

# Differential Interferometer SP 5000 DI Series



System parameter	SP 5000 DI	SP 5000 DI/F
Displacement measurement range	5 m	5 m
Displacement resolution	5 µm	5 µm
Angular measurement range with reflector with plane mirror (recommended distance ≤2 m)	±12,5° ±1,5 arcmin	±15° ± 1,5 arcmin
Angular resolution (at 0.1 nm length resolution)	0,001 arcsec	0,0015 arcsec
Beam distance (standard)	21 mm	14 mm
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	

## Geometric Data

Dimensions (L x W x H):		
Sensor head (with base plate)	[150 x 140 x 43] mm	[110 x 65 x 33] mm
Electronic supply and evaluation unit (standard)	[450 x 400 x 150] mm	
Electronic supply and evaluation unit (compact)	[250 x 400 x 150] mm	
Mass:		
Sensor head	2.0 kg	1.1 kg
Base plate	1.5 kg	-
Electronic supply and evaluation unit (standard)	ca. 8 kg	
Electronic supply and evaluation unit (compact)	ca. 5.7 kg	

## Electrical Data

Interfaces	standard optional	RS232C, USB Digital 32-bit parallel interface Digital incremental signals (TTL level) Analog incremental signals (1V <sub>pp</sub> )
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	