

System parameter	SP 5000 TR
Measuring range	0 m to ≥ 5 m (10 m upon request)
Resolution	20 pm*
Angular measuring ranges with reflector with plane mirror (recommended distance ≤2 m)	±12.5° ** ± 430 µrad
Angular resolution	0.01 µrad***
Roll angle measurement (optional with RAS 175 W) Measuring range Resolution	±17.5 mrad 0.9 µrad
Measuring uncertainty under stable conditions: Length measurement Angle measurement Roll angle measurement	0.15 µm/m ±0.04 % ± 0.04 µrad ±2.4 µrad ±0.5% (19°C – 21°C) ±2.4 µrad ±1.5% (15°C – 25°C)
Beam distances (horizontal and vertical)	12 mm
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
Max. displacement speed of measuring reflector	3 m/s
Geometric Data	
Dimensions (L x W x H): Sensor head with adjustable mount Reflector Electronic evaluation and supply unit EU Roll angle sensor RAS 175 W (optional)	[202 x 137 x 72] mm [45 x 45 x 20] mm [450 x 400 x 150] mm [74 x 54 x 77] mm
Mass: Sensor head with adjustable mount Reflector Electronic evaluation and supply unit EU Roll angle sensor RAS 175 W (optional)	1.9 kg 80 g ca. 8 kg 425 g
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 (LSB)

03/2026 · Subject to change.