METRONOR SOLO TWIN

Double camera electro-optical
portable coordinate measuring system

- FULL 70° FIELD-OF-VIEW
- EFFICIENT IN TIGHT AND CONFINED SPACES
- IDEAL FOR NARROW AND CROWDED ENVIRONMENTS
- EXCELLENT FOR PLANARITY, PARALLELISM, FLATNESS AND ALIGNING SHAFTS AND PLANES
- OPERATOR FRIENDLY: PROBING WITHOUT BEAMS, CABLES OR ARMS
- FLEXIBLE AND VERSATILE

Metronor SOLO Twin uses two separate cameras to generate each image. By effectively doubling the field-of-view, the camera can be placed closer to the measurement object, increasing accuracy and enabling measurement in one-set-up where several set-ups would otherwise be required.

During normal operation, the two cameras are mounted together on a special carbon fiber bracket ensuring optimal overlap and excellent stability. Using a fast and simple procedure, the alignment between the two cameras can be re-determined anytime and anywhere, keeping system performance consistent over time – and after any rough handling or transportation.

Metronor SOLO Twin also enables special applications where it is critical to have two separate camera axes that are precisely known relative to each other. Such applications include alignment or inspection of parallel objects such as planes or bores – e.g. in gearboxes, thrusters, turbines, or other machinery.

APPLICATIONS INCLUDE:

- Prototyping
- Assembly alignment
- Tool and die inspection
- Assembly alignment – in position and orientation
- Tube & pipe measurement
- Excess material verification in casting/forging
- In-process inspection
- On-machine alignment of parts for milling/machining
- On-machine inspection
- Tool building
- Fixture inspection
- Reverse engineering
- As built documentation

For more information: www.metronor.com

Technical Specifications

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PERFORMANCE SPECIFICATIONS

Range	Distance From Sensors	1.5 to 25 m (5 to 80')
Accuracy Small volume - 3D	±0.12 [mm]	Volume up to 1.5 x 1.5 x 1.5 m^3
		Accuracy of 3D length
		2 sigma (U95)
Accuracy Casting volume - 3D	±0.20 [mm]	Volume up to 3.0 x 3.0 x 3.0 m^3
		Accuracy of 3D length (typical)
Accuracy Profile Measurements	±0.16 [mm] (5 m from camera)	600mm wide profile orthogonal to camera optical axis
	±0.21 [mm] (10 m from camera)	2 sigma (U95)
	±0.43 [mm] (20 m from camera)	
Accuracy Parallelism	±0.0033 [deg]	Parallelism between 2 planes, 1000 mm size
		2 sigma (U95)
Accuracy Planarity	±0.06 [mm]	Planarity of single plane, size 2x2m^2
		2 sigma (U95)

HARDWARE SPECIFICATIONS

Environment	Operating Temperature	10 to 45ºC (50 to 113ºF)
	Storage Temperature	-25 to 65ºC (-13 to 150ºF)
	Operating Humidity	< 95% relative humidity, non-condensing
	Pressure, Humidity, Temperature	No effect on measurement accuracy
	No Warm-up	
Electrical Power	Auto Switching (Battery operation optional)	100-240 V AC, 50-60 Hz
Packaging	System Weight (excl. cases)	12 kg (29 lbs)
	Shipping Weight	26 kg (57 lbs)
Computing Unit	Type	Laptop, Windows 7 Professional 64 bit
Sensor Unit (2 incl.)	Type	CCD-based digital camera
	Optical Settings	Fixed aperture and focus, factory optimized
	Field of View	70º x 32º
	Effective Resolution	1.180.000x 512.000
	Unit Net Weight	0.80 kg (2 lbs)
Probing Unit	Type	Wireless Handheld, with quick-change styli
	Material	Carbon fibre w/embedded active targets
	Styli	User configurable set of 7 w/ titanium extensions/angles
	Styli Type	Ruby spheres (incl.), scribe tip (incl.), edge styli (opt.)
	Hidden Point Capability	600 mm (24") - longer with optional probes
	Unit Net Weight	0.52 kg (1.2 lbs)