

# PS

Power Station



## Connected to the Future

- Advanced Tracking Technology and New Remote Control System
- Fast and Powerful Reflectorless EDM
- LongLink™ Data Communication
- Advanced Angle Measurement System
- Rugged and User-friendly Design
- MAGNET™ Field On-Board Application Software

Exclusive  
**TShield**  
technology built-in

**World's First**  
integrated support service

# PS Series Robotic Total Stations

## PS A models :

# PowerTrac + RC-5

## Advanced Auto-Tracking Technology



## Connected to Perfect Remote Control

### Advanced Tracking Technology and New Remote Control System

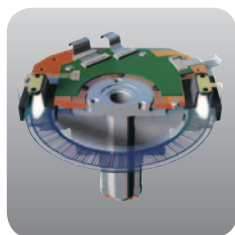
Advanced tracking algorithms with enhanced ability to predict future prism positions dramatically improves tracking stability. The revolutionary PowerTrac engine increases power for prism tracking even under extreme conditions of frequent interruptions or strong reflections. Combined with the RC-5, the PS has the most advanced auto tracking available.



### LongLink™ Data Communication\*

The exclusive LongLink™ communication functionality in every PS Series model provides operational capabilities never before offered in a robotic total station. With a 600m wireless communication range, you can now operate the data collector from the “smart-spot” of the crew, the prism pole. Topcon’s new LongLink™ technology brings a whole new level of flexibility to your manual field crew.

\* Offered as an option in some areas.



### Advanced Angle Measurement System

- All PS series Total Stations features advanced absolute encoders for long-term reliability in all work conditions. Dual-axis compensation ensures accurate leveling even on rough terrain.
- Motion clamp and tangent screw ensure stable angle measurement.
- PS-101 and PS-102 are equipped with groundbreaking technology for extremely reliable and accurate angle measurement.

## PS AC models :

# Revolutionary 2-Person Survey System

### Quick Auto-Collimating



Simply tap the display screen, and the PS AC series automatically collimates to the prism center. There is no need to look into an eyepiece. Just roughly turn the telescope to a prism, and the PS does the rest. Using a standard prism, the PS AC series provides an wide auto-collimating range from 1.5m to 1,000m.

Dramatic time saving

PS AC series	Rough Aiming	Collimation - Measure	Record data	1/2 the Steps!		
Manual Total Station	Rough Aiming	Focus	Horizontal Motion			

### More than What Human Eyes Can Do

- PS AC series quickly locates a prism through bushes or tree branches, in dim or dark conditions where it is difficult for an operator to visually find a prism.
- PS AC series provides consistent collimation accuracy and speed regardless of operator’s skill levels.



### Higher Productivity

Accomplish more work, ahead of schedule, with the PS AC series. It's time saving, high-precision performance lets you finish the job quicker. That means more profit from that job, and you can start the next job sooner!



### Fast and Powerful Reflectorless EDM

- Fast and accurate pinpoint distance measurement with phase shift technology.
- Fast distance measurement of 0.9s regardless of type of the object type.
- Minimum reflectorless measurement distance as close as 30cm.
- Improved visibility of collimation with super-bright laser pointer.
- Smaller EDM beam spot size for maximum distance measuring precision.
- Dependable measuring even at shallow incidence angles.
- Ensures accurate measurement with reflective sheet.

### Rugged Design

- IP65 dustproof/waterproof performance.
- Ambient temperature range -20°C to +50°C.



## PRIMARY FEATURES

**Bluetooth**

**Green/Red Guide Lights** are built into the telescope as a standard feature, enhancing setting-out work efficiency in a range of 1.3 to 150m.

**Remote Controller RC-5**

**Trigger key** lets you take a series of measurements without taking your eye off the telescope. Trigger key is ergonomically placed so that measurement can be taken at any time with just the push of a button.

**Star key [★]** instantly brings up functions menu.

**Control panel** consists of 10-key pad with color LCD touch screen display for easy viewing of graphics\*.

**USB Type A and Type miniB ports**

\*Control panel location may vary depending on region or model.

## Connected to MAGNET



MAGNET™

### Cloud-based Solutions for Precise Positioning

MAGNET™ is a software family that uses the cloud to seamlessly connect the field and office for data exchange, communications, asset tracking and more.

Real-time connections when you need it, where you need it.

## KIT COMPONENTS

### Standard package components

- PS Main unit • Battery (BDC70) × 2
- Battery charger (CDC68) • Power cable
- Stylus pen • Lens cap • Lens hood
- Tool pouch • Screwdriver • Lens brush
- Adjusting pin × 2 • Vinyl cover
- Wiping cloth • Quick Manual
- USB memory (PDF Manual)
- Main unit Operator's Manual
- Laser caution sign-board • Carrying case
- Carrying strap × 2



**SPECIFICATIONS**

**PS series Specifications**

Product Type	Auto-Tracking Model				Auto-Collimating Model			
	PS-101A	PS-102A	PS-103A	PS-105A	PS-101AC	PS-102AC	PS-103AC	PS-105AC
<b>Auto-Tracking / Auto-Pointing</b>								
Auto-Tracking	●	●	●	●	-	-	-	-
Auto-Collimating	●	●	●	●	●	●	●	●
Rotation speed / Auto-Tracking speed	85°/sec (at 20°C) / 20°/sec							
Working range	ATP1 / ATP1S 360° Prism: 2 to 600m (6.6 to 1,960ft.), Prism-5 mini prism: 1.3 to 500m (4.3 to 1,640ft.) Prism-2 one prism: 1.3 to 1,000m (4.3 to 3,280ft.)							
<b>Angle measurement</b>								
Display resolutions (selectable)	0.5" / 1"		1" / 5"		0.5" / 1"		1" / 5"	
Accuracy (ISO 17123-3:2001)	1"	2"	3"	5"	1"	2"	3"	5"
Dual-axis compensator	Dual Axis, Compensation Range: ±6'							
Advanced angle encoder technology	Provided		-		Provided		-	
<b>Distance measurement</b>								
Laser output <sup>1</sup>	Reflectorless mode: Class 3R, Prism / Sheet mode: Class 1 equivalent							
Measuring range <sup>2</sup>	Prism	ATP1 / ATP1S 360° Prism: 1.3 to 1,000m (4.3 to 3,280ft.), Prism-5 mini prism: 1.3 to 500m (4.3 to 1,640ft.) Prism-2 one prism: 1.3 to 6,000m (4.3 to 19,680ft.) under good conditions <sup>3</sup>						
	Reflective sheet <sup>4</sup>	RS90N-K: 1.3 to 500m (4.3 to 1,640ft.), RS50N-K: 1.3 to 300m (4.3 to 980ft.), RS10N-K: 1.3 to 100m (4.3 to 320ft.)						
	Reflectorless <sup>5</sup>	0.3 to 1,000m (1 to 3,280ft.) under good conditions <sup>3</sup>						
Accuracy <sup>2</sup> (ISO 17123-4:2001) (D=measuring distance in mm)	Prism	(1.5 + 2ppm x D) mm						
	Reflective sheet <sup>4</sup>	(2 + 2ppm x D) mm						
	Reflectorless <sup>5</sup>	(2 + 2ppm x D) mm <sup>6</sup>						
<b>Interface and Data management</b>								
Operating system / Application	Windows® Embedded CE.6.0 / MAGNET Field							
Display	3.5 inch, Transmissive TFT QVGA color LCD							
Memory	500MB internal memory, USB flash memory (max. 8GB)							
Interface	Serial RS-232C, USB2.0 (Type A / mini B)							
Bluetooth modem	Bluetooth Class 1, Ver.2.1+EDR, Operating range: 600m (1,960ft.) <sup>7</sup>							
<b>General</b>								
Laser pointer <sup>8</sup>	Coaxial red laser pointer using EDM measuring beam, Class 3R laser							
Guide light <sup>8</sup>	Green and Red LED, Working range: 1.3m to 150m (4.3 to 490ft.)							
Dust and water protection (IEC 60529:2001)	IP65							
Operating temperature	-20 to +50°C (-4 to +122°F)							
Size with handle	W230 x D196 x H393mm (W9.1 x D7.7 x H15.5in.)							
Weight with battery and tribrach	7.0kg (15.4lb.)							
<b>Power supply</b>								
BDC70 standard battery	7.2V, 5.2Ah							
Operating time (20°C)	Approx. 4 hours <sup>9</sup>							

**RC-5 Remote Control System (Optional of Auto-Tracking Model)**

Operating range (slope distance)	Far mode: 2m to 300m (6.6 to 980ft.) Standard mode: 2m to 100m (6.6 to 320ft.)	-
Measuring time	15 sec	-

<sup>1</sup> IEC60825-1:Ed.2.0:2007 / FDA CDRH 21 CFR Part 1040.10 and 1040.11 <sup>2</sup> Average conditions: Slight haze, visibility about 20km (12 miles), sunny periods, weak scintillation. <sup>3</sup> Good conditions: No haze, visibility about 40km (25 miles), overcast, no scintillation. <sup>4</sup> When the measuring beam's incidence angle is within 30° in relation to the reflective sheet target. <sup>5</sup> Fine mode. With Kodak Gray Card White Side (90% reflective). Brightness level at object surface: ≤ 500lx. 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. <sup>6</sup> Measuring range: 0.3 to 200m <sup>7</sup> Paired with RC-5, with instrument height to be more than 1.5m, no obstacles (like building structures, trees or vehicles) causing interrupting/reflecting radio wave, few sources of radio emissions/interference in the near vicinity of the instrument, no rain. <sup>8</sup> The laser-pointer and the guide light do not work simultaneously. <sup>9</sup> Continuous Auto-Tracking and distance measurement, or Auto-Pointing by both faces with 180° H&V rotation and fine-single distance measurement every 30s, at 20°C (68°F).

**Connected to TSshield**

World's first support service only from Topcon

TSshield is a standard feature on all new model Topcon Group total stations. Its advanced communication system provides new opportunities to secure and maintain your instrument.



\*For more detail of TSshield, please refer to the TSshield leaflet.  
\*This service may not be available in some areas.



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