Technical data Z+F IMAGER® 5006i

The imaging 3D laser measurement systems are applicable in the fields of digital planning of factories, industrial plants, architecture, protection of historic monuments, landscape and virtual reality. They are based upon the spot Z+F Laser Measurement System LARA:

Laser measurement system		
Ambiguity interval:	79 m	
Min. range:	0.4 m	
Resolution range:	0.1 mm	
Data acquisition rate:	≤ 508 000 pxl/sec.	
Linearity error up to 50m:[1]	≤ 1 mm	
Range noise at 10 m:[1 2] > Reflectivity 10% (black): > Reflectivity 20% (dark grey): > Reflectivity 100% (white):	 1.2 mm rms 0.7 mm rms 0.4 mm rms	
Range noise at 25 m:[1 2] > Reflectivity 10% (black): > Reflectivity 20% (dark grey): > Reflectivity 100% (white):	 2.6 mm rms 1.5 mm rms 0.7 mm rms	
Range noise at 50 m:[1 2 3] > Reflectivity 10% (black): > Reflectivity 20% (dark grey): > Reflectivity 100% (white):	 6.8 mm rms 3.5 mm rms 1.8 mm rms	
Range drift over temp. (-10°– 45°C):	negligible due to internal reference	
Optical transceiver		
Laser:	visible	
Beam divergence:	0.22 mrad	
Beam diameter at 1 m distance:	3 mm circular	
Laser safety class:	3R (ISO EN 60825-1)	
Deflection unit		
System vertical: System horizontal:	Rotating mirror Rotating device	
Field of view vertical: Field of view horizontal:	310° 360°	
Resolution vertical: Resolution horizontal:	0.0018° 0.0018°	
Accuracy vertical:[1] Accuracy horizontal:[1]	0.007° rms 0.007° rms	
Max. scanning speed vertical: Typ. Scanning speed vertical:	≤ 50 rps 25 rps	
Resolution		
Resolutions:	Pixel / 360° (vertical, horizontal)	Scanning time / 360°
“preview”:	1 250	25 sec
“middle”:	5 000	1 min 40 sec
“high”:	10 000	3 min 22 sec
“super high”:	20 000	6 min 44 sec
“ultra high”:	40 000	26 min 40 sec
Max. resolution for selections:	100 000	-

[1] detailed explanation on demand – please contact imager5006@zf-laser.com [2] data acquisition rate: 127 000 pxl/sec., raw data, in High Power Mode [3] values extrapolated

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Miscellaneous		
Tilt measurement: > Resolution: > Accuracy (zero point):[4]		1/1 000° 1/500°
Data interface:		Ethernet / USB 2.0
Data storage:		Internal HDD (≥ 60GB)
Communication interface:		Ethernet / WLAN
Integrated operation panel: > Display: > Keypad:		4 Lines 6 Buttons
Power supply: > Input voltage:		24V DC (scanner) | 90–260V AC (power unit)
Power consumption:		65 W max.
Battery life time: > Changeable battery pack: > External battery (TRAPP-15-24):		2.5 h 4 h
Ambient conditions: > Calibrated temperature: > Storage temperature: > Humidity: > Target reflectivity: > Illumination:		-10°C – 45°C -20°C – 50°C non-condensing no retro-reflectors all conditions from darkness to daylight
Dimensions and weights		
Scanner (w x d x h):	286 mm x 190 mm x 372 mm	14 kg
Bottom of scanner to horizontal axis:	242 mm	
Tripod: > Height: > Diameter:	approx. 80 cm – 140 cm approx. 120 cm	9 kg

[4] zero point determination by two layer measurements