

# Displacement angle differential interferometer SP 5000 DI/DS

System parameter	SP 5000 DI/DS
Measurement range	0 m to 2 m (up to 5 m on request)
Resolution	5 pm*
Angular measurement range with plane mirror (recommended distance ≤2 m)	±430 µrad
Angular resolution	0.0035 arcsec ***
Achievable measurement uncertainty Length measurement Angle measurement	0.15 µm/m ±0.04 % ± 0.04 µrad
Beam distance (standard)	15 mm (length measurement) / 6 mm (angle measurement)
Temperature sensitivity	<20 nm/K
Wavelength	632.8 nm
Frequency stability of the HeNe laser (after warm-up time)	2·10 <sup>-8</sup>
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
<b>Geometric Data</b>	
Dimensions (L x W x H): Sensor head Electronic evaluation and supply unit EU (standard)	[125 x 100 x 64] mm [450 x 400 x 150] mm
Mass: Sensor head Electronic evaluation and supply unit EU (standard)	2.4 kg approx. 8 kg
<b>Electrical Data</b>	
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 (LSB)

03/2024 · Subject to change.