



More Precision

opto**CONTROL** CLS-K // Fiber optic sensors





	Response time $\leq 120\mu\text{s}$
	Switching frequency $\leq 4\text{kHz}$
	Analog display
	Analog output 0 - 10VDC; 0 - 20mA; 4 - 20mA

Features:

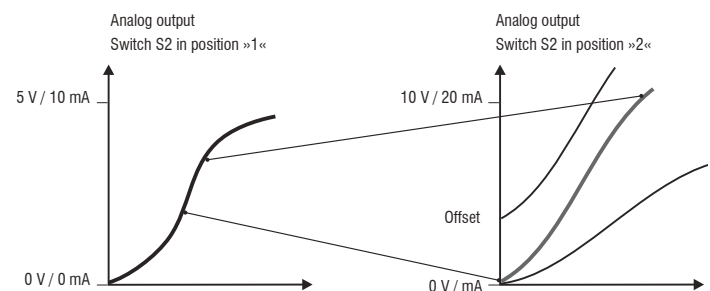
- Scanning distance up to 180mm*
- Range up to 2m*
- * depending on the fiber bundle diameter
- Supply 12-30VDC
- NPN switching output
- Stable long-term behavior by monitoring and regulating the emission of the transmitter diode

Applications:

- Test & measurement tasks
- Checking length and diameter
- Production monitoring via analog output and display
- Assembly control
- Indirect displacement measurement via optical fiber with cross-section converter

Advantages:

- Low drift by transmission monitoring
- Fast response time
- Sensor monitoring via analog signal

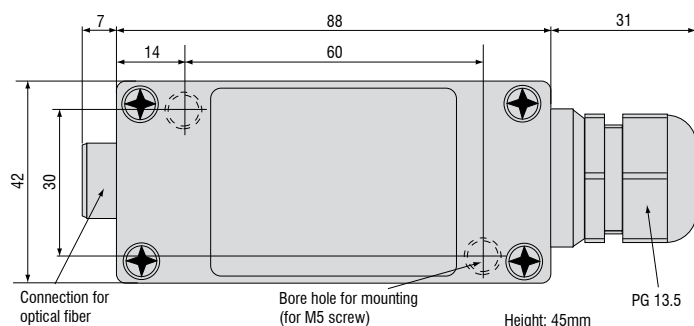
Scaling of analog output

The CLS-K-61/63 amplifier offers the possibility to scale the important signal range over the entire analog range. This enables to increase the sensitivity in a certain range, e.g. for the detection of small objects.

Type CLS-K	60	61	63	65
Order No.	10030032	10030033	10040035	10040036
Supply	12-30VDC			
Residual ripple	$\leq 10\%$			
Current consumption	$\sim 70\text{mA}$			
Switching delay	$\leq 500\text{ms}$			
Switching frequency	$\leq 4\text{kHz}$			
Response time	$\leq 120\mu\text{s}$			
Temperature drift	$\leq (-)0.5\%/K$			
Reproducibility	$\leq 1\%$ with $\Delta\theta = 2K$			
Hysteresis	4% of the measuring range value			
Analog Output	0-20mA	0-10VDC	0-20mA	4-20mA
Voltage output	load $\leq 600\Omega$			
Switching output	transistor 2x NPN O.C.			
Switching voltage	30VDC			
Switching current	5-100mA			
Sensitivity	adjustable via 10-level potentiometer P1			
Range switching	1:100 (Short range : Long range)			
Switching state	LED-display red/green			
Operating mode	light/dark switching output			
Protection class	IP65 (with optical fiber)			
Power supply and output	transient-protection polarity and short-circuit protection			
Operating temperature	0 to 50°C			
Storage temperature	-25°C to 70°C			
Type of connection	screw connectors	2m cable	screw connectors	screw connectors
Display	no	yes	no	no
Housing material	Makrolon® 8035 / UL94V1			
Weight	approx. 215g/135g			

Dimensions:

Dimensions in mm, not to scale



Connections:

CLS-K-60/63/65

1	GND
2	12-30 VDC
3	> Voltage output
4	NPN output O.C. *1
5	NPN output O.C. *2
6	

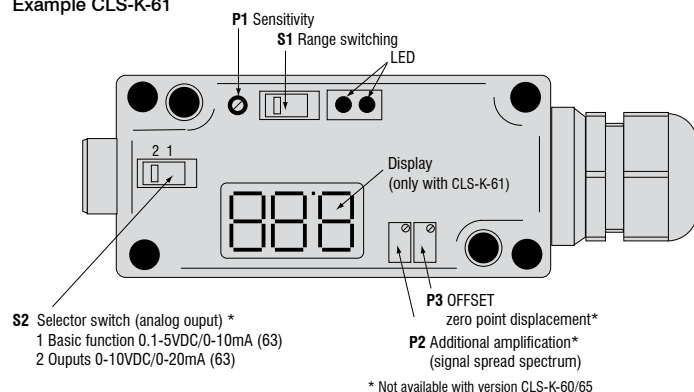
CLS-K-61

brown	GND
pink	12-30 VDC
green	Analog output +
yellow	Analog GND output
grey	NPN-Switching output *1
white	NPN-Switching output *2

*1 dark switching
*2 light switching

Control and display interface:

Example CLS-K-61



High performance sensors made by Micro-Epsilon



Sensors and systems for displacement and position



Sensors and measurement devices for non-contact temperature measurement



2D/3D profile sensors (laser scanner)



Optical micrometers, fiber optic sensors and fiber optics



Color recognition sensors, LED analyzers and color online spectrometer



Measurement and inspection systems