

## CSP2008 - Universal controller

The CSP2008 controller can be used to process two digital or analogue input signals of almost all Micro-Epsilon displacement sensors (2x internal plus 4x external via Ethercat modules from Beckhoff). Ethercat can also be used as an external interface (master) for connecting further sensors and I/O modules. The controller has a high luminance display so that measured values can be easily read, even from a long distance.

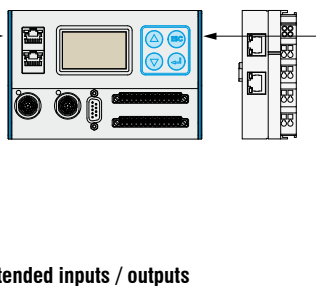
### Features

- Real-time processing of input and output signals at upto 100kHz (user selectable)
- Unique user interface for the configuration of the controller via Ethernet on a PC or laptop. All user selectable functions of the controller and the measured values can be viewed, displayed and stored in real time via your own web browser without installing any 3rd part software
- Simple sensor connection with automatic sensor recognition, configuration of the sensor using buttons and display on controller or via laptop
- Modular system upgradable with additional I/O modules for customer-specific requirements. The internal communication between I/O components using Ethercat connection (CSP 2008 acts as master)
- Simple mounting using DIN rail TS 35
- Extremely flexible and powerful functionality; function modules can be combined in many ways. Application example:

### System setup

#### Sensors via RS422

optoNCDT 1402  
optoNCDT 1700  
optoNCDT 2200/2220  
optoNCDT 2300  
optoCONTROL 2500  
optoCONTROL 2600



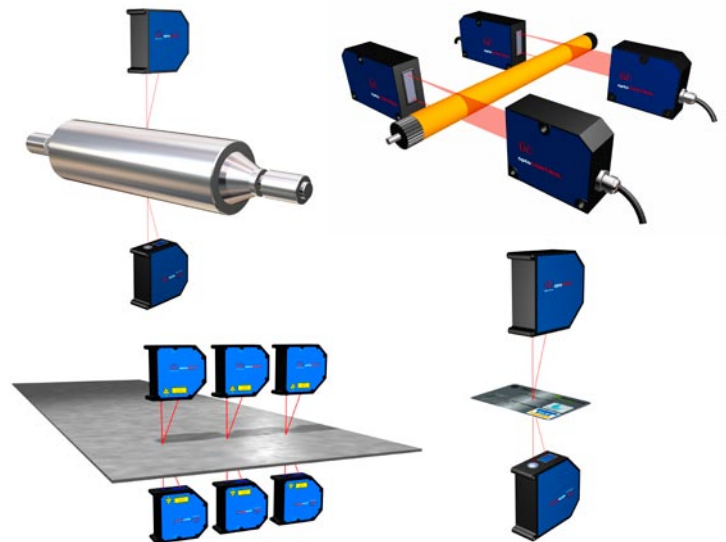
#### Beckhoff modules for extended inputs / outputs

EK1100 (EtherCat bus coupler)  
EL2004 (4 channel digital output terminal 24VDC)  
EL4132 (2 channel analogue output terminal for -10...10V, 16Bit)  
EL1012/EL1014/EL1018 (2 / 4 / 8 channel digital output terminal for 24V DC)  
EL3161/EL3162 (1 / 2 channel analogue output terminal for 0...10V, 16Bit)  
EL3141/EL3142 (1 / 2 channel analogue output terminal for 0...20mA, 16Bit)  
EL4112 (2 channel analogue output terminal for 0...20mA, 16Bit)  
RS422 Extension terminal for CSP2008

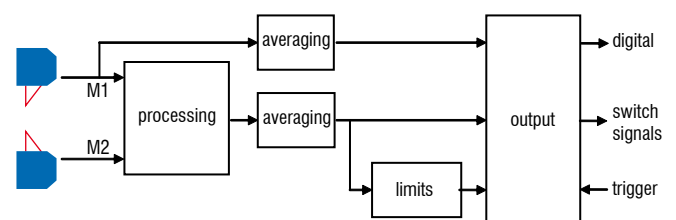


### Application fields

- Height measurement with 2 sensors
- Coplanarity measurement
- Flatness and roundness measurement with synchronised sensors
- Thickness measurement

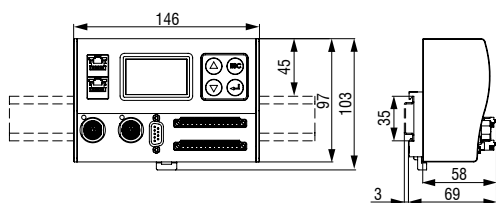


### Application example: Real Time thickness measurement with 2 optoNCDT laser sensors



# CSP2008 - Universal controller

Type	Universal controller CSP2008
Measuring frequencies	0.312...100 kHz (2 sensors)
Inputs/outputs	sensors: 2 sensor connectors (16 pin)
	digital
	1x ethernet (PC 100 MBit)
	1x ethercat (master, for Beckhoff I/O modules)
	1x RS422 (PLC max 1.5 Mbaud) (electrically isolated)
	2 terminal strips (13 pins)
	analog
	voltage 0...5 V, scaleable via software 0...10 V, -5...5 V, -10...10 V), electrically isolated, 100 kHz, 16 Bit
Functions	filter: moving average 1...1024 / recursive 1...32768 / median 3/5/7/9
	zero, master
	trigger (measuring value, edge, gate, software)
	limits (UL, LL, UW, LW, OK)
	calculation: A,B; A+B; A-B; -A-B; K-A-B; K+A+B; K+A-B; K+A; K+B; K(A+B); K(A+k*B)
	automatic sensor detection (digital interface)
	scaleable measuring ranges
	synchronisation
Firmware	storable configuration (max 4); bilingual (english-german)
Buttons	4 (▲; ▼; ←; ESC)
Display	Multi colour graphic display 52x30 mm; LED for successful connection controller/sensor
Power supply	9-36V, reverse polarity protection
Power supply sensors	max 2 sensors 24 VDC ±15%
EMC	DIN EN 61326-1:2006
Transient emissions	class A CISPR 11
Weight	appr 500 g
Connection	2x push-pull connectors
	2x RJ45
	1x DSUB 9 pin
	2x plugable spring terminal
Optional feature	key switch (laser on/off)
Protection class	IP 40
Operating temperature	0° C to 50°C
Storage temperature	-20°C to 70°C
Humidity	< 90%, non condensing



Universal controller with DIN rail TS 35  
(dimensions not to scale)

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