

confocalDT IFS2405/90-6

High-precision confocal chromatic sensor

- High resolution with a large measuring range
- Lateral beam exit for special installation scenarios
- Ideal for measurements of glass thickness and large pipe diameters



Model	IFS2405/90-6	
Measuring range	6 mm	
Start of measuring range	approx.	41 mm ¹⁾
Resolution	static ²⁾	18 nm
	dynamic ³⁾	93 nm
Linearity ⁴⁾	Displacement and distance	< ±1.5 μm
	Thickness	< ±3 μm
Light spot diameter	31 μm	
Max. tilt angle ⁵⁾	±10°	
Numerical aperture (NA)	0.22	
Min. target thickness ⁶⁾	0.3 mm	
Connection	pluggable optical fiber via FC socket, standard length 3 m; extension up to 50 m; bending radius: static 30 mm; dynamic 40 mm	
Assembly	Clamping, mounting adapter (see accessories)	
Temperature range	Storage	-20 ... +70 °C
	Operation	+5 ... +70 °C
Shock (DIN EN 60068-2-27)	15 g / 6 ms in XY axis, 1000 shocks each	
Vibration (DIN EN 60068-2-6)	2 g / 20 ... 500 Hz in XY axis, 10 cycles each	
Protection class (DIN EN 60529)	IP64 (front)	
Material	Aluminum housing, glass lenses	
Weight	approx. 217 g	

¹⁾ Start of measuring range measured from sensor axis

²⁾ Average from 512 values at 1 kHz, near to the mid of the measuring range onto optical flat

³⁾ RMS noise relates to mid of measuring range (1 kHz)

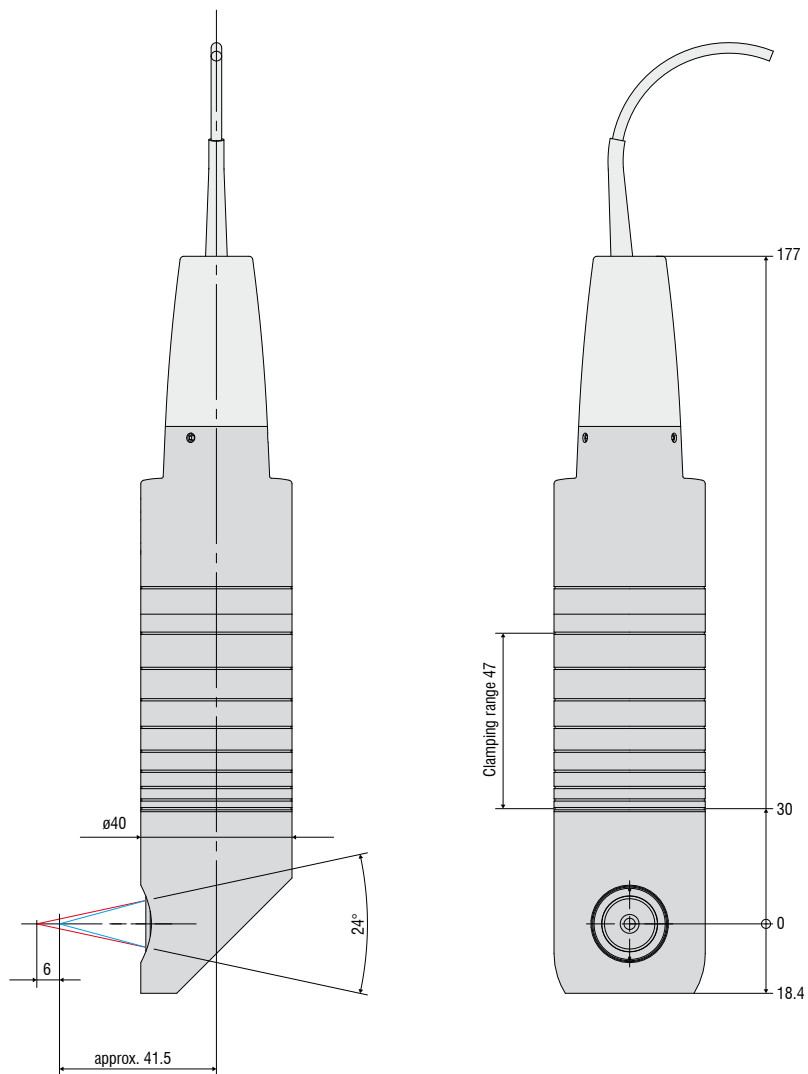
⁴⁾ All data at constant ambient temperature (25 ± 1 °C) against optical flat; specifications can change when measuring different objects.

⁵⁾ Maximum sensor tilt angle that produces a usable signal on reflecting surfaces. The accuracy decreases when approaching the limit values.

⁶⁾ 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.

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Dimensions:



Dimensions in mm,
not to scale.