MICRO-EPSILON

More Precision.

optoCONTROL **CLS-K**

Fibre optic sensors for gap, diameter, edge and presence

optoCONTROL **CLS-K-UV**

Fibre optic sensor for glass detection

Response time ≤ 10ms	
Cut-off frequency ≤ 100Hz	
*A*nalog	Analogue output 0.5 - 5VDC

For glass/plexiglass detection

Features:

- Scanning distance   1-20mm
- In transmitted light*   1-100mm
- Supply   12-30VDC
  Pole protected, short-circuit protected
- Switching output: NPN, PNP
  (depending on the version/optocoupler)
- Hysteresis adjustable
- Drop-out delay adjustable 2-200ms
- Sensitivity adjustable
- Light and dark switching
- Wavelength typically 290nm

* Depending on the fibre optic and the surface
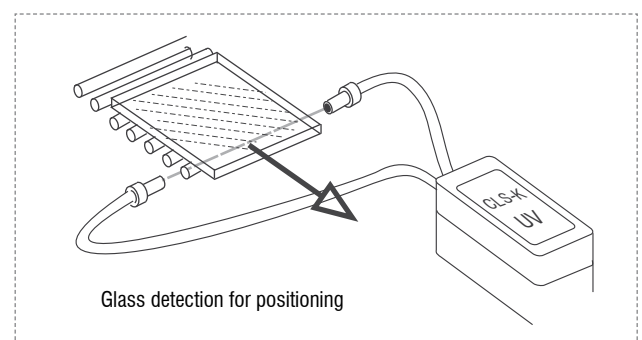
Applications:

- Glass-plate detection passing through,
  starting at 0.1mm thickness
- Glass-plate positioning, starting at precisely 0.1mm
- Stop position recognition for glass plates during
  production
- For glass, plexiglass and CDs (not for films)
- Inspection of coatings

Benefits:

- Modular via fibre optic connection
- Compact design
- Analogue output
- Reproducibility starting from 0.1mm
- Use in tight spaces
- Customer-specific fibre optics permeable for UV light

Application example

Glass detection for positioning

Type CLS-K-UV

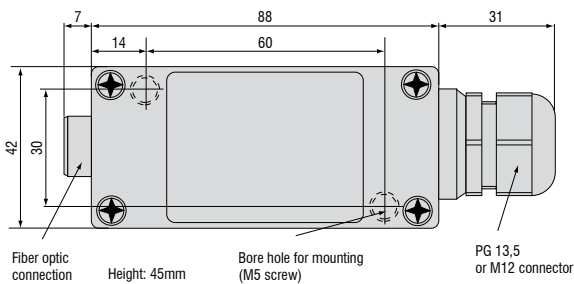|		
Electrical data	Operating voltage UB	12-30VDC
	Residual ripple	≤ 10%
	Current consumption	~ 70mA typ.
Output	Switching output	PNP, NPN (depending on the variant)
	Switching processes	light and dark switching
	Outputsstrom	≤ 200mA
	Switching voltage	≤ 30V (max. 36V)
	Cut-off frequency	≤ 100Hz (-3dB)
	Response time	≥ 10ms
	Drop-out delay	2-200ms (adjustable)
	Switching delay	≤ 200ms
	Hysterese	5-50% (adjustable)
	Protection	Pole protected, short-circuit protected
Analogue output	Voltage	0.5 - 5VDC (Load resistance $R_L \geq 2k\Omega$)
Light source	LED	UV , wavelength typ. 290nm
	Modulation frequency	typ. 2.8kHz
Environmental influences	Permissible operating temperature	0 to +50°C
	Permissible storage temperature	-25 to +70°C
	Permissible rel. humidity	90% (non-condensing)
	Life expectancy	typ ≥ 5000 hours
	Protection class	IP 65 (with mounted fibre optic)
Mechanical tasks	Weight	approx. 215g/135g
	Material	Macrolon 8030/UL54V1, cover transparent
	Connection (depending on the variant)	M12 connector, 5 pin or connection 2m

Order code

Typ	Type of connection	PNP	NPN	Analogue	Art. No.
CLS-K-121/UV PNP	Cable*	x		x	10064149
CLS-K-122/UV PNP	Connector	x		x	10064153
CLS-K-141/UV NPN	Cable*		x	x	10064156
CLS-K-142/UV NPN	Connector		x	x	10064158

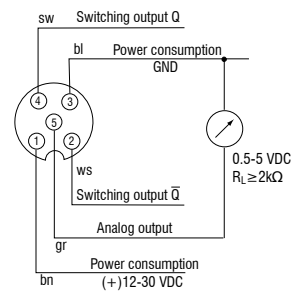| Accessories		Art. No.
Article	Description	
Connection for connector version	5 pin with connector (cable box) PUR, 2m	11231168
Fibre optic (FASOP)	See page 10 ff. (e.g. FAD-M-A2.0-2,0-1200-UV)	

*Cable design: 6 wired, 2m, PVC

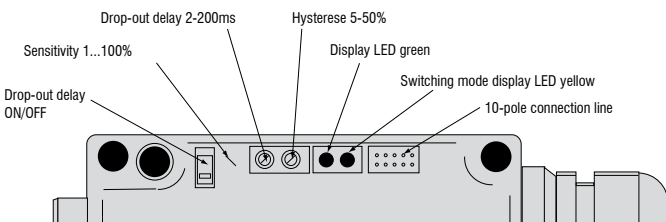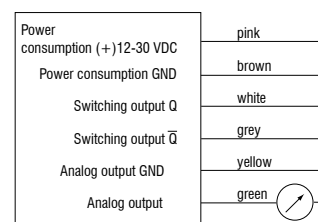## Dimensions:

Dimensions in mm, not to scale

7
88
31
14
60
42
30

Fiber optic connection   Height: 45mm   Bore hole for mounting (M5 screw)   PG 13,5 or M12 connector

Connections:

Connector version

sw   Switching output Q
bl   Power consumption GND
ws   Switching output Q̄
Analog output
gr   Power consumption
bn   (+)12-30 VDC
0.5-5 VDC $R_L \geq 2k\Omega$

Control and display interface:

Sensitivity 1...100%
Drop-out delay 2-200ms
Hysterese 5-50%
Display LED green
Switching mode display LED yellow
Drop-out delay ON/OFF
10-pole connection line

Cable version

Power consumption (+)12-30 VDC — pink
Power consumption GND — brown
Switching output Q — white
Switching output Q̄ — grey
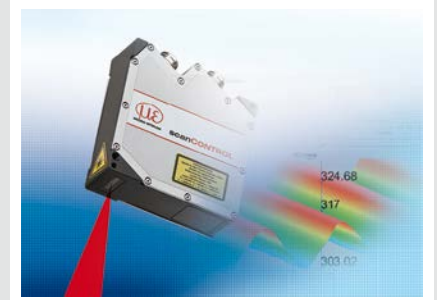Analog output GND — yellow
Analog output — green

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)

Measurement and inspection systems for quality assurance

Optical micrometers, fibre optic sensors and fibre optics

Colour recognition sensors, LED analyzers and colour online spectrometer