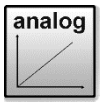
PY740020

Light section sensors

- **measurement of edge and cente 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 current output	 0.1V/mm 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

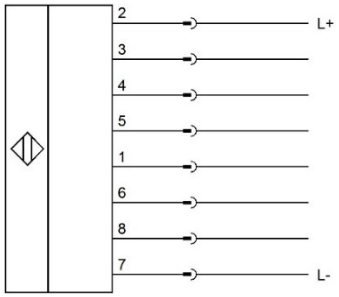
ambient light immunity	< 35kLux
temperature (operating)	-20 ... +50°C
temperature (storage)	-25 ... +75°C
protection class	IP67
vibration resistance (sinusoidal)	**IEC 60068-2-6:2008** 7.5mm p-p for f = 2 - 8Hz, 2g for f = 8 – 200Hz, or 4g for 200 – 500Hz
resonance test	**IEC 60068-2-6:2008** 1.5mm p-p 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 g2/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

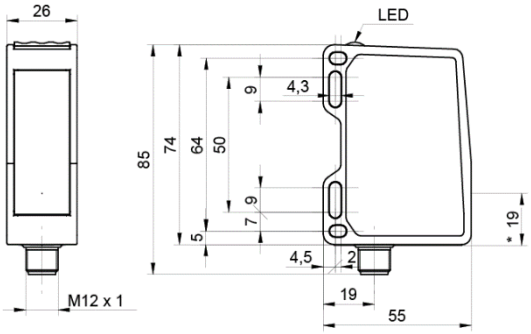
light source	AlGaInP laser diode
wave length	660nm

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.