

Differential Interferometer

SP 5000 DI Series

System parameter	SP 5000 DI	SP 5000 DI/F
Measurement range	0 m to ≥ 5 m	
Resolution	5 pm*	
Angular measurement range with reflector with plane mirror (recommended distance ≤2 m)	±12.5° ** ±430 µrad	±15° ** ±430 µrad
Angular resolution	0,005 µrad***	0,007 µrad***
Beam distance (standard)	21 mm	14 mm
Temperature sensitivity	<20 nm/K	<10 nm/K
Wavelength	632.8 nm	
Frequency stability of the HeNe laser (after warm-up time)	2·10 ⁻⁸	
Warm-up time of the HeNe laser	10 ... 20 min	
Operating temperature range	15 ... 30°C	
Maximum displacement speed of measuring reflector	3 m/s	
Geometric Data		
Dimensions (L x W x H): Sensor head (with base plate) Reflector Electronic evaluation and supply unit EU (standard)	[150 x 140 x 43] mm Ø 15 mm x 15 mm	[110 x 65 x 33] mm Ø 10 mm x 15 mm [450 x 400 x 150] mm
Mass: Sensor head Base plate Reflector Electronic evaluation and supply unit EU (standard)	2.0 kg 1.5 kg 8 g	1.1 kg - 6 g ca. 8 kg
Electrical Data		
Interfaces standard other interfaces on request (/R)	RS232C, USB	
Cable length between sensor head and electronics unit	3 m, optionally up to 10 m	
Power supply	100 ... 240 VAC / 47 ... 63 Hz	
Laser safety class according to EN 60825-1:2014 and ANSI Z136.1 (CDRH)	2M II	

*in frequency domain

** rotary point dependent

***least significant bit (LBS)

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