

## confocalDT IFS2407-1,5 High-precision confocal chromatic sensor



- Finest structure detection
- Measurement of precision parts
- Measurement of lens profiles
- Reliable measurement on steep edges

Model		IFS2407-1,5
Measuring range		1.5 mm
Start of measuring range	approx.	17 mm
Resolution	static <sup>[1]</sup>	6 nm
	dynamic <sup>[2]</sup>	36 nm
Linearity <sup>[3]</sup>	Displacement and distance	< ±0.3 μm
	Thickness	< ±0.6 μm
Light spot diameter		5.5 μm
Maximum measuring angle <sup>[4]</sup>		±43° (±70°) <sup>[5]</sup>
Numerical aperture (NA)		0.70
Min. target thickness <sup>[6]</sup>		0.075 mm
Target material		reflective, diffuse as well as transparent surfaces (e.g. glass)
Connection		pluggable optical fiber via FC socket, standard length 3 m; extension up to 50 m; bending radius: static 30 mm, dynamic 40 mm
Installation		Clamping, mounting adapter (see accessories)
Temperature range	Storage	-20 °C... +70 °C
	Operation	+5 °C... +70 °C
Shock (DIN EN 60068-2-27)		15 g / 6 ms in XY axis, 1000 shocks each
Vibration (DIN EN 60068-2-6)		2g/ 20 ... 500 Hz in XY axis, 10 cycles each
Protection class (DIN EN 60529)		IP65 (front)
Material		Aluminum housing, glass lenses
Weight <sup>[7]</sup>		approx. 800 g

<sup>[1]</sup> Average from 512 values at 1 kHz, in the mid of the measuring range onto optical flat

<sup>[2]</sup> RMS noise relates to mid of measuring range (1 kHz)

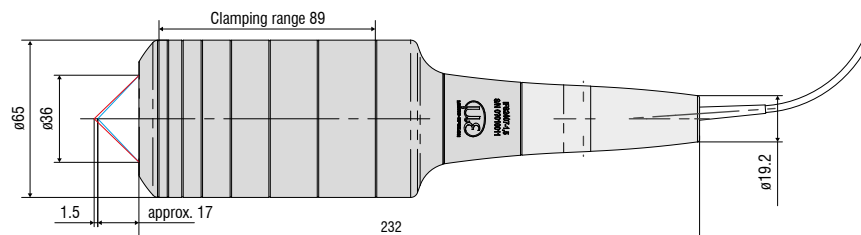
<sup>[3]</sup> All data at constant ambient temperature (25 ±1 °C) against optical flat; specifications can change when measuring different materials.

<sup>[4]</sup> Maximum sensor measuring angle up to which a usable signal can be achieved on reflective surfaces, with accuracy decreasing toward the limit values

<sup>[5]</sup> Maximum measuring angle of the sensor up to which a usable signal can be obtained on diffusely reflecting metallic surfaces, whereby the accuracy decreases towards the limit values

<sup>[6]</sup> Glass sheet with refractive index n = 1.5 throughout the entire measuring range. In the mid of the measuring range, also thinner layers can be measured.

<sup>[7]</sup> Sensor weight without optical fiber



(Dimensions in mm, not to scale.)