

PENTAX

**Reflectorless
Total Station**

V-100N Series

V-101N

V-102N | V-102NL

**Newly
enhanced Total Station
equipped with high power
EDM System 'TURBO X'**

**Increase your
work efficiency**

TI Asahi Co., Ltd.
Focusing on true performance

PENTAX TOTAL STATION V-100N SERIES

Characteristics

The V-100N is a full-featured total station with long reflectorless measuring capability which provides exceptional performance and a cost-effective solution to a wide range of general and concrete surveying applications. This total station is designed to be accessible to users of all skill levels.

YOUR BENEFITS

Powerful

Long measuring range

- Reflectorless mode up to 1,000 m

Long battery operation

- Maximum 30 hours continuous distance measurement

Fast

Quick measuring response

- Initial measuring speed 0.7 sec
- Continues 0.3 sec per measurement.

Precise

High accuracy measurement

- Prism mode (2+2 ppm),
- Reflectionless (3+2 ppm)
- 1 or 2 second angle accuracy for all standard models

Stable

Solid and consistent performance

- IP54 dust/water resistance protects the instrument in harsh outdoor environment.
- The trigger key is embedded in the instrument to avoid the impact of jitter on the measurement.



KEY FEATURES

Solid Aluminum Handle

Rugged aluminum handle ensures safe carriage of the instrument

Long operation time

Dual lithium battery design supporting hot-swap with total 6700mAh capacity and modern ARM processors enables users to conduct a long continuous operation about as much as 50 hours out of a single power charge. The battery is compatible with other various PENTAX surveying products.



TURBO X: Newly enhanced EDM system

Longer distance, higher accuracy and faster action. New EDM system TURBO X is designed and developed to maximize all the features required for efficient and accurate measuring works.

Advanced optical technology

V-100N's telescope features high light transmission performance which enables users to obtain clear visibility in dark places with a high resolution and high contrast images, thus effectively contributes them to reduce working hours.

Advanced main board

New generation low power consumption ARM processor equipped with great electro-magnetic resistant exercises high and stable computing performance.

Dual axis Compensator

The electro-optical compensator placed on the vertical axis supports +/- 4' in compensating range with 6" in accuracy.

The precision electric vial helps users to set the instrument level precisely and quickly.

Easy and quick data transfer

V-100N is equipped with USB slot and Bluetooth port for easy transaction of the data and real-time communication with external devices.



Bright & Colorful LCD

Wide bright color screen secures high visibility of the display under sunlight

Versatile surveying program

V-100N's powerful onboard software package features an easy-to-use operator interface that guides users through all types of applications required in contemporary surveying fields.

Trigger Key

Distance measurement is activated with a soft finger touch on the surface capacitive trigger key.



SPECIFICATIONS TOTAL STATION V-100N SERIES

Model		V-101N	V-102N	V-102NL
Telescope	Magnification		30 X	
	Effective Aperture		48 mm	
	Field of View		1° 30'	
	Minimum Focus		1.7 m	
Distance Measurement	Laser Class of Laser Pointer		Prism mode Class 1, Reflectorless mode: Class 3R	
	Measurement Range (Good Conditions) *1			
	Reflectorless *2	1000 m	1000 m	600 m
	1P		3500 m	
	Measurement Accuracy			
	Reflectorless ~ 200m		±(3+2ppm×D) mm	
	Reflectorless 200m ~		±(5+3ppm×D) mm	
	Prism /Reflector Sheet		±(2+2ppm×D) mm	
	Minimum Count		Normal Meas. : 1 mm or 0.1 mm / Fast Meas. : 10 mm	
	Initial Meas. Reflectorless		Approx. 0.3 sec.	
Prism/Refl. Sheet		Approx. 0.8 sec.		
Continuous Meas. Reflectorless		0.7 sec.		
Prism/Refl. Sheet		Approx. 0.3 sec.		
Environmental Correction		Yes		
Laser Pointer		Yes		
Angle Measurement	Measuring Method		Absolute Rotary Encoder	
	Detection Method		Code image Detection	
	Minimum Count		1"	
	Accuracy (ISO 17123-3)	1"	2"	2"
Display Type		Back light 2 Sides 320x240 color pixels		
Compensator	Compensator Type		Liquid-electric	
	Compensator Axis		2 Axis	
	Compensator Range		± 4'	
Onboard Software	Functions		File Management, coordinate measurement, stakeout, resection, reference line measurement, offset measurement, missing line measurement, remote height measurement, area calculation, etc.	
Data Process	Data Recording Method		Internal Memory	
	Capacity (Coordinates/Observation Data)		Approx. 40,000 points	
Interface		USB Port (Pen Drive is supported) and Bluetooth		
Sensitivity of Vials	Electrical Level		0.5"	
	Tubular Level		30"/2 mm	
Laser Plummet			Class 2	
Base			Detachable	
Dust & Water Protection			IP54 (instrument only)	
Operating Temperature Range			-20 °C ~ +50 °C	
Dimensions			215 x 176 x 315 mm	
Weight (incl. Battery)			5.93 kg	
Battery Pack (BP07)	Power Source		Li-ion 7.4V 3350mAh, equipped with 2 batteries as standard, Hot-Swappable	
Operation Time	Continous Meas.		Maximum 30 hours with 2 batteries	
	Angle Meas.		Maximum 50 hours with 2 batteries	
Battery Charging Time		1 battery: approx. 2 hrs. / When charging 2 batteries at the same time: approx. 4 hrs.		

*1 Normal or good weather conditions are based on the following conditions:

20km visibility with slight shimmer, weak sunlight and moderate wind.

*2 The measurement range and accuracy of reflectorless, and time required to measure may vary by the shape, size of surface area and reflection rate of the target and its environment.

The measurement range of reflectorless is determined by the white side of the KODAK Gray Card (KODAK is a registered trademark of Eastman Kodak Company).

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DANGER

LASER RADIATION - DO NOT STARE INTO BEAM OR VIEW DIRECTLY WITH OPTICAL INSTRUMENT INTO SUNLIGHT
620-690 nm/4.75mW max.
CLASS IIIa LASER PRODUCT
Laserclass IIIa, conform FDA 21 CFR Ch. 1 § 1040

CAUTION

LASER RADIATION - DO NOT STARE INTO BEAM
620-690 nm/0.95mW max.
CLASS II LASER PRODUCT
Laserclass II, conform FDA 21 CFR Ch. 1 § 1040

www.pentaxsurveying.com/en/

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The CE marking assures that this product complies with the requirements of the EC directive for safety.



ISO 9001: 2015 Certified

JSIMA
Japan Surveying Instruments Manufacturers' Association

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