

SOKKIA

MADE TO FIT YOUR WORLD.

iM-50 Series

Intelligent Measurement Total Station





Positioning made easy

The iM-50 Series offers the perfect entry-level site layout and survey instrument. The sleek and light iM-50 is made with superior Japanese quality and design, built with exceptional function and form in mind.

And like all of our products, you can customize it to meet your needs and create your own workflows.

- Integrated construction and survey application software
- Fast, accurate, and powerful EDM
- Reflectorless up to 500 m
- Prism range up to 4,000 m
- Advanced angle accuracy (2" or 5")

Outstanding performance

Featuring a new EDM, the iM-50 series is fast, accurate, and powerful. In reflectorless mode, it measures up to 500 m at an incredible 2mm+2ppm accuracy, and has 1.5mm+2ppm accuracy when measuring up to 4,000 m to standard prisms.

Fast and powerful EDM

The iM-50 series gives you rapid and correct pinpointing with phase shift technology. The ultra-narrow EDM beam can precisely measure walls, corners, manholes on the road surface, even chain-link fences and tree branches. You get a rapid distance measurement of 0.9 seconds regardless of the object.

Easy data transfer

Powered with integrated Bluetooth® capability and an internal antenna, the sleek design enables you to deliver measurements cable-free to your data controller.



Rugged and waterproof

With an IP66 certification, the iM-50 series is guaranteed to protect against dust and be waterproof up to one meter. Its rugged metal chassis and heavy duty handle stand up to even the toughest job sites. Truly an all-weather solution, the iM-50 series can operate in temperatures ranging from -20°C to 60°C.



Ready for the field

The iM-50 series has up to 50,000 points of internal memory, and can store an additional 32GB through the USB. And with the easy-to-use SDRbasic on-board software, you have everything you need to get the job done out in the field.



Specifications

MODEL	iM-52	iM-55
Telescope		
Magnification / Resolving power	30x / 2.5"	
Others	Length : 171mm (6.7in.), Objective aperture : 45mm (1.8in.) (48mm (1.9in.) for EDM), Image: Erect, Field of view: 1°30' (26m/1,000m), Minimum focus: 1.3m (4.3ft.) Reticle illumination: 5 brightness levels	
Angle Measurement		
Minimum Display (selectable)	1" / 5" (0.0002 / 0.001gon, 0.005 / 0.02mil)	
Accuracy (ISO 17123-3:2001)	2"	5"
Dual-axis compensator	Dual-axis liquid tilt sensor, working range: ±6'	
Collimation compensation	On/Off (selectable)	
Distance Measurement		
Laser output*1	Reflectorless mode : Class 3R / Prism/sheet mode : Class 1	
Measuring range (under average conditions*2)	Reflectorless*3 Reflective sheet*4/*5	0.3 to 500m (1,640ft.)
	Mini prisms	RS90N-K: 1.3 to 500m (4.3 to 1,640ft.), RS50N-K: 1.3 to 300m (4.3 to 980ft.), RS10N-K: 1.3 to 100m (4.3 to 320ft.)
	One prism	CP01: 1.3 to 2,500m (4.3 to 8,200ft.), OR1PA: 1.3 to 500m (4.3 to 1,640ft.)
Minimum Display	Fine / Rapid : 0.0001m (0.001ft. / 1/16 in.) / 0.001m (0.005ft. / 1/8 in.) (selectable) Tracking / Road : 0.001m (0.005ft. / 1/8 in.) / 0.01m (0.02ft. / 1/2 in.) (selectable)	
Accuracy*2 (ISO 17123-4:2001) (D=measuring distance in mm)	Reflectorless*3 Reflective sheet*4/*5 Prism*7	(2 + 2ppm x D) mm*6 (2 + 2ppm x D) mm (1.5 + 2ppm x D) mm
Measuring time*8	Fine Rapid Tracking	0.9s (initial 1.5s) 0.6s (initial 1.3s) 0.4s (initial 1.3s)
OS, Interface and Data management		
Operating system	Linux	
Display / Keyboard	Graphic LCD, 192 x 80 dots, backlight : on/off (Selectable) / Alphanumeric keyboard / 28 keys with backlight	
Control panel location	On both faces	On single face
Data storage	Internal memory Plug-in memory device	Approx. 50,000 points USB flash memory (max. 32GB)
Interface	Serial RS-232C, USB2.0 (Type A, for USB flash memory)	
Bluetooth modem (option)*9	Bluetooth Class 1.5, Operating range: up to 10m*10	
General		
Laser-pointer	Coaxial red laser using EDM beam	
Levels	Graphic Circular level (on tribrach)	6' (Inner Circle) 10' / 2 mm
Plummet	Optical*11 Laser*12	Optional Standard Standard Optional
Dust and water protection / Operating temperature	IP66 (IEC 60529:2001) / -20 to +60°C (-4 to +140°F)	
Size with handle	183(W)x 181(D)x 348(H)mm (On both faces)	183(W)x 174(D)x 348(H)mm (On single face)
Instrument height	192.5mm from tribrach mounting surface	
Weight with battery & tribrach	Approx. 5.1kg (11.3lb)	
Power Supply		
Battery	Li-ion rechargeable battery BDC46C	
Operating time (20°C)*13	Approx. 14hours*14	

*1 IEC60825-1:Ed.3.0:2014/ FDA CDRH 21 CFR Part 1040.10 and 11 *2 Average conditions: Slight haze, visibility about 20km (12 miles), sunny periods, weak scintillation. *3 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. *4 When the measuring beam's incidence angle is within 30° in relation to the reflective sheet target. *5 Measuring range in temperatures of 50 to 60°C (122 to 140°F): RS90N-K: 1.3 to 300m (4.3 to 980ft.), RS50N-K: 1.3 to 180m (4.3 to 590ft.), RS10N-K: 1.3 to 60m (4.3 to 190ft.) *6 Measuring range: 0.3 to 200m *7 Face the prism toward the instrument during the measurement with the distance at 10 m or less. *8 Good conditions: No haze, visibility about 40km (25miles), overcast, no scintillation. *9 Usage approval of Bluetooth wireless technology varies according to country. Please consult your local office or representative in advance. *10 No obstacles, few vehicles or sources of radio emissions/interference in the near vicinity of the instrument, no rain. *11 Magnification: 3x, Minimum focus: 0.5m (19.7in.) from tribrach bottom. *12 Red laser diode (635nm±10nm), Beam accuracy: ≤1.0mm@1.3m, Class 2 laser product. *13 Figures will change depending on the operating environment including temperatures and observation conditions. *14 In use of ECO mode. Fine single measurement every 30sec.

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