

More Precision



Compact confocal chromatic sensor with a narrow measurement cone **confocalDT IFS2404-8**

-  Compact sensor, lightweight, designed for easy line integration
-  Large offset distance
-  Narrow light cone
-  Compatible with all confocalDT controllers
-  For precise distance and thickness measurements



Model		IFS2404-8
Measuring range		8 mm
Start of measuring range	approx.	50 mm
Resolution	Static ^[1]	< 80 nm
	Dynamic ^[2]	< 500 nm
Linearity ^[3]	Displacement and distance	< ±2 µm
	Thickness	< ±4 µm
Light spot diameter		36 µm
Maximum measuring angle ^[4]		±5.5°
Numerical aperture (NA)		0.11
Min. target thickness ^[5]		0.4 mm
Target material		reflective, diffuse as well as transparent surfaces (e.g. glass)
Connection		pluggable optical fiber via FC socket; for cable type and cable length, see accessories
Temperature range	Storage	-20 °C ... +70 °C
	Operation	+5 °C ... +70 °C
Shock (DIN EN 60068-2-27)		15g / 6 ms in XY axis, 1000 shocks each
Vibration (DIN EN 60068-2-6)		2g / 20 ... 500 Hz on XY axis, 10 cycles each
Protection class (DIN EN 60529)		IP64 (front)
Material		Stainless steel housing, glass lenses
Weight ^[6]		approx. 75 g

^[1] Average from 2,048 values at 1 kHz, in the mid of the measuring range onto optical flat

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

^[3] All data at constant ambient temperature (25±1 °C). Measurement 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

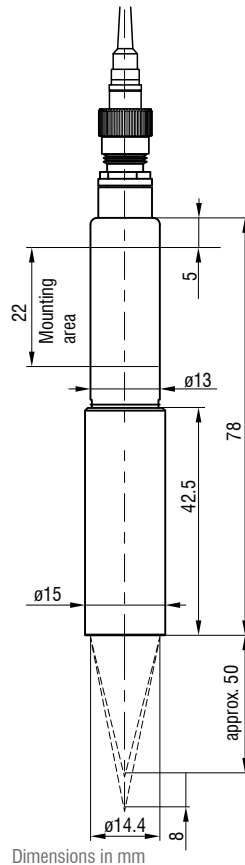
^[5] Glass sheet with refractive index n = 1.5 throughout the entire measuring range. In the mid of the measuring range, also thinner layers can be measured.

^[6] Sensor weight without optical fiber

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Dimensions



Accessories

Sensor-specific optical fiber

C2401-x with FC/APC and E2000/APC connectors (3 m, 5 m, 10 m, customer-specific length up to 50 m)

Other versions:

C2401/PT3-x Optical fiber with protective hose for mechanical stress (3 m, 5 m, 10 m, customer-specific length up to 50 m)

C2401-x(10) Drag-chain suitable optical fiber (3 m, 5 m, 10 m)

C2401-x(20) Robot-suitable optical fiber (3 m, 5 m, 10 m)