

More Precision

confocalDT // Confocal chromatic measurement system



Confocal chromatic sensors for measuring displacement and thickness

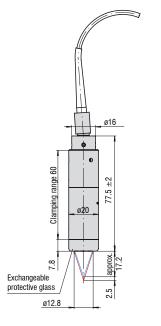
confocalDT IFS2406



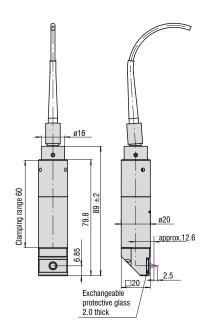
The IFS2406 series stands out due to its compact design and high precision. Due to its axial and radial measuring directions, the confocal sensor is suitable for vacuum applications and is extremely versatile in terms of its use.

As well as distance measurements on reflecting or transparent surfaces, the sensor can also be applied in one-sided thickness measurement of transparent film, plates or layers.

IFS2406-2.5/VAC(001)



IFS2406/90-2.5/VAC(001)



Sensor model	IFS 2406-2.5/VAC(001)	IFS 2406/90-2.5/VAC(001)
Measuring range	2.5mm	2.5mm
Start of measuring range approx.	17.3mm measured from protective glass frame	12.6mm measured from sensor axis
Spot diameter	10μm	10µm
Linearity (displacement and distance measurement)	$0.75\mu\mathrm{m}$	0.75μm
	±0.03 % FSO	
Linearity (thickness measurement)	1.5μm	1.5μm
	±0.06 % FSO	
Resolution 1)	24nm	24nm
Weight (without cable)	105g	130g
Max. tilt 2)	±16°	±16°
Protection class	IP 40, vacuum compatible	
Operating temperature	+5°C +70°C	
Storage temperature	-20°C +70°C	
Sensor cable (fibre optic cable)	length: standard 3m; option up to 50m; bending radius: static 30mm; dynamic 40mm	
Shock	15g, 6ms	
Vibration	2g / 10Hz 500Hz	

FSO = Full Scale Output

All data based on measurements with an optical cable of 26µm C2401-X(01) fibreglass at constant ambient temperature (25±2°C) against optical flat; specifications can change when measuring different materials.

1) Average from 512 values at 1kHz, near to the centre of the measuring range
2) Maximum sensor tilt angle that produces a usable signal, near to the centre of the measuring range

Accessories

Software

IFD24n1-Tool Free demo software tool included in delivery

Accessories light source

IFX2471/Xe/75 external Xenon light source for controller IFC2471 (70 kHz)

IFX2471/Xe/75-light-bulb for IFX2471 IFL2451/LED-light-bulb for IFC2451

IFL2451/LED(003)-light-bulb for IFC2451(003) with cooling element

CL2471-1/Xe Light source cable, 1m

Accessories IFS2405

C2401-X Fibre optical cable (3m, 10m, customer specific length up to 50m)
C2401/PT-X Armored cable (3m, 10m, customer specific length up to 50m)

C2401-3(10) Sensor cable for drag chain use, 3m C2401-5(10) Sensor cable for drag chain use, 5m

Accessories IFS2402/2403

CE2402-X Extension for fibre optical cable (3/10/13/30/50m)

CE2402-X/PT Sensor with armored cable

(3/10m, customer specific length up to 50m)

C2402/Vac/KF16 Vacuum feedthrough, 1 channel C2405/Vac/6/CF63 Vacuum feedthrough, 6 channel Vacuum feedthrough, 9 channel

Accessories

 SC2471-3/USB/IND
 Connector cable IFC2451/61/71, 3m

 SC2471-3/IF2008
 Connector cable IFC2451/61/71-IF2008, 3m

 SC2471-3/CSP
 Connector cable IFC2451/61/71-CSP2008, 3m

 SC2471-10/IF2008
 Connector cable IFC2451/61/71-IF2008, 10m

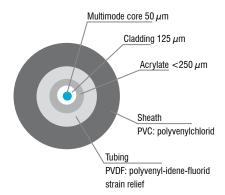
 SC2471-10/CSP
 Connector cable IFC2451/61/71-CSP2008, 10m

SC2471-10/USB/IND Connector cable IFC2451/61/71, 10m SC2471-20/USB/IND Connector cable IFC2451/61/71, 20m

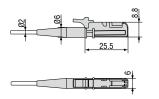
PS2020 Power supply 24 V / 2,5 A EC2471-3/OE Encoder cable, 3 m

Fibre optic

Temperature range : -50°C - 90°C Bending radius: 30/40mm



E2000/APC standard connector



High performance sensors made by Micro-Epsilon



Sensors and systems for displacement and position



Sensors and measurement devices for non-contact temperature measurement



2D/3D profile sensors (laser scanner)



Optical micrometers, fibre optic sensors and fibre optics



Colour recognition sensors, LED analyzers and colour online spectrometer



Measurement and inspection systems





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