

PENTAX

R-400V Series

EFFICIENT ACCURACY AT YOUR FINGERS!

- 400m reflectorless EDM range
- Easy transfer to a PC via USB, SD connection
- Dual axis compensator 3" and 5" models
- Triple axis compensator 2" model
- Adjustable laser plummet



**INCREASED
PRODUCTIVITY
FASTER
TURNAROUND**



Model	R-422VN	R-423VN	R-425VN	R-435VN
Telescope	Magnification	30 x		
	Effective aperture	45mm (EDM45mm)		
	Resolving power	3.0"		
	Field of view	2.6 % (1° 30')		
	Minimum focus	1.0 m		
	Focus	Manual		
Distance measurement	Visible laser: Class III a (3R) (Reflectorless) / Class II (2) (Prism, sheet)			
Measurement range (Good conditions) (*3)	Reflectorless (*1)	1.5 ~ 400 m		
	Reflector sheet (*2)	1.5 ~ 600 m (800 m)		
	Mini Prism	1.5 ~ 1,600 m (2,000 m)		
	1 P	1.5 ~ 5,500 m (7,000 m)		
	3 P	1.5 ~ 7,000 m (9,000 m)		
Accuracy	Prism / Reflector sheet	1.5 ~ 10 m: ± (3 + 2 ppm x D) mm / 10 m ~: ± (2 + 2 ppm x D) mm, Quick: ± (3+2ppmxD) mm (*5)		
	Reflectorless	1.5 ~ 300 m: ± (5 + 2 ppm x D) mm / 300 m ~: ± (7 + 10 ppm x D) mm		
	Minimum count	0.1 mm (Fine mode) / 1 mm (Normal mode) / 10mm (Track mode)		
Measuring time (*4)	Repeat meas. Normal (1 mm)	Prism / Reflector sheet 2.0 sec - Reflectorless 2.0 sec		
	Quick (1 mm)	Prism / Reflector sheet 1.2 sec (*5)		
	Track (10 mm)	Prism / Reflector sheet 0.4 sec - Reflectorless 0.4 sec		
	Initial meas. Normal (1 mm)	Prism / Reflector sheet 2.5 sec - Reflectorless 2.4 sec		
	Quick (1 mm)	Prism / Reflector sheet 1.7 sec (*5)		
	Track (10 mm)	Prism / Reflector sheet 2.5 sec - Reflectorless 2.5 sec		
Angle measurement	Measurement method	Absolute rotary encoder		
	Direction method	Vertical / Horizontal angle: 2 sides		Vertical / Horizontal angle: 1 side
	Minimum count	1" / 5" selectable		
	Accuracy (ISO 17123-3)	2"	3"	5"
Compensator	3 Axis		2 Axis	
Target screw	1 speed			
Sensitivity of vials	Plate level	30" / 1 mm		
	Circular level	8' / 2 mm		
Laser Plummet	Visible laser: ± 0.5mm (instrument height: 1.5m) (Optical Plummet is optional)			
Base	Detachable		Shifting	
Dust & water resistance	IP56 (instrument only)			
Ambient temperature	-20°C ~ +50°C / -4°F ~ 122°F (working range)			
Tripod thread	5/8" x 11			35 mm P2
Dimensions / Weight	Dimensions	180 (W) x 342 (H) x 177 (L) mm		
	Weight (incl. battery)	5.7 kg		
	Carrying case	250 (W) x 365 (H) x 425 (L) mm		
Battery pack	Power source	Ni-MH 4300 mAh (rechargeable) DC 6.0 V		
	Operation time	Approx. 7.0 hrs (ETH + EDM) / 15 hrs (ETH) with approx. 2.2 hrs of charging time		
	Weight	380 g		
Battery charger and AC adapter	Input Voltage	AC 100 ~ 240 V		
	Output Voltage	DC 7.5 V		
	Weight	280 g		
Data Process	Data recording method	Internal Memory		
	Coordinates data (*6)	45,000		
	Special function	PowerTopoLite		
	I / F	RS-232C, SD CARD, USB		
Display / keyboard	Display type	Graphic LCD / 20 characters x 8 lines / 240 x 96 pixels		
	Quantity	1 (2nd optional)		
	Keys	22 each (12 numeric / 5 function / 5 special)		
	Display back light	Intensity settings: 10 steps		
Laser Pointer	Yes			
Date clock	Yes			

- *1 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 trademark of Eastman Kodak Company)
- *2 Reflector sheet: PENTAX genuine Reflector sheet
- *3 The measurement range may vary by conditions of the environment.
Normal conditions: 20km visibility with slight shimmer
Good conditions: 40km visibility, overcast, no heat, no shimmer and moderate wind.
- *4 EDM measuring time is determined in good conditions. It may take longer than usual to measure the distance exceeding 4000m in prism mode and 300m in reflectorless mode. Also the measurement time in reflectorless mode is influenced by the shape, size and surface area and reflection rate of the target and its environment.
- *5 Quick mode, which functions with prism and reflector sheet, is effective only under normal mode (1mm) and up to 500m.
- *6 Number of points to be recorded may vary by usage.
Maximum number of point to be recorded per job site: 3000 points
Maximum number of job file to be recorded: 50 job files
Maximum data points to be sent from PC to the instrument: 3000 points

You should be able to use any SD card in your camera. While Pentax does not guarantee compatibility with any particular manufacturer or model, we have seen consistent compatibility with SD cards from Panasonic (1GB), SanDisk (1GB), and Toshiba (1GB)

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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



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



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