SOKKIA

NET1

Automated 3-D STATION

for 3-D COORDINATE MEASURING SYSTEM MONMOS

SOKKIA's High-Precision 3-D Station is Now Automated
Another MONMOS Goes into Action

Applications

- Construction management and maintenance for: Shipbuilding, Rail Vehicles, Automobiles, Bridges, Wind Turbine Generators, Plant Facilities…and more
- Automatic deformation monitoring in: Tunnels, Subways, Dams, Slopes and Heavy Construction Sites

Auto-pointing, Auto-tracking, Motor Drive, Remote Control

Equipped with new features to dramatically increase measurement efficiency and save labor.

■ Automatic Measurement Function

In addition to a high-precision motor drive mechanism, NET1 can perform auto-pointing using both reflective prisms and sheet targets. Automatic deformation monitoring is possible for early detection of earth or structure movement.

- Auto-pointing using a single prism can be performed from as far as 1,000m (3,280ft.) away.
- A dedicated auto-pointing algorithm* was developed specifically for NET1 allowing it to accurately sight the target closest to the telescope center, even if multiple prisms and other reflective objects are in the telescope's field of view.

* With a normal auto-pointing function, the total station sights the target closest to the instrument with the strongest measuring light reflection. NET1 automatically points to the closest targets to the crosshair center regardless of distance.

- In addition, NET1 features an "Auto-tracking" function to constantly track a moving prism, further broadening measurement possibilities.

■ High-precision EDM

- NET1's phase-comparison method EDM realizes a high distance accuracy of (1 + 1ppm x D)mm with reflective sheet targets, and (1.5 + 1ppm x D)mm using prisms.
- NET1 offers a range of 300m (980ft.) for reflective sheets and 3,000m (9,800ft.) for prisms allowing a wide range of measurement applications.
- NET1 has a maximum 200m (650ft.) reflectorless measurement range allowing points where a target cannot be affixed to be measured.

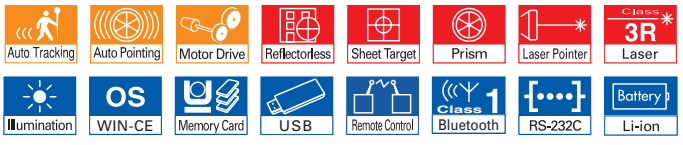
■ Equipped for all applications and environments

- NET1 can be used without worry in wet or dusty sites thanks to its high IP64 level of environmental protection.
- NET1 is equipped with Bluetooth® wireless technology for cable-free connections to controllers, PC and other peripherals.
- The NET1 incorporates the upgradeable Windows CE operating system. The display employs a high-visibility transreflective TFT LCD touch screen.

NET1 Specifications

Telescope		Objective aperture: 45mm, Magnification: 30x, Minimum focus: 1.3m
Angle measurement		Absolute encoder scanning, diametrical detection.
Accuracy (ISO 17123-3:2001)		1" / 0.0003gon / 0.005mil
Display resolutions		0.5" / 1", 0.0001 / 0.0002gon, 0.002 / 0.005mil, selectable
Distance measurement		Modulated laser, phase comparison method with red laser diode (690nm)
Laser output		Reflectorless mode: Class 3R (max. 5mW) Prism/Sheet mode: Class 1 equivalent (max. 0.22mW)
Measuring range	Reflectorless*1	0.3 to 200m / 1 to 650ft.
	With reflective sheet	1.3 to 300m / 4.3 to 980ft. (RS50N-R)
	With 1 AP prism	1.3 to 3,000m / 4.3 to 9,800ft.
Accuracy (ISO 17123-4:2001)	Reflectorless*1	(3 + 1ppm x D)mm
	With reflective sheet	(1 + 1ppm x D)mm
	With AP prism	(1.5 + 1ppm x D)mm
Display resolutions		0.0001m / 0.001ft. / 1/16in.
Motor drive		DC motor drive with self-locking free rotation system
Rotation speed		Max. 45°/s
Auto-pointing & Auto-tracking		Pulse laser transmitter and CCD detector integrated in telescope
Auto-pointing range	With 1 AP prism	1,000m / 3,280ft.
Auto-tracking range	With 1 AP prism	800m / 2,600ft.
Auto-pointing accuracy		2mm up to 100m / 0.08in up to 330ft. 3"/1mg over 100m/330ft. (2.9mm/200m / 0.11in./640ft.)
General		
Target illumination		White LED, Blink/On/Off selectable, 3-step brightness selection
Laser-pointer function		Coaxial red laser using EDM beam
Operating system		Windows CE (Ver.5.0)
Onboard memory		64MB (more than 1MB available for data)
Interface		Serial RS-232C, USB1.1 Type A, Bluetooth (Class 1) wireless
Display		3.5in. Transreflective TFT QVGA color LCD with touch screen function
Dust and water protection		Conforms to IP64 (IEC 60529)
Operating temperature		-10 to +50°C / 14 to 122°F
Size with handle and battery		W 201 x D 202 x H 375 mm / W 8.0 x D 8.0 x H 14.8 in.
Weight		7.7kg / 17.0lb.
Power supply		7.2V DC
BDC58 detachable battery		Li-ion rechargeable battery, 7.2V, 4.3Ah
Continuous use in auto-pointing mode*2		About 3 hours

* 1 With Kodak Gray Card White Side (90% reflective). Reflectorless range/accuracy may vary according to measuring objects, observation situations and environmental conditions.
* 2 Auto-pointing (180° rotation) and fine single measurement every 30s at 25°C (77°F).



Bluetooth®

FIG Sokkia is a sponsor of the International Federation of Surveyors.

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