ⁴⁾ Reflectorless ⁵⁾	(0.0001 m / 0.0001 m (0.0001 ft. / 0.001 ft., 1/64 in. / 1/16 in.) (0.8 + 1ppm x D) mm (0.5 + 1ppm x D) mm (1 + 1ppm x D) mm
Measuring time (Fine mode) ⁷⁾		(1 + 1ppm x D) mm (2 + 1ppm x D) mm ⁶⁾ 0.9s (initial 1.5s)
Motor		
Type	DC motor drive	
Rotation speed	85°/s	
Auto-Collimating		
Working range (under average conditions ²⁾)	One prism Reflective sheet RS50N-R ⁴⁾	1.3 to 1,000 m (4.3 to 3,280 ft.) 5 to 50m (16 to 160ft.)
Sighting accuracy (ISO 17123-3)	prism Reflective sheet ⁴⁾	1" (1 mm @ 200 m) 4" (1 mm @ 50 m)
OS, Interface and Data management		
Operating system	Windows Embedded CE 6.0	
Display ¹⁰⁾	3.5inch, transmissive TFT QVGA color LCD with LED backlight, Touch screen, Automatic brightness control	
Keyboard ¹⁰⁾	25 keys with backlight	
Trigger key	On right instrument support	
Data storage	Internal memory Plug-in memory device	500MB (includes memory for program files) USB flash memory (up to 8 GB)
Calendar / clock function	Provided	
Interface	Serial RS-232C, USB2.0 (Type A / miniB)	
Bluetooth modem ¹¹⁾	Bluetooth Class 1, Ver.2.1+EDR, Operating range: up to 600m (1,960 ft.) ¹²⁾	
General		
Target searchlight	LED (white), Blink / On, selectable	
Laser-pointer	Coaxial red laser using EDM beam, ON / OFF, selectable	
Levels	Graphic Circular level	6' (Inner Circle) 10' / 2 mm
Optical plummet	Magnification: 3x, Minimum focus: 0.3m (11.8in.) from tribrach bottom	
Dust and water protection / Operating temperature	IP65 (IEC 60529:2001) / -20 to +50°C (-4 to +122°F)	
Size with handle ¹⁰⁾	Display and keyboard on one face: 230 (W) X 196 (D) X 393 (H) mm Display and keyboard on both faces: 230 (W) X 207 (D) X 393 (H) mm	
Weight with battery & tribrach ¹⁰⁾	Display and keyboard on one face: 6.8 kg (15.0 lb) Display and keyboard on both faces: 7.0 kg (15.4 lb)	
Power supply		
Battery	BDC70	Li-ion rechargeable battery
Operating time (20°C) ¹³⁾	BDC70 External battery (option)	Approx.4 hours BT-73Q: approx.14.5 hours

*1 IEC60825-1:Ed.2.0:2007 / FDA CDRH 21 CFR Part 1040.10 and 11 *2 Good conditions: No haze, visibility about 40km (25 miles), overcast, no scintillation. *3 Face the prism to the instrument during the measurement with the distance at 10 m or less. *4 Face the reflective sheet target to the instrument. *5 With Kodak Gray Card White Side (90% reflective). When brightness on measured surface is 30,000 lx. or less. Reflectorless range/accuracy may vary according to measuring objects, observation situations and environmental conditions. *6 Measuring range: 0.5 to 200 m *7 Fastest time under good atmospheric conditions*2, no compensation, EDM ALC at appropriate setting, slope distance. *8 Average conditions: Slight haze, visibility about 20km (12 miles), sunny periods, weak scintillation. *9 Figures when the Auto Pointing beam strikes within 15° of the reflective sheet target. *10 Control panel and keyboard location may vary depending on region or model. *11 Usage approval of Bluetooth wireless technology varies according to country. Please consult your local office or representative in advance. *12 Paired with RC-5, with instrument height to be more than 1.5m, no obstacles (like building structures, trees or vehicles) causing interrupting/reflecting radio wave, few sources of radio emissions/interference in the near vicinity of the instrument, no rain. *13 Fine distance measurement (single) using Auto Pointing, repeated every 30 seconds