

PENTAX

**Reflectorless
Total Station**

V-100NS Series

V-101NS | V-102NS | V-102NLS

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

**Exceptional Performance
Cost Effective Solution
Accessible to all skill levels**

TI Asahi Co., Ltd.
Focusing on true performance

V-100NS SERIES TOTAL STATION KEY FEATURES

The **V-100NS** is a full-featured total station with long-range reflectorless measurement capability, delivering exceptional performance and a cost-effective solution for a wide range of general and construction surveying applications. It is designed to be accessible to users of all skill levels.

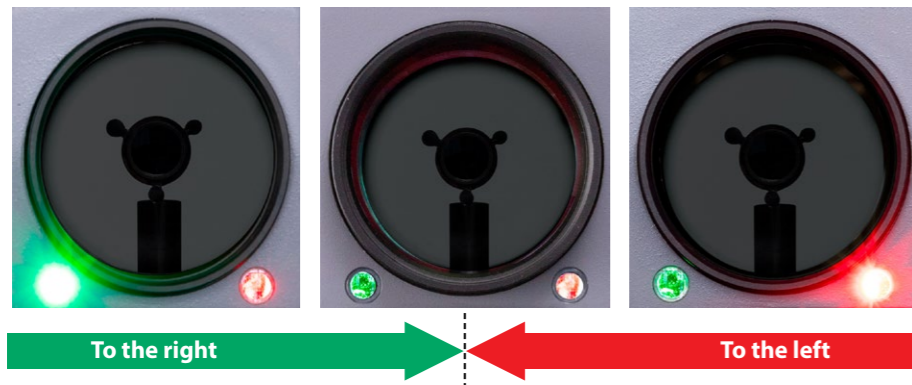


Long operation time

The dual lithium-battery design with hot-swap support and a total capacity of 6700 mAh, combined with modern ARM processors, enables users to operate continuously for up to 50 hours on a single charge. The battery is also compatible with a wide range of other PENTAX surveying products.

Guidelights

The Guidelights improve stakeout efficiency by showing with simple light signals whether the prism is left or right of the sight line. The operator can adjust position quickly by checking the light.



Trigger Key

A light touch on the capacitive trigger key enables measurement without looking away from the telescope and reduces movement from button pressing.



Solid Aluminum Handle

Rugged aluminum handle ensures safe carriage of the instrument.

TURBO X: The Newly Enhanced EDM System

Achieve longer range, higher accuracy, and faster distance-measurement speed. The TURBO X EDM system is engineered and developed to maximize the key capabilities required for efficient and precise measurement tasks.



Advanced Optical Technology

The V-100NS's telescope delivers excellent light-transmission performance, allowing users to obtain clear visibility even in dark environments. It provides high-resolution, high-contrast images that enable precise targeting, even in challenging lighting conditions.

Dual Axis Compensator

The electro-optical compensator placed on the vertical axis supports $\pm 4'$ in compensating range with 6" in accuracy. The precision electric vial helps users to set the instrument level precisely and quickly.

Bright & Colorful LCD

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

Versatile Field Solutions

V-100NS's versatile software features powerful apps for surveying, stakeout, and area calculations. Its intuitive step-by-step guidance delivers rapid, high-precision results for offsets and resections, maximizing professional efficiency and accuracy in the field

SPECIFICATIONS TOTAL STATION V-100NS SERIES

Model		V-101NS	V-102NS	V-102NLS
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 320×240 color pixels		
Guidelights	Visibility Range		5°	
	Center Alignment Range		30'	
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

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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

Member symbol of the Japan Surveying Instruments Manufacturers' Association representing the high quality surveying products.

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