MICRO-EPSILON

More Precision

Dual Processing Unit // Controller for sensor evaluation and signal conversion

Controller for sensor evaluation and signal conversion
Dual Processing Unit

- Evaluation of two digital sensor readings and output of the calculation result
- Synchronization of sensor and encoder values
- Data transmission via Ethernet (TCP/UDP)
- Fast data acquisition and output up to 100 kHz
- Intuitive web interface with program selection for fast setup

Automatic sensor evaluation

The Dual Processing Unit (DPU) is a controller that enables the synchronous acquisition and evaluation of two digital sensor or encoder values.

The inputs on the module can be switched via software and can be used either as encoder or RS422 inputs. Selectable programs allow the automatic calculation of values, e.g. thickness. For simultaneous acquisition of measured values, the DPU can be synchronized using the sensor, via an encoder or by the DPU itself.

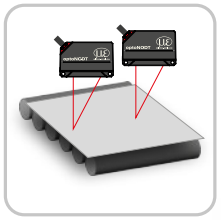
With its user-friendly web interface, the Dual Processing Unit offers extensive encoder settings, filter algorithms and statistics functions. In addition, the sensors' measurement values can be subsequently linearized via a 2-point mastering feature.

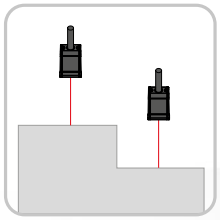
Fast data output up to 100 kHz

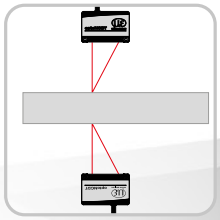
Data output is possible via different interfaces. For digital data output, up to two values can be output simultaneously and without restrictions via Ethernet (TCP/UDP). Analog current or voltage signals are available for one value each as well as two switching outputs (HTL). The conversion is performed with 16 bits, the maximum output rate is 100 kHz.

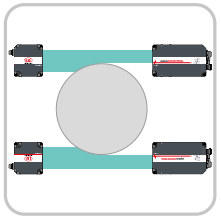
The Dual Processing Unit is compatible with the following Micro-Epsilon sensors:

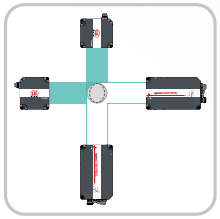
- optoNCDT: ILD1420, ILD1900, ILD2300
- optoCONTROL: ODC2520
- confocalDT: IFD241x, IFC2411, IFC242x, IFC2465, IFC2466

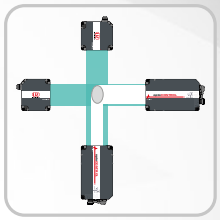

Single distances

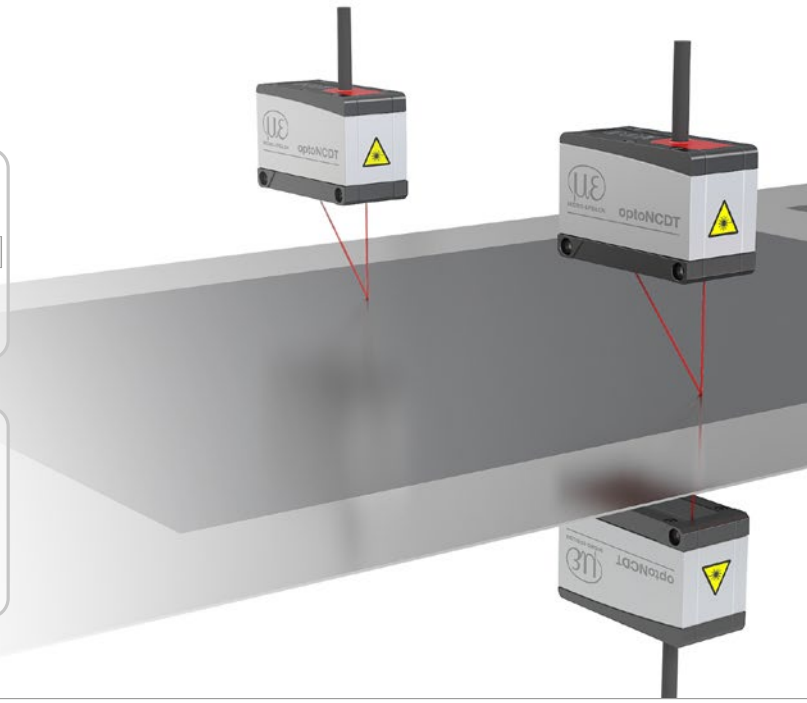

Stage


Thickness

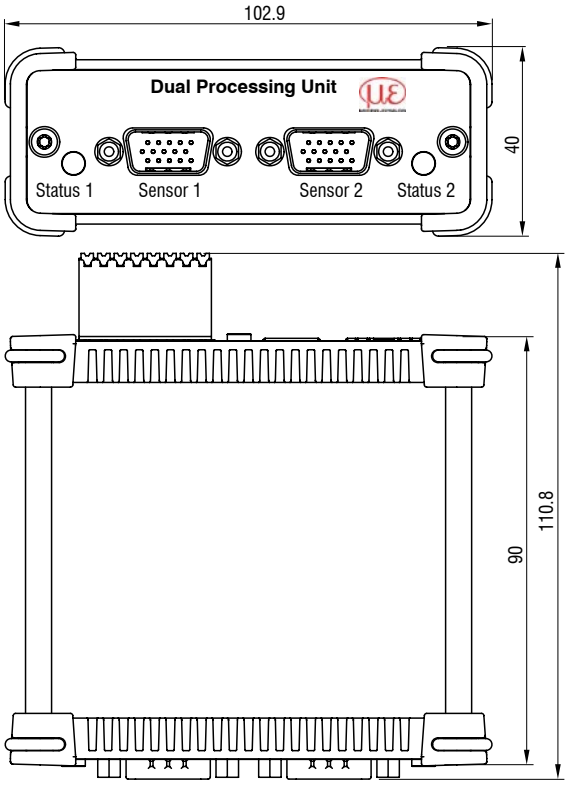

Diameter


Concentricity


Ovality



Model		Dual Processing Unit
Supply voltage		13 ... 30 VDC
Max. current consumption		200 mA
Signal input		2x RS422 for sensor or encoder 2x HTL/TTL (switchable) for trigger and master
Digital interface		1x Ethernet (TCP/UDP) 1x USB
Analog output		1x current output per connected sensor (4 - 20 mA) 1x voltage output per connected sensor (0 - 5 V, 0 - 10 V, ±5 V, ±10 V)
Switching output		2x HTL
Connection		1x RJ45 for Ethernet 1x USB 2x 15-pin Sub-D socket for RS422 1x pluggable pin strip 16-pin for power supply, laser on/off, trigger, analog output
Mounting		Desktop housing, optional mounting via holding clamp (available as accessory)
Temperature range	Storage	0 ... 50 °C
	Operation	5 ... 50 °C
Shock (DIN EN 60068-2-6)		5 g, 6 ms, 1000 shocks, 3 axes in 2 directions each
Vibration (DIN EN 60068-2-27)		2 g, sinusoidal excitation with 50 ... 2000 Hz, 10 cycles, 3 axes
Protection class (DIN EN 60529)		IP40
Material		Aluminum housing
Weight		approx. 210 g
Control and indicator elements		Status LED for controller/sensor connection, Ethernet; web interface for setup and extended functions: Filter, Zero, Mastering
Measuring programs		Distance 1, distance 2, step, thickness/diameter
Compatibility		optoNCDT: ILD1420, ILD1900, ILD2300; optoCONTROL: ODC2520; confocalDT: IFD241x, IFC2411, IFC242x, IFC2465, IFC2466



Dimensions in mm, not to scale

Sensors and Systems from Micro-Epsilon

Sensors and systems for displacement, distance and position

Sensors and measurement devices for non-contact temperature measurement

Measuring and inspection systems for metal strips, plastics and rubber

Optical micrometers and fiber optics, measuring and test amplifiers

Color recognition sensors, LED analyzers and inline color spectrometers

3D measurement technology for dimensional testing and surface inspection

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