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.

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**NET1 Specifications**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telescope</td>
<td>Objective aperture: 45mm, Magnification: 30x, Minimum focus: 1.3m</td>
</tr>
<tr>
<td>Angle measurement</td>
<td>Absolute encoder scanning, diametrical detection.</td>
</tr>
<tr>
<td>Accuracy</td>
<td>(ISO 17123-3:2001) 1” / 0.0005gon / 0.005mm</td>
</tr>
<tr>
<td>Display resolutions</td>
<td>0.5” / 1” / 0.0005gon / 0.005mm, selectable</td>
</tr>
<tr>
<td>Distance measurement</td>
<td>Modulated laser, phase comparison method with red laser diode (690nm)</td>
</tr>
<tr>
<td>Laser output</td>
<td>Reflectors less mode: Class 3R (max. 5mW)</td>
</tr>
</tbody>
</table>

**Measurement range**
- Reflectorless*: 0.3 to 200m / 7 to 650ft.
- With reflective sheet: 3.3 to 1000m / 4.3 to 9800ft. (RS50N-R)
- With 1 AP prism: 1.3 to 3000m / 4.3 to 9800ft.

**Accuracy**
- (ISO 17123-4:2001) Reflectorless*: 0.3 to 200m / 7 to 650ft.
- With reflective sheet: 1.3 to 3000m / 4.3 to 9800ft.
- With 1 AP prism: 1.3 to 3000m / 4.3 to 9800ft.

**Display resolutions**
- 0.0001m / 0.0001ft. / 0.16”.

**Motor drive**
- DC-motor drive with self-locking free rotation system.

**Rotation speed**
- Max. 450/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.
- With 2 AP prism: 800m / 2,620ft.

**Auto-pointing accuracy**
- 2mm up to 100m / 0.88in up to 330ft, 3”/4”in 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: Window CE (Ver 5.0)
- Onboard memory: 64MB (more than 1MB available for data)
- Interface: Serial RS-232C, USB 1.1, 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: 292 x 120 x 137.5 mm / 11.5 x 4.7 x 5.4 in.
- Weight: 7.7kg / 17.0lb.
- Power supply: 7.2V DC
- BDC68 detachable battery: Li-ion rechargeable battery, 7.2V, 4.3Ah
- Continuous use in auto-pointing mode*: About 3 hours

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*S with Kodak Gray Card White 20% (0% reflective), Reflectorless range/accuracy may vary according to measuring objects, observation situations and environmental conditions.

** with Auto-pointing (180° rotation) and fine angle measurement every 30s at 25°C (77°F).

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