

# SOKKIA

MADE TO FIT YOUR WORLD.

## iM-100 Total Station





### Big power, small package

Easy-to-use, highly accurate, rugged, and reliable the iM-100 manual total station is perfect for entry-level site layout and surveying. The iM-100 is built to be your hardest worker, made to withstand even the toughest conditions and providing up to 28 hours of battery life\*1.

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

- Fast, accurate, and powerful EDM
- Reflectorless up to 800 meters
- Dual-axis compensation
- Waterproof IP66 rating
- Up to 28 hours in battery life\*1

### High-end performance

Featuring a new top line EDM, the iM-100 is fast, accurate, and powerful. It has 1.5 mm / 2 ppm accuracy and is able to measure up to 5,000 meters to standard prisms, and in reflectorless mode measures up to 800 meters at an incredible 2.0 mm + 2 ppm accuracy.

### Precise positioning

Dual-axis compensation ensures stable measurements even on rough terrain. The compensator automatically corrects both horizontal and vertical angles and allows for more accurate instrument setups and measurements.

### Ready for the field

In addition to an IP66 certification, the iM-100 is guaranteed to protect against dust and be waterproof up to one meter. It comes in a regular model which can operate in temperatures ranging from -20°C to 60°C, and a low-temperature model that can handle -35°C to 50°C\*2.



### Stay charged

The iM-100 lets you get more done on the job without the need to recharge during the workday. Typical battery life is tested to 28 hours in Eco mode and 21 hours in regular mode.



### Get connected

With Bluetooth® wireless communication you can deliver data instantly to your Bluetooth-equipped controller, with no external antenna needed.



## Superior storage

Don't worry about how or where to store all your data, the iM-100 has you covered. With 50,000 pts internal memory and up to 32GB USB flash drive support, you can easily store all data in the field that you need.



## Specifications

| MODEL   | iM-101   | iM-102   | iM-103 | iM-105 |
|---|--|--|--------|--------|
| <b>Telescope</b>  |  |  |        |        |
| Magnification / Resolving power                                       | 30x / 2.5"   |  |        |        |
| Length  | 171 mm (6.7 in.)   |  |        |        |
| Objective aperture  | 45 mm (1.8 in.) (48 mm (1.9 in.) for EDM)  |  |        |        |
| Image   | Erect  |  |        |        |
| Field of view   | 1°30' (26 m/1,000 m)   |  |        |        |
| Minimum focus   | 1.3 m (4.3 ft.)  |  |        |        |
| Reticle illumination  | 5 brightness levels  |  |        |        |
| <b>Angle Measurement</b>  |  |  |        |        |
| Display Resolution  | 0.5" / 1"  | 1" / 5"  |        |        |
| Accuracy (ISO 17123-3:2001)   | 1"   | 2"   | 3"     | 5"     |
| IACS (Independent Angle Calibration System)                           | Provided   |  |        |        |
| Dual-axis compensator / Collimation compensation                      | Dual-axis liquid tilt sensor, working range: ±6' (±111 mgon) / Collimation compensation available                    |  |        |        |
| <b>Distance Measurement</b>   |  |  |        |        |
| Laser output <sup>1</sup>   | Reflectorless mode: Class 3R / Prism / sheet mode: Class 1   |  |        |        |
| Measuring range (under average conditions <sup>2</sup> )              | Reflectorless <sup>3</sup><br>Reflective sheet <sup>4,5</sup>  | 0.3 to 800m (1.0 to 2,624 ft.)<br>RS90N-K: 1.3 to 500 m (4.3 to 1,640 ft.)<br>RS50N-K: 1.3 to 300 m (4.3 to 980 ft.)<br>RS10N-K: 1.3 to 100 m (4.3 to 320 ft.)<br>Mini prisms<br>One AP prism<br>CP01: 1.3 to 2,500 m (8,200 ft.), OR1PA: 1.3 to 500 m (1,640 ft.)<br>1.3 to 5,000 m (4.3 to 16,400 ft.) / Under good conditions <sup>6</sup> : 6,000 m (19,685 ft.) |        |        |
| Display Resolution  | Fine/Rapid: 0.001 m / 0.01 ft. / 1/8 in.<br>Tracking: 0.01 m / 0.1 ft. / 1/2 in.                                     |  |        |        |
| Accuracy <sup>7</sup> (ISO 17123-4:2001) (D=measuring distance in mm) | Reflectorless <sup>3</sup><br>Reflective sheet <sup>4</sup><br>AP/CP prism   | (2 + 2 ppm x D) mm <sup>7</sup><br>(2 + 2 ppm x D) mm<br>(1.5 + 2 ppm x D) 1.5 mm  |        |        |
| Measuring time <sup>8</sup>   | Fine: 0.9 s (Initial 1.5 s), Rapid: 0.6 s (Initial 1.3 s), Tracking: 0.4 s (Initial 1.3 s)                           |  |        |        |
| <b>Interface and Data management</b>                                  |  |  |        |        |
| Display / Keyboard  | Graphic LCD, 192 x 80 dots, backlight, contrast adjustment / Alphanumeric keyboard / 28 keys with backlight          |  |        |        |
| Control panel location <sup>9</sup>                                   | On both faces (second display is optional)   |  |        |        |
| Trigger key   | On right instrument support  |  |        |        |
| Data storage  | Internal memory<br>Plug-in memory device   | Approx. 50,000 points<br>USB flash memory (max. 32GB)  |        |        |
| Interface   | Serial RS-232C, USB2.0 (Type A, for USB flash memory)  |  |        |        |
| Bluetooth <sup>®</sup> modem (optional) <sup>10</sup>                 | Bluetooth <sup>®</sup> Class 1.5, Ver.2.1 + BR, EDR, LE, BT4.1<br>Operating range: up to 10 m (33 ft.) <sup>11</sup> |  |        |        |
| <b>General</b>  |  |  |        |        |
| Laser-pointer <sup>12</sup>   | Coaxial red laser using EDM beam   |  |        |        |
| Guide light <sup>12</sup>   | Green LED (524 nm) and Red LED (626 nm),<br>Operating range: 1.3 to 150 m (4.3 to 490 ft.) <sup>2</sup>              |  |        |        |
| Levels  | Graphic<br>Circular level (on tribrach)<br>Plate Level   | 6' (Inner Circle)<br>10' / 2 mm<br>Regional Dependent  |        |        |
| Optical plummet (optional for NA, LA and EU)                          | Magnification: 3x,<br>Minimum focus: 0.3 m (11.8 in.) from tribrach bottom   |  |        |        |
| Laser plummet (optional for Oceania and Russia)                       | Red laser diode (635 nm ± 10 nm),<br>Beam accuracy: ≤1.0 mm at 1.3 m, Class 2 laser product                          |  |        |        |
| Dust/Water Rating   | IP66 (IEC 60529:2001)  |  |        |        |
| Operating Temperature <sup>13</sup>                                   | -20 to 60°C  |  |        |        |
| Size with handle <sup>9</sup> (w x d x h)                             | Control panel on both faces: 183 x 181 x 348 mm<br>Control panel single face: 183 x 174 x 348 mm                     |  |        |        |
| Weight with battery and tribrach                                      | Approx. 5.3 kg   |  |        |        |

\*1 IEC60825-1:Ed.2.0:2007 / FDA CDRH 21 CFR Part 1040.10 and 11 \*2 Average conditions: Slight haze, visibility about 20 km (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 -30 to -20°C (-22 to -4°F) with Low Temperature models: RS90N-K: 1.3 to 300 m (4.3 to 980 ft.), RS50N-K: 1.3 to 180 m (4.3 to 590 ft.), RS10N-K: 0.3 to 800 m (4.3 to 190 ft.) \*6 Good conditions: No haze, visibility about 40 km (25 miles), overcast, no scintillation. \*7 Measuring range: 0.3 to 200 m \*8 Typical, under good conditions. Reflectorless measurement time may vary according to measuring objects, observation situations and environmental conditions. \*9 Control panel location may vary depending on region or model. \*10 Usage approval of Bluetooth wireless technology varies according to country. Please consult your local office or representative in advance. \*11 No obstacles, few vehicles or sources of radio emissions/interference in the near vicinity of the instrument, no rain. \*12 The laser-pointer and the guide light do not work simultaneously. \*13 Low Temperature models: -30 to 50°C (-22 to 122°F) are available on built-to-order basis, region or model. Please consult your local office or representative in advance.

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