

PENTAX | V-300

STRETCHING THE LIMITS...

V-325 | V-325N | V-335N | V-323N



AHEAD OF VISION

PENTAX

V-300

OPTIMAL CONFIGURATION,
OPTIMAL PRODUCTIVITY

V-325 | V-325N | V-335N | V-323N

Telescope with 30x magnification

Two classes of angular accuracy

Standard camcorder Ni-MH Battery

Alphanumeric Keyboard

Large graphic display

Optical plummet for easy and quick set-up

- Indicator LED for Laser beam
- Compact and lightweight
- IP55
- Single Axis Compensator

Applications:

- Surveying
- Construction
- Industrial applications
- Free Station
- Stake Out
- Reference Line / Arc
- Area Calculation
- Tie Distance
- Height transfers
- Inaccessible Points



The V-300-series incorporates an electronic distance measurement module (EDM) made for measurements to prisms or whenever needed for direct measurement to objects up to a distance of 300m. With the Quick Measurement Mode productivity is increased through a shorter initial measuring time to a prism and or reflector sheet. This is effective up to distances of 500m. This makes the Pentax V-300 Total Station a flexible measuring system that provides you and your customers important cost savings.

ADVANTAGES TO THE USER/OPERATOR



V-300 KEY FEATURES

- On-board memory of V-325: 16,000 points
On-board memory of V-325N/V-335N/V-323N: 30,000 points
- EDM accuracy: $\pm (2 + 2 \text{ ppm})$ on all models
- Reflectorless measuring up to 300 m

SIMPLE OPERATION

All functions are initiated from just five keys. A function that keeps the operation intuitive and logical. Easy-to-use alphanumeric keys (10 keys) allow you to enter quickly specific characters, numbers and other information.

LARGE MEMORY

The on-board memory of V-325 has 16,000 points. Other models have 30,000 measuring points (XYZ) allowing you to handle efficiently any measurement and inspection tasks. Max. 2,000 measuring points (XYZ) can be recorded in one job file. The user can make up to 15 job files.

INNOVATIVE DUAL MODE EDM MEASURING SYSTEM

No more obstacles on the construction site with Pentax V-300. Simply select the desired laser mode by striking one of the five function keys and you can measure objects up to 300 meters away without a prism.

RELIABLE DATA EXCHANGE with DL-02

Information is exchanged via a standard RS232C cable. DL-02 software supports all upload and download between PENTAX surveying instruments and PC's. DL-02 allows direct exchange of data from any software. It operates under Windows™ 95, 98, 2000 & NT and Windows XP. Data can be converted into the following formats: Pythagoras files, DXF, JS-Info, TDS, SDR, TAB separated ASCII, DC-1Z, 3 User Definable Formats and various other accepted formats.

COMPACT FOR OPTIMAL PORTABILITY

The V-300 is compact and lightweight. The standard configuration has everything you need for a days work (excluding tripod and prism), and fits into an easy to carry case.

ON-BOARD SOFTWARE POWERTOPOlite

V-300 comes equipped with full-featured PowerTopoLite software that helps you handle your most difficult survey jobs. This powerful software package features an easy-to-use operator interface that guides you through all measuring jobs. PowerTopoLite's architecture provides open access to a number of powerful integrated functions to solve any advanced surveying application.



WATERPROTECTION

The V-300 complies with the most stringent international industry standards. It is designed and engineered to ensure accuracy and reliability under the harshest work conditions, at the same time protecting your investment. (The degree of protection against dust and water of the V-300 complies with the International Protection standard IP55 defined following the standard IEC 60529).



PENTAX V-300 Series Technical Specifications

Model		V-325	V-325N	V-335N	V-323N	
Telescope	Image			Erect		
	Magnification			30 X		
	Effective aperture			45 mm		
	Field of view			1°30' (2.6%)		
	Minimum focus			1.0 m		
	Resolving power			3.0"		
Focus	Type			Manual		
Distance measurement	Laser class		Visible Laser: class II (2)	Visible Laser: class III R (Reflectorless), Class II (Prism)		
	Measurement Range	Reflectorless	No	1.5 ~ 300 m		
		Reflector sheet		1.5 ~ 600 m (800 m)		
		Mini Prism		1,100 m (1,600 m)		
		1 prism		3,400 m (4,500 m)		
		3 prisms		4,500 m (5,600 m)		
	Accuracy	Prism		1.5 m ~ 10 m: ± (3 + 2 ppm x D) mm	10 m ~ ± (2 mm + 2 ppm x D) mm	
		Reflector sheet		1.5 m ~ 10 m: ± (3 + 2 ppm x D) mm	10 m ~ ± (2 mm + 2 ppm x D) mm	
	Minimum Reading	Reflectorless	No	1.5 m ~ 200 m: ± (5 + 2 ppm x D) mm	200 m ~ ± (7 mm + 10 ppm x D) mm	
		Normal		1 mm		
		Quick Mode		1 mm		
	Measurement Time - Rep.	Tracking Mode		10 mm		
		Normal Mode		2.0 Seconds(1 mm)		
Quick Mode			1.2 Seconds (1 mm)			
	Tracking Mode		0.4 Seconds(1 cm)			
Angle measurement	Method		Absolute Rotary Encoder			
	Minimum Display		5" / 1"			
	Accuracy		5"		3"	
Compensator	Type		Single Axis			
	Range		± 3'			
Leveling	Plate Vial		40"/2 mm			
	Circular Vial		8' / 2 mm			
Optical plummet	Magnification		3 X			
Base section	Type		Detachable	Shifting	Detachable	
	Display	Quantity	2			
	Graphic LCD	8 lines x 20 characters				
	Numeric Keys	12 Standard - Dedicated				
	Alpha Keys	Standard - Non Dedicated				
	Function Keys	5				
	Special Keys	5				
	Backlight	10 step adjustable				
Environmental	Operating Range	-20°C ~ + 50°C				
	Water Protection	IP55				
Internal memory	Size	16,000 points	30,000 points			
Motions	Tangent	1 Speed (H & V)				
Battery	Voltage	DC6V				
	Type	Ni-Mh				
Dimension		172(W) x 343(H) x 177(L) mm				
Weight	Instrument w/Battery	5.7 kg		5.6 kg	5.7 kg	
	Carrying Case		2.6 kg			

Note: Distance measurement: () = good conditions: 40 km visibility, overcast, no heat, no shimmer and moderate wind

Note:

- * The measurement range may vary by measurement conditions.
 - Normal conditions: 20 km visibility with slight shimmer.
 - Good conditions: 40 km visibility, overcast, no heat, no shimmer and moderate wind.
- * Reflector sheet: PENTAX genuine Reflector sheet (5 cm x 5 cm).
- * EDM Measuring time varies according to distance to be measured and conditions of the environment.

Ahead of Vision

Light is the element of seeing and it brings color into the world. Pentax has excelled in this medium for over 85 years. Since our beginning our engineers have brought forth innovative precision optical equipment year after year. Pentax Optics – photo cameras, medical endoscopes as well as industrial and measuring optics – are always ahead of their time regarding quality, precision and innovation.

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Visit the V-300 series at:
www.pentaxsurveying.com

DANGER
 LASER RADIATION - DO NOT STARE INTO BEAM OR VIEW DIRECTLY WITH OPTICAL INSTRUMENT INTO SUNLIGHT
 620-690 nm/4.95mW 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



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



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 Japan Surveying Instruments Manufacturers' Association
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