DS Series

TOPCON

Compact Auto-Tracking Total Station

- Auto-Tracking Technology
- MAGNET™ On-board Software
- Ultra-powerful, Advanced EDM
- Exclusive LongLink™ Communications
- TSshield™ Advanced Security and Maintenance
- Rugged Waterproof Design

DS Series Compact Auto-Tracking Total Station

Powerful EDM and tracking performance even in crowded traffic or harsh environments.

A professional motorized total station, the DS is a mid-ranged positioning product for the construction professional who is looking for productivity enhancement from servo motors and XPointing Technology. The MAGNET™ on-board software has an intuitive interface to assist with staking out complex structures. This rugged waterproof designed total station has the latest technology of TSshield™ advanced security and maintenance, and exclusive LongLink™ communications.

You can work directly on the bright, color touchscreen or with the alpha-numeric keyboard, to achieve higher levels of production with MAGNET™ Field on-board software. The DS total station can be used on a wide variety of applications, from building layout to earthwork volumes, and land surveying.

A World's First! New TSshield™

Topcon is proud to offer another World's First technology in all DS 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. This feature secures your total station 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.
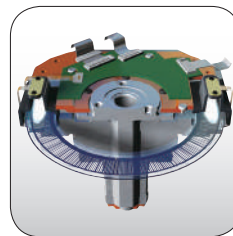

Ultra-Powerful, Advanced EDM
The 1,000m (3,280 ft.) reflectorless measurement can be achieved with a smaller beam spot size. Measurements can be as fast as 0.9 seconds.

LongLink™ Communications
LongLink™ is used to communicate wirelessly with a field controller at the prism pole location, up to 300m away. Upgrade to auto-tracking performance for an economical robotic system.

Advanced Angle Accuracy
Topcon's advanced angle encoder technology with exclusive calibration system provides "Best in Class" angle accuracy, up to 1-second (DS 101).

Rugged, Waterproof Design
Provides protection from dust and driving rain as well as other inclement weather conditions. Operates in temperatures from -20ºC to +50ºC (-4ºF to 122ºF).

XPointing Technology with Optional Auto-Tracking Upgrade
The DS Series XPointing Technology automatically sights the center of a prism. This is faster and more consistent than manually aiming and focusing on a prism. In addition, the DS Series firmware can be upgraded to track a moving prism. The remote operator can control the DS Series from the prism pole. Automatic tracking of a prism makes the DS Series capable of being a one-man robotic system. This system is far more productive than a manual total station.

TOPCON

World's First
TSshield™ System

Fast and Powerful EDM
1,000m Non-prism Range

Advanced Angle Accuracy

Easy Access USB Type
A/B Flash Drive Port

Rugged Waterproof/
Dustproof IP65 Design

Exclusive "STAR-KEY"
Functionality

Backlit 25 Key Keyboard and
Directional Arrow Key

USB Upgrade Kit for Auto-Tracking

The DS Series firmware can be upgraded to automatically track a prism. This USB upgrade process is simple and will enhance productivity. The USB port can also be used to transfer data files.

KIT COMPONENTS

System Components
▪ DS Total Station
▪ Batteries and Charger
▪ Lens Cap and Hood
▪ Tool Kit
▪ Manual and USB Stick
▪ Carry Case with Straps

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SPECIFICATIONS

Telescope	
Resolving power	2.5″
Magnification	30x

Angle Measurement	
	Min. Resolution/Accuracy
DS-101	1″
DS-103	3″
DS-105	5″

Tilt Angle Compensation	
Compensation	Dual-axis compensator
Range	±6′

Distance Measurement	
Prism EDM Range	6,000m
Prism EDM Accuracy	1.5mm+2ppm
Non-Prism Range	1,000m
Non-Prism Accuracy	2mm+2ppm (0.3 to 200m)
Measuring Time	Fine: 0.9 sec
	Rapid: 0.6 sec
	Tracking: 0.4 sec
Optional Auto-Tracking	
360º Prism Range	2 to 600m (6.6 to 1,960 ft.)
Single Prism Range	1.3 to 1,000m (4.3 to 3,280 ft.)

Communications	
LongLink™ rover communications*	
USB 2.0 Slot (Host + Slave)	
RS-232C Serial	

General	
Display	Color Touch TFT 240 x 320 QVGA Display (Dual Display)
Keyboard	25 keys with illuminator (Single Keyboard)
Battery Operation	Up to 5 hours
Dust/Water Protection	IP65
Wireless Connection	*Bluetooth*® Class 1
Operating Temperature	-20°C to +50°C (-4°F to +122°F)

* The communication range may vary due to the condition of the area

For more specifications information:
www.topcon-positioning.eu

SOFTWARE

MAGNET™

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

Field

Modern User Interface
MAGNET Field provides a bright, graphical user interface with large touch icons, and bright readable text. The screens not only look good, but provide fast workflows.

Easy to Use
The icon and text field interface has been optimized to provide both text and images to indicate what data is needed on each screen.
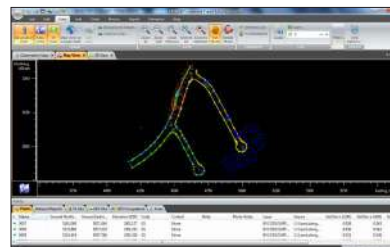

Advanced Calculations
MAGNET Field on-board not only controls the measurements of the DS, but also provides many COGO and adjustment calculations right on the instrument.

Office Tools

MAGNET Office Tools
Directly integrates into Autodesk products utilizing their CAD engine, or as a standalone installation with Topcon's MAGNET Office Site and MAGNET Office Topo.

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