



SDL30/SDL50

Digital Levels

Save Time with Innovative, Industry-Leading Technologies

2.5-second High-speed Measurement, 20 lux Minimum Brightness, Inverted Staff Recognition, Wave-and-Read, and the Highest Accuracy in its Class.

2.5 seconds – High-speed Measurement

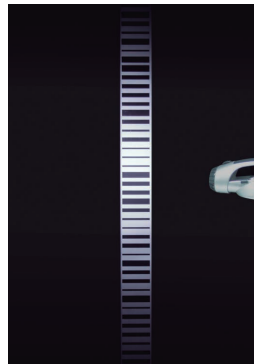
Aim, focus, and press a key. Height and distance are simultaneously measured in 2.5 seconds, 20 percent faster than ordinary digital levels.



Consistent Performance in Diverse Environments

The SDL30/50 provides the superior measurement capability under a variety of environmental conditions. Even when the staff surface is partially shaded, or in dim lighting conditions where the brightness at staff surface is as low as 20 lux*, the SDL30/50 consistently provides reliable measurement results without downtime. A small flashlight is enough to illuminate the staff in the dark.

* 20 lux is defined as the minimum brightness with which human face can be recognized.



Automatic Recognition of Inverted Staff

The SDL30/50 automatically recognizes directions of RAB-Code staffs and displays the results with a minus sign (-) when the staff is inverted. Height of ceiling, overpass, bridge, road sign, tree branch, tunnel crown, and other objects can be easily measured without a calculator.



Wave-and-Read Technology

The innovative "Wave-and-Read" technology provides an additional survey style option. The SDL30/50 tracks the RAB-Code staff waved back and forth to read the correct height. The staff reading becomes the minimum when it is in vertical position. The SDL30/50 automatically detects the least value of staff readings.



Choice of Accuracy

SDL30: 0.4mm (Super-Invar Staff) / 0.6mm (Invar) / 1.0mm (Fiberglass)
SDL50: 0.6mm (Super-Invar Staff) / 0.8mm (Invar) / 1.5mm (Fiberglass)
Choose the digital level and staffs according to the accuracy* you need. Sokkia offers the top-of-the-line SDL1X model for higher accuracy of up to 0.2mm.

* 1km double-run leveling

Internal Memory

Up to 2,000 measurement data of elevation or height difference can be recorded in the internal memory. Auto mode records data as soon as the measurement is taken, while manual mode allows you to check the measurement results before recording. Stored data can be exported using the "Spectrum Link" software.

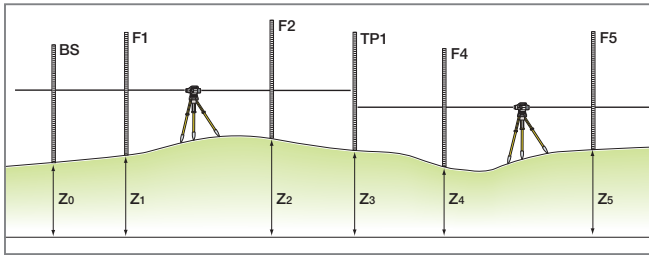


Convenient Onboard Programs

The onboard measurement programs of SDL30/50 facilitate leveling and setting-out tasks. Programs include:

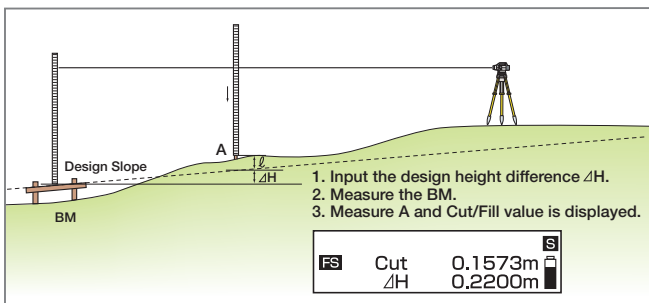
- Elevation
- Height Difference
- Cut and Fill Setting-out
- Setting-out in Distance

Elevation / Height Difference



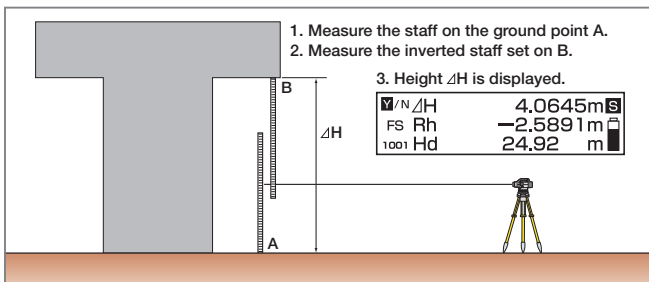
- The SDL30/50 calculates height difference between backsight (BS) and foresight (FS).
- Elevation of foresight can be calculated by inputting BS elevation.

Cut and Fill Setting-out



- Slope can be set using Cut and Fill Setting-out program.
- Leveling is possible by inputting the height difference zero (0).

Height Measurement



- Two measurements provide the height of point B.
- Elevation can be calculated by inputting BS elevation.

RAB-Code Staff

| Material | Model | Length | Linear expansion | Sections | Weight |
|-----------------|--------|-------------|------------------|----------|------------------|
| New Super-Invar | BIS30A | 3m (9.9ft.) | ±0.1ppm/°C | 1 | 5.5kg (12.2 lb.) |
| Invar | BIS20 | 2m (6.6ft.) | 1ppm/°C | 1 | 4.3kg (9.5 lb.) |
| | BIS30 | 3m (9.9ft.) | 1ppm/°C | 1 | 5.5kg (12.2 lb.) |

SOKKIA

SOKKIA BV, EUROPEAN HEAD OFFICE
Essebaan 11 • 2908 LJ Capelle a/d IJssel
The Netherlands
www.sokkia.com

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SDL30/SDL50

DIGITAL LEVELS

SPECIFICATIONS

| Model | SDL30 | SDL50 |
|---|---------------------------------|--|
| Height accuracy (ISO 17123-2)* | Electronic BIS30A staff | 0.4mm (0.016in.) |
| | BIS20/30 staffs | 0.6mm (0.024in.) |
| | BGS staffs | 1.0mm (0.04in.) |
| | Visual BGS staffs | 1.0mm (0.04in.) |
| Distance accuracy (D: measuring distance) | Electronic | <±10mm (±0.4in.) (D≤10m (D≤33ft.)) <±0.1% x D (10<D≤50m (33<D≤164ft.)) <±0.2% x D (50<D≤100m (164<D≤328ft.)) |
| | Electronic | 1.6 to 100m (5.3 to 328ft.) |
| | Visual | from 1.5m (5.0ft.) |
| Measuring mode | Electronic | Single / Repeat / Average / Tracking / Wave-and-Read |
| Display resolution | Height | 0.0001/0.001/0.01m (0.001/0.01/1ft., 1/8in.) |
| | Distance | 0.01/0.1m (0.1/1ft., 1in.) |
| Measuring time | Single/Repeat | <2.5s |
| | Average | <2.5s x [number of measurements] |
| | Tracking | <1s |
| Minimum brightness condition | | 20 lux at the surface of staff (with natural light) |
| Telescope | Objective aperture | 45mm (1.8in.) |
| | Magnification / Resolving power | 32x / 3" |
| | Minimum focus / Field of view | 1.5m (5ft.) / 1°20' |
| | Compensator | Type |
| | Working range | ±15' |
| Sensitivity of circular level | | 10'/2mm |
| Horizontal circle | | Diameter: 103mm (4in.), Graduation: 1° (1gon) |
| Display | | Dot matrix LCD (128 x 32 dot) with illuminator |
| Keyboard | | 8 keys (7 keys on front panel, 1 key on side panel) |
| Data storage | | 2,000 points internal memory |
| Interface | | RS-232C, baud rate 1,200 to 38,400bps |
| Onboard programs | | Elevation / Height difference / Cut & Fill setting-out / Setting-out distance / Height measurement |
| Water resistance | | IPX4 (IEC60529:2001) |
| Dust rating | | IPX |
| Operating temperature | | -20 to +50°C (-4 to 122°F) |
| Size | | W158 x D257 x H182mm (W6.2 x D10.1 x H7.2in.) |
| Weight with battery | | 2.4kg (5.3 lb.) |
| Standard battery | | BDC46B (Rechargeable Li-ion, 7.2V, 2.45Ah) |
| Operating time | | Approx. 16 hours at 25°C (77°F) |

* Standard deviation for 1km double-run leveling

Standard Configuration

- SDL30/SDL50 digital level
- CDC68 charger
- Tool kit
- Operator's manual
- BDC46B battery
- EDC113A/B/C power cable
- Dust cover and cleaning cloth
- Carry case

Optional Accessories

- DE23: Diagonal eyepiece
- GS60L: Circular level for staff

| Material | Model | Length | Rear graduation | Sections | Weight |
|------------|---------|--------------|-----------------|----------|-----------------|
| Fiberglass | BGS40 | 4m (13.2ft.) | Metric | 3 | 2.4kg (5.3 lb.) |
| | BGS50 | 5m (16.4ft.) | Metric | 4 | 3kg (6.6 lb.) |
| | BGS50G3 | 5m (16.4ft.) | feet/10th/100th | 4 | 3kg (6.6 lb.) |
| Aluminum | BAS55 | 5m (16.4ft.) | Metric | 5 | 1.9kg (4.2 lb.) |

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