MICRO-EPSILON

More Precision

optoCONTROL CLS1000 // Fiber optic sensor for industrial applications
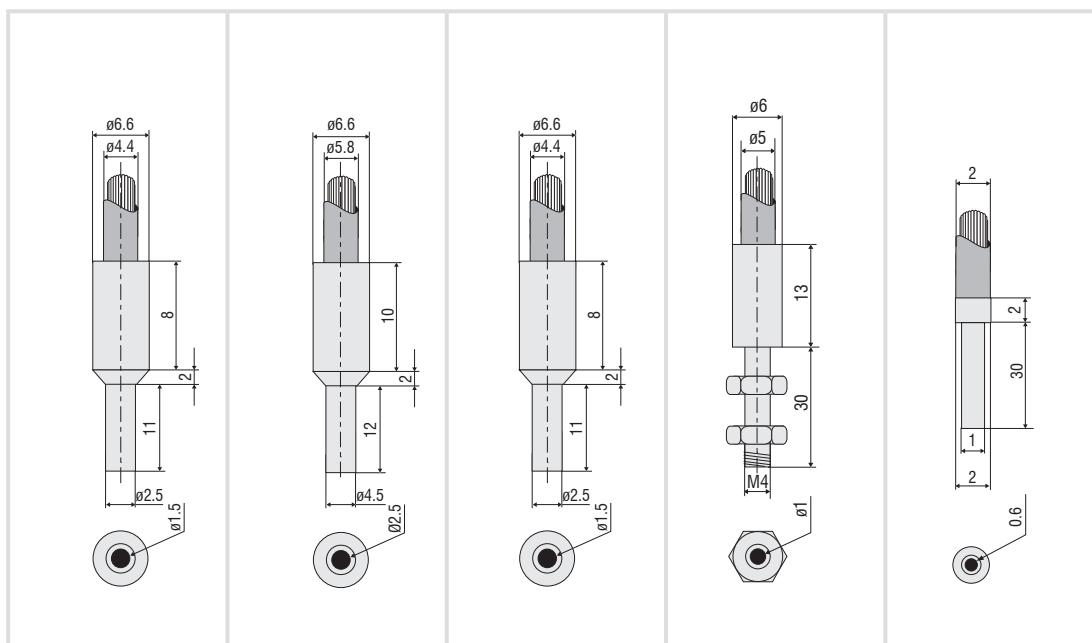
Model	CFS4-A11	CFS4-A20	CFS4-A30	CFS4-C10-M	CFS4-B11-P
Article number	10810487	10810351	10810584	10810383	10810254
Sensor type	Reflex sensor				
Detection range [1] — Start	1 mm	1 mm	1 mm	1 mm	1 mm
Detection range [1] — End	132 mm	394 mm	430 mm	50 mm	19 mm
Measurement geometry	0°:0°				
Connection	Screwable fiber optic cable via FA socket (M18x1), standard length 1.2 m				
	max. bending radius 13.2 mm	max. bending radius 17.4 mm	max. bending radius 22.5 mm	max. bending radius 13.2 mm	max. bending radius 6 mm
Mounting	FA (M18x1)				
Temperature range — Storage / Operation	Sensor head: -10 ... +80 °C; Fiber optic cable: -60 ... +180 °C			Sensor head: -10 ... +80 °C Fiber optic cable: -40 ... +300 °C	Sensor head: -10 ... +80 °C; Fiber optic cable: -20 ... +80 °C
Humidity (non-condensing)	20 … 80 % RH			20 … 60 % RH	20 … 80 % RH
Protection class (DIN EN 60529)	IP64			IP40	IP64
Material — Sensor head	Stainless steel				
Material — Optical fibers	integrated glass fiber (Ø1.5 mm) and metal-silicone coating (T)		integrated glass fiber (Ø3.0 mm) and metal-silicone (T) sheathing	integrated glass fiber (Ø1.0 mm) and metal (M) sheathing	integrated glass fiber (Ø0.6 mm) and PVC plastic (P) sheathing
Weight	50 g	90 g	114 g	60 g	15 g
Compatibility	compatible with all CLS and CFO controllers				
Special features	All variants are also available with different sheath, length 0.3 ... 10 m, vibration protection, IP protection, suitable for drag chains and available for temperature ranges up to 2000 °C. In combination with a pressure-tight feedthrough, a stainless steel sheath and T250° bonding, vacuum applications down to 10^{-5} mbar are also possible.				

[1] Detection range refers to polished stainless steel.

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.
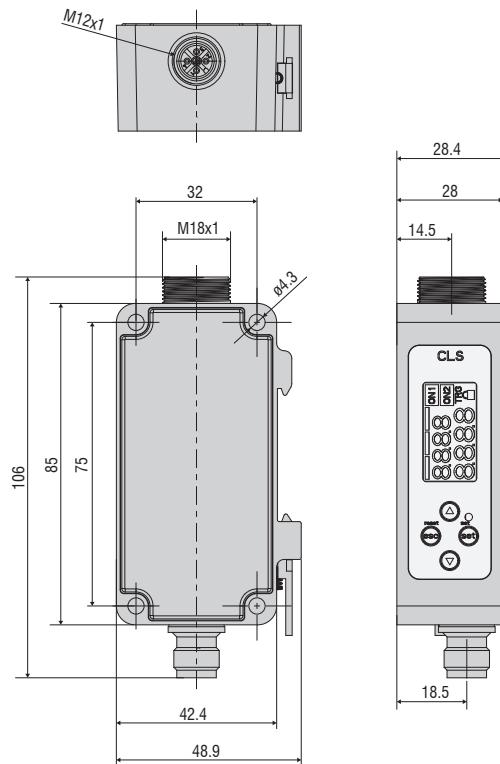
(dimensions in mm, not to scale)