











# More Precision.

**confocalDT IFC246x** // Light-intensive controller for high speed measurements



# Light-intensive controller for high speed measurements

## confocalDT IFC2465/IFC2466

-  Measuring rate up to 30 kHz
-  Ethernet / EtherCAT / RS422 / PROFINET / Ethernet/IP / Analog
-  Fast surface compensation and high light intensity
-  Configuration via web interface
-  Submicron resolution
-  Thickness measurement of multi-layer materials
-  Synchronous two-sided thickness measurement
-  Robust design with passive cooling



The confocalDT 2465 and 2466 controllers enable fast, high-precision distance and thickness measurements up to 30 kHz. They are available as a single- or dual-channel variant. In addition, the MP models measure the thickness of up to 5 transparent layers at once. The controllers are characterized by high luminous intensity which enables very fast and reliable measurements even on dark surfaces.

The controller can be operated with any IFS sensor and is available as a standard version for distance measurements or as a multi-peak version for multi-layer thickness measurements. Using a special calculation function, the confocalDT 2466 dual-channel version evaluates both channels. Measurement acquisition is synchronous and can be carried out while exploiting the full measuring rate for both channels.

Due to a user-friendly web interface, no additional software is necessary to configure the controller and the sensors. Data output is via Ethernet, EtherCAT, RS422 or analog output. Optionally available interface modules enable the data to be output also via PROFINET or EtherNet/IP.



Settings are made via the web interface. For thickness measurements, materials are stored in an expandable materials database.

Model	IFC2465	IFC2465MP	IFC2466	IFC2466MP
Resolution	Ethernet/EtherCAT	1 nm		
	RS422	18 bit		
	Analog	16 bits (teachable)		
Measuring rate	continuously adjustable from 100 Hz to 30 kHz			
Linearity	typ. <math>\pm 0.025\%</math> FSO (depends on sensor)			
Multi-layer measurement	1 layer	5 layers	1 layer	5 layers
Light source	internal white LED			
No. of characteristic curves	up to 20 characteristic curves for different sensors per channel, selection via table in the menu			
Permissible ambient light <sup>1)</sup>	30,000 lx			
Synchronization	yes			
Supply voltage	24 VDC $\pm 15\%$			
Power consumption	approx. 10 W			
Signal input	sync-in / trig-in; 2x encoders (A+, A-, B+, B-, index)			
Digital interface	Ethernet / EtherCAT / RS422 / PROFINET <sup>2)</sup> / EtherNet/IP <sup>2)</sup>			
Analog output	Current: 4 ... 20 mA; voltage: 0 ... 10 V (16 bit D/A converter)			
Switching output	Error1-Out, Error2-Out			
Digital output	sync-out			
Connection	Optical	pluggable optical fiber via E2000 socket, length 2 m ... 50 m, min. bending radius 30 mm		
	Electrical	3-pin supply terminal strip; encoder connection (15-pin, HD-sub socket, max. cable length 3 m, 30 m with external encoder supply); RS422 connection socket (9-pin, Sub-D, max. cable length 30 m); 3-pin output terminal strip (max. cable length 30 m); 11-pin I/O terminal strip (max. cable length 30 m); RJ45 socket for Ethernet (out) / EtherCAT (in/out) (max. cable length 100 m)		
Mounting	free-standing, DIN rail mounting			
Temperature range	Storage	-20 ... +70°C		
	Operation	+5 ... +50 °C		
Shock (DIN EN 60068-2-27)	15 g / 6 ms in XYZ axis, 1000 shocks each			
Vibration (DIN EN 60068-2-6)	2 g / 20 ... 500 Hz in XYZ axis, 10 cycles each			
Protection class (DIN EN 60529)	IP40			
Material	Aluminum			
Weight	approx. 1.8 kg		approx. 2.25 kg	
Compatibility	compatible with all confocalDT sensors			
No. of measurement channels <sup>3)</sup>	1		2	
Control and indicator elements	multifunction button (two adjustable functions and reset to factory setting after 10 s); 5x LEDs for intensity, range, status and supply voltage			

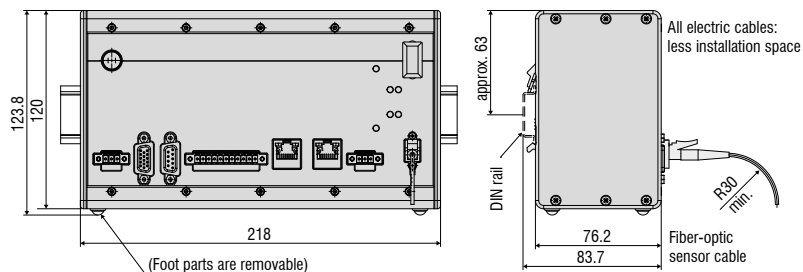
FSO = Full Scale Output

<sup>1)</sup> Illuminant: light bulb

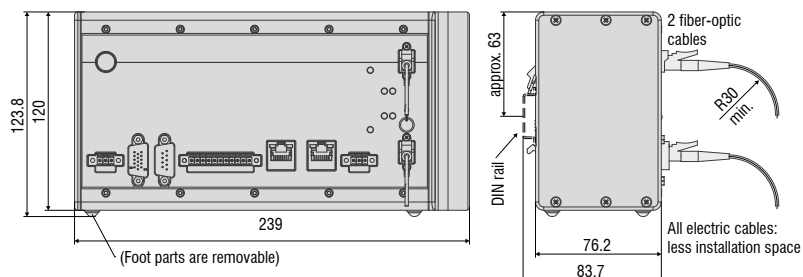
<sup>2)</sup> Connection via interface module (see accessories)

<sup>3)</sup> No loss of intensity and linearity due to two synchronous measurement channels

### IFC2465 Controller



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## Sensors and Systems from Micro-Epsilon



Sensors and systems for displacement, position and dimension



Sensors and measurement devices for non-contact temperature measurement



Measuring and inspection systems for quality assurance



Optical micrometers, fiber optics, measuring and test amplifiers



Color recognition sensors, LED Analyzers and inline color spectrometers



3D measurement technology for dimensional testing and surface inspection