ES Series

Reflectorless Total Stations

• Advanced Security and Maintenance with New TSshield™
• Fast and Powerful EDM
• Exclusive LongLink™ Communications Functionality
• Advanced Angle Accuracy
• Super Long Battery Life – 36 Hours!
• Rugged, Waterproof Design

Provided by Xpert Survey Equipment
Click Topcon ES-107 for Product Info and Updated Pricing
Topcon’s new ES Series Total Stations –
New Advanced Design with Superior Technology

The new 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 4,000m to standard prisms, and can measure in reflectorless mode up to 500m at an incredible 3mm + 2ppm accuracy.

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

A World’s First! New 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 your activated instrument is lost or stolen, you can send a coded signal to the instrument and disable it – your 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.

Ultra-Powerful, Advanced EDM
- 500m non-prism range
- 4000m prism range
- Less than 1 second fine measurement
- Coaxial red laser pointer
- Pinpoint, precise beamspot

Easy Access USB 2.0 Memory
- Up to 8GB storage
- Environmentally protected
- Compatible with industry standard thumb drives

Advanced Angle Encoder System
- “Best in Class” 1” angle accuracy available
- Incorporates exclusive IACS (Independent Angle Calibration System) on 1” & 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)

The exclusive LongLink™ communications functionality in every ES Series model provides operational capabilities never before offered in a manual total station. With a 300m wireless communication range, using Bluetooth® Class 1 technology, 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 new LongLink™ technology brings a whole new level of flexibility to your manual field crew.
The new ES Series offers an intuitive graphical onboard software that provides advanced measurement, logging and calculation functionality without an external data collector.

**Primary Features**

- World’s First - TSshield™ system
- 300m range LongLink™ functionality
- Easy access, environmentally protected USB 2.0 slot
- Highly visible Green & Red LED guidelights
- Super long battery life – up to 36 hours
- Exclusive “STAR-KEY” functionality
- Electronic leveling system
- Laser plummet
- 500m non-prism range
- Unique IACS angle encoder system (1° & 2°)
- Tangent Lock – Securely holds your angle in place
- Quick & trigger button
- Easy-to-use
- Dual, graphic, backlit LCD display & keyboard

**Kit Components**

<table>
<thead>
<tr>
<th>Complete System Components</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ES</strong></td>
</tr>
<tr>
<td>Battery</td>
</tr>
<tr>
<td>Lens Cap</td>
</tr>
<tr>
<td>USB stick</td>
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<tr>
<td>Carry Case</td>
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</tbody>
</table>
ES Series Reflectorless Total Stations

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Angle Measurement</th>
<th>Min. Resolution/Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>ES-101</td>
<td>0.5&quot;/1&quot;</td>
</tr>
<tr>
<td>ES-102</td>
<td>1&quot;/2&quot;</td>
</tr>
<tr>
<td>ES-103</td>
<td>1&quot;/3&quot;</td>
</tr>
<tr>
<td>ES-105</td>
<td>1&quot;/5&quot;</td>
</tr>
<tr>
<td>ES-107</td>
<td>1&quot;/7&quot;</td>
</tr>
</tbody>
</table>

IACS (Independent Angle Calibration System) Standard on 1" & 2" models

Compensation Dual-axis compensator

**Distance Measurement**

<table>
<thead>
<tr>
<th>Prism EDM Range</th>
<th>4000m (ES-107 3000m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prism EDM Accuracy</td>
<td>2mm+2ppm</td>
</tr>
<tr>
<td>Non-Prism Range</td>
<td>500m</td>
</tr>
<tr>
<td>Non-Prism Accuracy</td>
<td>3mm+2ppm (0.3-200m)</td>
</tr>
<tr>
<td>Measuring Time</td>
<td>Fine: 0.9 sec</td>
</tr>
<tr>
<td></td>
<td>Rapid: 0.7 sec</td>
</tr>
<tr>
<td></td>
<td>Tracking: 0.3 sec</td>
</tr>
</tbody>
</table>

Communications

LongLink™ rover communications utilizing Bluetooth® Class 1

USB 2.0 Slot (Host + Slave)

RS-232C Serial

**General**

<table>
<thead>
<tr>
<th>Display/Keyboard</th>
<th>Dual LCD Touchscreen (ES-107 Single Display)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battery Operation</td>
<td>Up to 36 hours</td>
</tr>
<tr>
<td>Dust/Water Protection</td>
<td>IP66</td>
</tr>
<tr>
<td>Wireless Connection</td>
<td>Bluetooth® Class 1</td>
</tr>
<tr>
<td>Operating Range</td>
<td>-20°C to +60°C*</td>
</tr>
</tbody>
</table>

*Special Arctic version available (-30 to +50°C)

For more specification information: topconpositioning.com/es-series

**OPTIONAL SOFTWARE**

MAGNET™

A family of software solutions that streamlines the workflow for surveyors, contractors, engineers and mapping professionals.

**MAGNET Field**

Cloud connected field controller software for use with total stations and GPS rovers. With ES LongLink™ communication, the field controller can be operated, with the prism, at the point of measurement.

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**MAGNET Enterprise**

See every set of data and stay connected with both Field and Office with this cloud managed interface. Unprecedented productivity can be yours with Enterprise.

**MAGNET Office**

Connect to the MAGNET cloud directly from your CAD software. Office is full-featured CAD and processing software, or use MAGNET through direct integration in Autodesk products.

Your local Authorized Topcon dealer is: