

The total station is a surveying instrument that combines an electronic theodolite and an electronic distance meter (EDM) to provide accurate measurements of both horizontal and vertical angles as well as distances. It is commonly used in construction, engineering, and land surveying projects to collect data for creating detailed maps, plans, and 3D models.

TECHNICAL SPECIFICATIONS

Distance measurement		
	Singles prism	3.0 Km
Maximum distance	Three prisms	5.0Km
	No-prism	400m/600m
Digital display	Max:99999999.9999 m Min.:0.1 mm	
Precision	No-prism 5+3ppm, prism 2+2ppm	
Unit	m/ft for selection	
Time for measuring	Single fine measurement 2 S. tracking 0.8 S	
Number of measurements	1~99	
Meteorologic correction	Automatic correction of input parameter	
Atmospheric refraction and earth curvature correction	Automatic correction of input parameter, K=0.14	
Prism constant correction	Automatic correction of input parameter	
Angle measurement		
Angle measurement method	Absolute code	
Grating disc dia. (horizontal, vertical)	79mm	
Min. reading displayed	1"	
Detection method	Horizontal circle:2 sides	
	Vertical circle:2 sides	
Precision	2"	
Telescope		
Imaging	Right reading	
Barrel length	170mm	
Objective lens effective aperture	48mm	
Magnification	30×	
Viewing angle	1°30'	
Resolution	3.5"	
Min. focus distance	1.5m	
Automatic vertical compensator		
System	Single axis, double axis liquid electronic sensor compensation	
Operating range	±3'	
Accuracy	±3"	
Level		
Level tube	20"/2mm,30"/2mm	
Circular vial	8'/2mm	
Optical plummet		
Imaging	Positive image	
Magnifying ratio	3×	
Focusing range	0.5m~	
Field angle	5°	
Display		
Type	Two sides, graphically	
Data transmission		
Interface	RS-232C	
Battery		
Power supply	Rechargeable Ni-MH battery, rechargeable lithium battery	
Volt.	Lithium battery: DC7.6V; Ni-MH battery: DC7.2V	
Continuous operation time	8hours	
Size and weight		
Overall dimensions	174×207×383mm	
Weight	6.8kg	



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TECHNICAL SPECIFICATIONS

Distance Measurement Section

Single prism	2000m
Three prism	3200m
No prism	400m
Accuracy	Prism: $\pm(3\text{mm}+2\text{ppm}\cdot D)$ No prism: $\pm(5\text{mm}+3\text{ppm}\cdot D)$
Unit	m/ft
Display	Maximum 999999.999m Minimum 1mm
Measuring time	Precise model: 2S, track model: 0.5S
Number of time Set	1~99
Meteorologic correction	Input the value and correct automatic
Prism constant	Input the value and correct automatic

Angle Measurement Section

Method	Absolute coding
Grating diameter	74mm
Minimum reading	1"
Measuring unit	360°
Detection	Diametrical detection
Accuracy	2"

Telescope Section

Light source	Lasser
Imaging	Positive
Length	165mm
Effective aperture	48mm
Magnification	30×
Distinguishability	3.75"
Minimum focus distance	1m
Stadia ratio	100

Vial

Plate vial	20"/2mm
Circular vial	8'/2mm

Vertical Compensator

System	Single axis tilt sensor
Working range	$\pm 3'$
Distinguishability	1"

Optical Plummet

Magnification	3×
Focusing range	0.3m~ ∞
Field of view	5°

Display Section

Type	Double sides, 160×80 LCD Display
Data Transmission port	USB, RS-232C

On-board Battery

Power resource	Rechargeable Ni-H battery
Voltage	DC7.2V, 3000mAh
Continuous working time	Angle measurement: 20 hours Distance measurement: 8 hours

Operation Environment

Working temperature	-20℃~45℃
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Size & weight

Dimension	180×175×355mm
Weight	6.5Kg



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TECHNICAL SPECIFICATIONS

Distance Measurement Section

Range	Single prism	3000m
	Three prism	5000m
Accuracy	$\pm(2\text{mm}+2\text{ppm}\cdot D)$, $\pm(3\text{mm}+2\text{ppm}\cdot D)$	
Unit	m / ft	
Display	Maximum	99999999.9999m
	Minimum	0.1mm
Measuring time	Precise model:1S, track model:0.8S	
Number of time Set	1~99	
Meteorologic correction	Input the value and correct automatic	
Prism constant	Input the value and correct automatic	

Angle Measurement Section

Method	Absolute coding	
Grating diameter	79mm	
Minimum reading	1"	
Detection	Horizontal	Diametrical detection
	Vertical	Diametrical detection
Accuracy	2"	

Telescope Section

Imaging	Positive	
Length	170mm	
Effective aperture	48mm	
Magnification	30×	
Angle of vision	1.5°	
Distinguishability	3.5"	
Minimum focus distance	1.5m	

Compensator

System	Double axis photoelectric tilt sensor or Single axis liquid tilt sensor	
Working range	$\pm 3'$	
Distinguishability	1"	

Display Section

Type	Double sides, 160×80 LCD Display	
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Data Transmission

Port	USB, RS-232C	
Capacity	40,000 data at least	

Others

Plummet	Optical or Laser plummet	
Power	Rechargeable lithium battery, DC7.2V, 3000mAh	
Continuous working time	8 hours at least	
Size	168×165×348mm	
Weight	6.8Kg	
Working temperature	-20℃ ~ 50℃	

