

More Precision



confocal^{DT} IFS2404-4 Confocal chromatic sensor

- Precise distance measurement
- Compact sensor design
- Excellent price-performance ratio



Model		IFS2404-4
Measuring range		4 mm
Start of measuring range	approx.	14.7 mm
Resolution	static ^[1]	80 nm
	dynamic ^[2]	250 nm
Linearity ^[3]	Displacement and distance	$\leq \pm 1.2 \mu\text{m}$
	Thickness	$\leq \pm 2.4 \mu\text{m}$
Light spot diameter		10 μm
Maximum measuring angle ^[4]		$\pm 12^\circ$
Numerical aperture (NA)		0.20
Min. target thickness ^[5]		0.2 mm
Target material		reflective, diffuse as well as transparent surfaces (e.g. glass)
Connection		pluggable sensor cable via FC socket with a 20 μm core, type C2404-X
Mounting		Radial 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
Vibration (DIN EN 60068-2-6)		2 g / 10 Hz ... 500 Hz
Protection class (DIN EN 60529)		IP65 (front)
Material		Aluminum housing, glass lenses
Weight ^[6]		20 g

^[1] Average from 512 values at 1 kHz, in the mid of the measuring range onto optical flat

^[2] RMS noise related to the mid of the measuring range (1 kHz)

^[3] All data at constant ambient temperature (25 \pm 1 °C). Measured on plane-parallel test glass. Acceptance report is enclosed with delivery

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

^[5] 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.

^[6] Sensor weight without optical fiber

