

PY740021

Light section sensors

- / measurement of edge positions, center positions, width and gaps
- / high measuring accuracy
- / flexible mounting -30°/+30°
- / with touch-display
- / aluminum housing



laser cutting procedure
laser protection class 1



General data

dimensions	26 x 55 x 85mm
function	edge positions, center positions, width, gap; for very precise measurement.
function: FLEX MOUNT and MEASURING FIELD	yes
measuring range (distance)	150 ... 250mm
start of measuring range	150mm
end of measuring range	250mm
measuring field size (width)	75 ... 125mm
measuring field width right @ end of measuring range	+62.5mm
measuring field width left @ end of measuring range	-62.5mm
blind range	0 ... 150mm
measuring frequency	125 ... 500Hz
response time	4 ... 16ms
smallest detectable object width	1.5mm
smallest detectable gap	2mm
smallest detectable step	2m
resolution	start / end of measuring range 30 ... 50µm
repeat accuracy	start / end of measuring range 10µm
linearity deviation	± 80 ... ± 120µm ± 160µm ... ± 240µm
digital output hysteresis	0.5mm
PRECISION filter values:	median average
standard	off off
high	7 16
very high	16 128
operating display	LED green
output display	LED red
FLEX MOUNT distance sensor to reference surface	180 ... 250mm
max. unevenness reference surface (rms)	1mm

min. length reference surface	50mm
cable length max.	5m up to the neutral point
adjustment	touch display
warm-up time	15min
temperature drift	< 0.05% measured value/K
scaling analog output:	
voltage output	0.05V/mm
current output	0.1mA/mm

Mechanical data

width / height / legth	26 / 74 / 55mm
design	cuboid, frontal optics
housing material	aluminum
front screen	glass
connection	M12-connector, 8-pin
weight	130g

Electrical data

operating voltage	15 ... 28V DC
current consumption max. (ohne Last)	150mA
output circuit	analog
output signal	4 ... 20mA / 0 ... 10V DC ¹
switching output	push-pull
switching function	Out 1 / alarm
output current	< 100mA
reverse polarity protection	yes, +VS to GND
short-circuit protection	yes

Ambient conditions

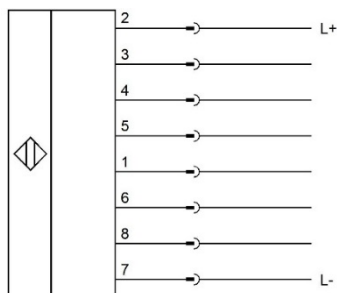
ambient light immunity	< 25kLux
temperature (operating)	-20 ... +50°C
temperature (storage)	-25 ... +75°C
protection class	IP67
vibration resistance (sinusoidal)	IEC 60068-2-6:2008 7.5mm p-p for f = 2 - 8Hz, 2g for f = 8 – 200Hz, or 4g for 200 – 500Hz
resonance test	IEC 60068-2-6:2008 1.5mm p-p for f = 10 - 57Hz , 10 cycles for each axis 10g for f = 58 -2.000Hz, 10 cycles for each axis
vibration resistance (coincidence)	IEC 60068-2-64:2008 spectrum: 0.1g ² /Hz for 20 – 1.000Hz, 30 minutes / axis (>10gRMS)
shock resistance	IEC 60068-2-27:2009 50g / 11ms or 100g / 6ms, 10 shocks in each axis and each direction 100g / 2ms, 5.000 shocks in each axis and each direction
impact resistance	IEC 60068-2-27 100g / 2ms, 4,000 shocks in each axis and each direction

Optical data

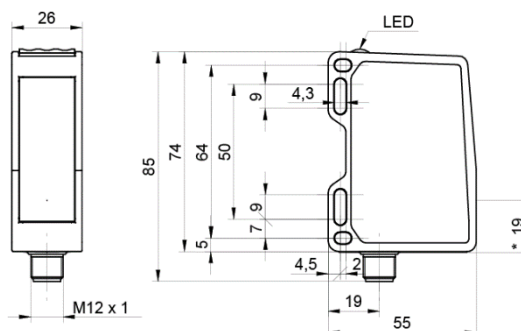
light source	AlGaInP laser diode
wave length	656nm
operating mode	pulsed

pulse duration	
mode light objects	1ms
mode dark objects	3ms
pulse period	
mode light objects	2 ... 7ms
mode dark objects	4 ... 8ms
emitted total pulse power	
	3mW
beam shape	
	elliptical (focused to laser line)
focal distance df	
	200mm
beam size @ window	
vertical	3mm
parallel	8mm
beam size @ focus point	
vertical	< 0.5mm
parallel	L = 120mm
beam divergence	
vertical	10mrad
parallel	32°
laser classification (IEC 60825-1/2014)	
	laser class 1

Connection



Dimensional drawing



*optical axis

functions: 1 = n. c., 2 = L+, 3 = 4-20mA/0-10V, 4 = Push Pull, 5 = Alarm Push Pull, 6 = n. c., 7 = L-, 8 = Hold

colors: 1 = WH (white), 2 = BN (brown), 3 = GN (green), 4 = YE (yellow), 5 = GY (gray), 6 = PK (pink), 7 = BU (blue), 8 = RD (red)

Safety warnings:

Before initial operation, please make sure to follow all safety instructions that may be provided in the product information!

Never use these articles in applications where the safety of a person depends on their functionality.