

Automated 3D Station "NET1"



Sokkia (Japan) has released the NET1 automated 3D station, offering enhanced measurement efficiency for industrial, construction and deformation monitoring applications. NET1 incorporates the latest total station technologies - auto-pointing, auto-tracking, reflectorless measurement and wireless control to greatly increase efficiency in a wide range of applications.

The 3D Station can automatically search and point to prisms and reflective sheets with an auto-pointing range of up to 1,000m (3,280ft.) using prisms. A dedicated auto-pointing algorithm allows 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. This new algorithm is indispensable for automatic deformation monitoring applications where the

fixed targets are repeatedly measured in pre-determined intervals.

NET1 has 1" (0.0003gon / 0.005mil) angle accuracy. The minimum display resolutions are 0.5" (0.0001gon / 0.002mil) and 0.0001m / 0.001ft. Sokkia's advanced phase-comparison method EDM realises a high distance accuracy of $(1 + 1\text{ppm} \times D)\text{mm}$ with reflective sheets and $(1.5 + 1\text{ppm} \times D)\text{mm}$ using prisms. An extended measuring range up to 300m (980ft.) with reflective sheets, 3,000m (9,800ft.) with a single prism and a reflectorless range of 200m (650ft.) further increases measurement capabilities on large scale construction and mining sites.

IP64 dust-water protection allows use under harsh environmental conditions. Bluetooth technology enables wireless communication with a controller or PC. NET1 also incorporates the upgradeable Windows CE operating system and highly visible transreflective TFT LCD touch screen.

Sokkia has been providing NET-series high precision 3D stations - industrial total stations - for use in the measurement of ship blocks, bridge blocks, vehicles, large scale building construction as well as high accuracy deformation monitoring of tunnels, dams, buildings and landslides since 1990.

<https://www.gim-international.com/content/news/automated-3d-station-net1>
