TOPCON

ES SERIES
REFLECTORLESS TOTAL STATIONS
Reflectorless Total Stations

- Advanced security and maintenance with TSshield™
- Fast and powerful EDM
- Exclusive LongLink™ communications
- Advanced angle accuracy
- Super long battery life – 36 hours
- Rugged, waterproof design

Topcon’s ES Series total stations – advanced design with superior technology
The ES Series was designed from the ground up to deliver the very latest technological advantages, all in a small, sleek design – you’ll appreciate the advantages from the very first measurement.

Featuring a class leading EDM unit, the ES is able to measure up to 4,000 m to standard prisms, and can measure in reflectorless mode up to 500 m at an incredible 3 mm + 2 ppm accuracy.

Measurements are captured faster than ever, and with a beam width of 15 mm (over 30 m), the bright red laser dot pinpoints features with ease.

A world’s first – TSshield™
Topcon is proud to offer another World’s First technology in all ES Series total stations – TSshield™. Every instrument is equipped with a telematics-based multi-function communications module providing the ultimate security and maintenance capabilities for your investment.

If the activated instrument is lost or stolen, send a coded signal to the instrument and disable it – the total station is secure anywhere in the world.

In the same module you have daily connectivity to cloud-based Topcon servers that can inform you of available software updates and firmware enhancements.

LongLink™
With a 300 m wireless communication range, using Bluetooth® Class 1, you can now operate the data collector from the “smart-spot” of the crew, the prism pole. Also referred to as the two-man, economical robot solution, Topcon’s LongLink™ technology brings a whole new level of flexibility to your manual field crew.
Laser plummet

Tangent lock – securely holds your angle in place

Quick and easy-to-use trigger button

Unique IACS angle encoder system (1” and 2”)

World’s first TSshield™ system

500 m non-prism range

300 m range LongLink™ functionality

Dual, graphic, backlit LCD display and keyboard

Side mount extra long-life battery

Highly visible green and red LED guidelights

Electronic leveling system

Exclusive “STAR-KEY” functionality

Laser plummet

Easy access, environmentally protected USB 2.0 slot

300 m range LongLink™ functionality

Side mount extra long-life battery

Dual, graphic, backlit LCD display and keyboard

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Dual, graphic, backlit LCD display and keyboard
**Angle Measurement**

<table>
<thead>
<tr>
<th>Model</th>
<th>Resolution/Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>ES-101</td>
<td>0.5”/1”</td>
</tr>
<tr>
<td>ES-102</td>
<td>1”/2”</td>
</tr>
<tr>
<td>ES-103</td>
<td>1”/3”</td>
</tr>
<tr>
<td>ES-105</td>
<td>1”/5”</td>
</tr>
<tr>
<td>ES-107</td>
<td>1”/7”</td>
</tr>
</tbody>
</table>

IACS (Independent Angle Calibration System) Standard on 1” and 2” models

Compensation: Dual-axis compensator

**Distance Measurement**

<table>
<thead>
<tr>
<th>Prisms and EDM Range</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,000 m (ES-107 3,000 m)</td>
<td>2 mm + 2 ppm</td>
</tr>
<tr>
<td>500 m Non-Prism Range</td>
<td>3 mm + 2 ppm (0.3 - 200 m)</td>
</tr>
</tbody>
</table>

Measuring Time: Fine: 0.9 sec, Rapid: 0.7 sec, Tracking: 0.3 sec

**Communications**

- LongLink™ rover communications utilizing Bluetooth® Class 1
- USB 2.0 Slot (Host + Slave)
- RS-232C Serial

**General**

- Display: Dual Backlit LCD (ES-107 Single Display)
- Battery Operation: Up to 36 hours
- Dust/Water Rating: IP66
- Wireless Connection: Bluetooth® Class 1
- Operating Temp: -20°C to 60°C
  - Special Arctic version available (-30 to 50°C)

**Ultra-powerful, advanced EDM**

- 500 m non-prism range
- 4,000 m prism range
- Red/Green guidelight
- Coaxial red laser pointer
- Pinpoint, precise beamspot

**Easy access USB 2.0 memory**

- Up to 8 GB storage
- Environmentally protected
- Compatible with industry standard thumb drives

**Advanced angle encoder system**

- “Best in Class” 1” angle accuracy
- Incorporates exclusive IACS (Independent Angle Calibration System) on 1” and 2” models

**Rugged, waterproof design**

- Waterproof/dustproof IP66 design handles the toughest environments
- Magnesium-alloy housing providing stable angle accuracy
- Graphic display and alphanumeric key board (standard)

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For more information: topconpositioning.com/es-series

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