MICRO-EPSILON

More Precision

**optoCONTROL CLS1000 //** Fiber optic sensor for industrial applications

Special sensors
CFS-SL

A wide variety of applications and installation situations require a sensor that is perfectly matched to the application. On request, we can manufacture individual sensors with special fiber optics and probe heads according to your specifications and dimensions.

In addition to a wide range of standard sensors, we work directly with our customers to create complex fiber optic components for the respective application.

Whether in conjunction with evaluation electronics, for object illumination or special applications - the full spectrum of possibilities offered by fiber optic technology is demonstrated here.
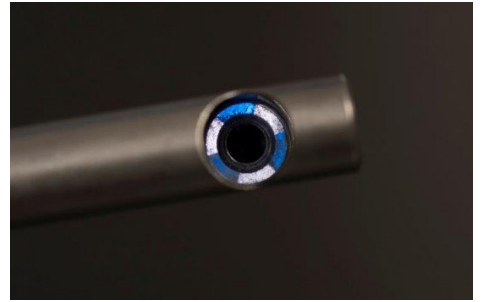
Special sensors from standardized applications

In cooperation with our customers, we have manufactured a large number of special sensors in recent years. The following images show examples of these sensors, which are used in special machines for complex measurement tasks. Special sensors can be manufactured in many different materials for any measurement task and for direct installation in your machine, starting from a single unit, as far as this is physically possible.
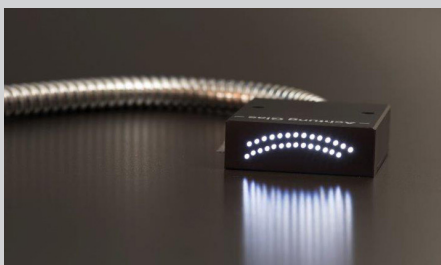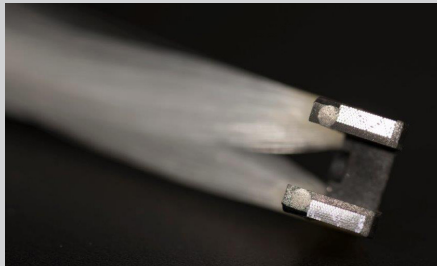
For marketing purposes and for better illustration, a white light source was used in the images shown here.

Configuration
Optical glass fibers

Function	Ferrule	Sheath	Fiber bundle Ø	Total length	Aperture angle	max. temp. range	Vibration protection	Drag chain suitability
CFS – **3** –	**A20** –	**T** –	**2.5**	**1200**	**67°** –	**T2000** –	**VS** –	**D**

Standard types or customized configuration from pages 10 - 15	Individual configuration from pages 18/19. Information in the sensor designation only if the specification deviates from the specified standard.

Specification of suitability for drag chains
D=suitable for drag chains

Specification of vibration protection
VS = Vibration protection

Specification of temperature bonding
with the maximum possible temperature

Specification of aperture angle
Not applicable when standard aperture angle is 67°

Length of optical fiber.
Not applicable for standard length of 1200 mm

Specification of fiber bundle diameter. Only if this
deviates from the values listed in the tables.

Specification of sheath based on ambient conditions.
Not applicable for T-sheath, as it is a standard sheath

Specification of the ferrule.
Addition "/90" for 90° beam path

Specification of the function: 1 = angle sensor; 2= circular sensor;
3= transmission sensor; 4= reflex sensor; 5= receiver sensor

Controller
optoCONTROL CLS1000

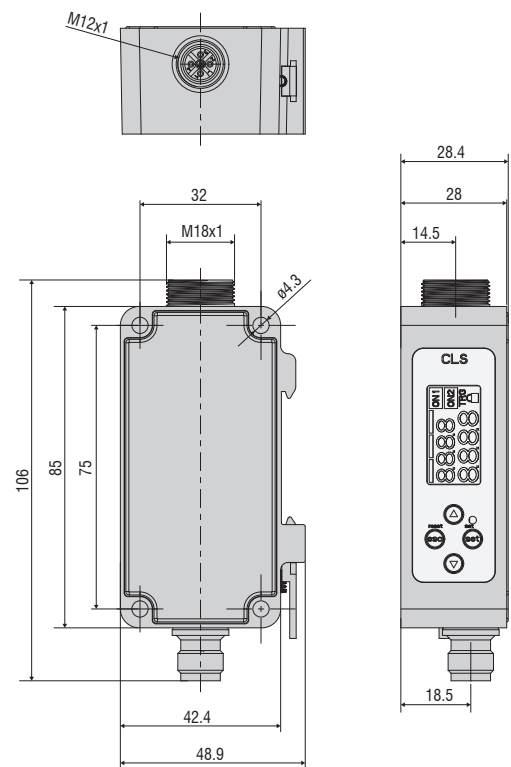|	
	Large detection and operating ranges
TEACH	Numerous teach-in modes for fast sensor adjustment
	Detection of the finest structures
	Extremely high resistance to ambient light up to 50,000 lx
	LCD display for quick and easy configuration
	Extremely robust and compact
	Switchable NPN; PNP; PP

Reliable presence detection and position control

The fiber optic sensor comprises a CFS sensor and a CLS1000 controller. The wide detection and operating ranges of up to 2000 mm make the fiber optic sensor ideal for the detection of components even at great distances.

The optoCONTROL CLS1000 optoelectronic fiber optic sensor is suitable for use in automation thanks to its variable switching outputs. The fiber optic sensor is used, for example, in position control and for position and presence detection.

The CLS1000 controller is available in five different versions: CLS1000-QN with antivalence function (normally open/normally closed), CLS1000-2Q with two switching outputs, CLS1000-OC with optocoupler, CLS1000-AU with voltage output and CLS1000-AI with current output. Each model is available in NPN, PNP or push-pull versions, each with or without trigger.

Due to the high resistance to ambient light and the possibility to adapt the controller in OEM applications, the CLS1000 can be used in almost all environments, regardless of high temperatures or confined installation spaces.

(dimensions in mm, not to scale)