

PY740020

Light section sensors

- / measurement of edge and center positions, width and gaps
- / high measuring frequency
- / 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.	
version	edge sensor	
function FLEX MOUNT	yes	
function MEASURING FIELD	yes	
measuring range (distance)	100 ... 150mm	
start of measuring range	100mm	
end of measuring range	150mm	
measuring field size (width)	48 ... 72mm	
measuring field width right @ end of measuring range	+36mm	
measuring field width left @ end of measuring range	-36mm	
blind range	0 ... 100mm	
measuring frequency	159 ... 625Hz	
response time	3.0 ... 12.4ms	
smallest detectable object width	0.7mm	
smallest detectable gap	1.5mm	
smallest detectable step	0.7mm	
resolution	start / end of measuring range 20µm	
repeat accuracy	start / end of measuring range 10µm	
linearity deviation	± 50 ... ± 75µm ± 10 ... ± 100µm	
digital output hysteresis	0.2mm	
PRECISION filter values:	median	average
standard	off	off
high	7	16
very high	15	128
operating display	LED green	
output display	LED yellow / LED red	
FELX MOUNT distance sensor reference surface	115 ... 150mm	

max. unevenness reference surface (rms)	0.5mm
min. length reference surface	24mm
cable length max.	5m to neutral point
warm-up time	15min.
temperature drift	< 0.03% measured value/K
scaling analog output:	
voltage output	0.1V/mm
current output	0.16mA/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 range +Vs	15 ... 28V DC
current consumption max. (ohne Last)	150mA
output circuit	analog
output signal	4 ... 20mA / 0 ... 10V DC
switching output	push-pull
switching function	Out 1 / alarm
output current	<100mA
reverse polarity protection	yes, +VS zu GND
short-circuit protection	yes

Ambient conditions

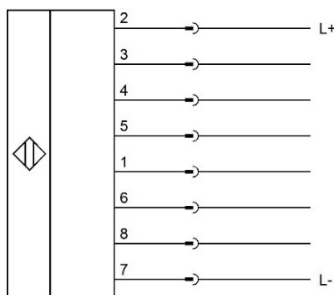
ambient light immunity	< 35kLux
temperature (operating)	-20 ... +50°C
temperature (storage)	-25 ... +75°C
protection class	IP67
vibration resistance (sinusoidal)	IEC 60068-2-6:2008 7.5mm p-p for f = 2 - 8Hz, 2g for f = 8 – 200Hz, or 4g for 200 – 500Hz
resonance test	IEC 60068-2-6:2008 1.5mm p-p for f = 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: 0.1 g 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

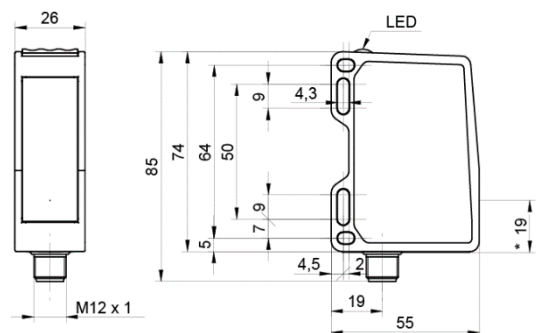
light source	AlGaInP laser diode
wave length	660nm

operating mode	pulsed
pulse duration	
mode light objects	0.1ms
mode dark objects	0.3ms
pulse period	
mode light objects	1.6 ... 5.9ms
mode dark objects	1.8 ... 6.3ms
emitted total pulse power	15mW
beam shape	elliptical (focused to laser line)
focal distance df	125mm
beam size @ window	
vertical	2.5mm
parallel	7.5mm
beam size @ focus point	
vertical	< 0.1mm
parallel	L = 73mm
beam divergence	
vertical	16.0mrad
parallel	30.2°
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.