Pocket-size line sensor

- Integrated light and analysis
- Teachable
- Analog output
- Switching output
- RS 485
- Rotatable connector

Pocket-size line sensor *PosCon*

The acquisition of widths, edges or center positions can be selected with ease via the simple control buttons on the sensor. These highly accurate values are available as an analog output or from the optional RS 485 interface. With the help of the integrated Teach-in function measuring ranges can be read in and programmed. Even though smaller than a cigarette packet, the ***PosCon*** contains all the controls, signal processing and a long life illumination unit as well.

- There are 3 standard measuring ranges. For each measuring range, there is a reflector or a tape in the right size.

- The 3 different measuring modes (width, edge, center) are teachable via the onboard controls, and remain even after power is removed from the sensor.

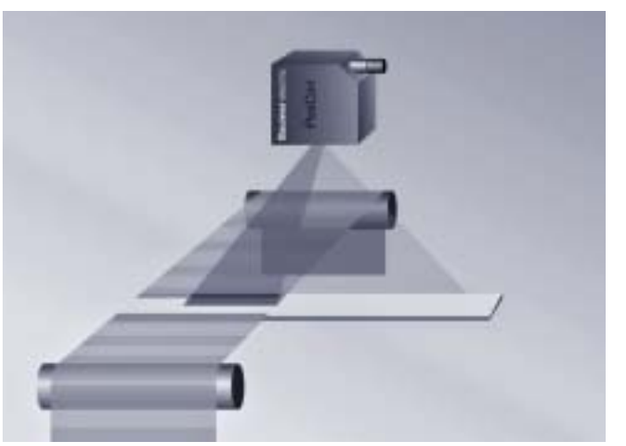
- Two measuring values can be programmed via the Teach-in controls and used as tolerance limits for the switching output.

- All control functions can be remotely activated via the optional RS 485 interface.

• Width measurement:
Width measurement of textile, synthetics, paper, or film with detection of both break and tear. Tool control, fill level and in-line quality inspection.

• Edge position:
Because of its high precision the sensor is ideally suited to use for applications in the packaging, handling and graphics industry.

• Center position:
Guidance and control of objects in the measuring field. Suitable for tasks found in the conveying, warehouse, and special machine industries.



Series 22

- **Integrated light and analysis**
- **Teachable**
- **Analog output 4...20 mA**
- **Switching outputs**
- **RS 485**
- **Rotatable connector**
- **With polarization filter for transparent objects**

without polarization filter | **Polarization filter**

Measuring ranges: 30 mm, 150 mm, 350 mm

part number	
analog interface	**ind.**
analog interface and RS 485	**ind.**
measuring ranges 30 **/** 150 **/** 350 mm	**ind.**
switching outputs 1 **/** 2	**ind.**
switching output PNP **/** NPN	**ind.**

ZADM 022xxxx.00xx

K
H
300 / 151 / 351
0 / 1
1 / 2

ZADM 022xxxx.01xx

K
H
300 / 151 / 351
0 / 1
1 / 2

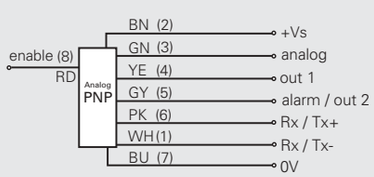
technical data			
measuring ranges	30 mm	150 mm	350 mm
measuring distance to the object	50 mm	200 mm	500 mm
smallest recognizable object	0,3 mm	1,2 mm	4 mm
resolution	0,03 mm	0,15 mm	0,35 mm
reflector width	3 mm	15 mm	30 mm
light source / wave length	infrared LED / 880 nm		
linearity error	max. 1%		
measuring frequency	> 130/sec		
analog output	4...20 mA		
switching output	PNP / NPN		
voltage supply	15 - 28 VDC		
current consumption	< 150 mA		
max. switching current	100 mA		
reverse polarity protection, short circuit protection	yes		
temperature range	0...+55 °C		
front (optics)	glass		
housing	die-cast zinc		
protection class	IP 67		

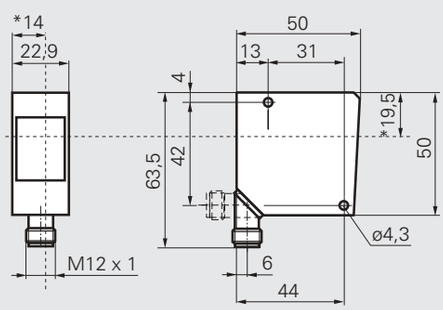
measuring ranges	30 mm	150 mm	350 mm
measuring distance to the object	50 mm	200 mm	500 mm
smallest recognizable object	0,3 mm	1,2 mm	4 mm
resolution	0,03 mm	0,15 mm	0,35 mm
reflector width	3 mm	15 mm	30 mm
light source / wave length	infrared LED / 880 nm		
linearity error	max. 1%		
measuring frequency	> 120/sec		
analog output	4...20 mA		
switching output	PNP / NPN		
voltage supply	15 - 28 VDC		
current consumption	< 150 mA		
max. switching current	100 mA		
reverse polarity protection, short circuit protection	yes		
temperature range	0...+55 °C		
front (optics)	glass		
housing	die-cast zinc		
protection class	IP 67		

accessories	
measuring range	30 mm
measuring range	150 mm
measuring range	350 mm
measuring range	610 mm (width)
connection 8-pin (M12 x 1)	
mounting bracket	
process controller	

reflector	reflector tape (on reel)	reflector tape per piece
FTDR 005I040	FTDL 005I000/..m	FTDL 005I040 L = 40 mm
FTDR 020I175	FTDL 020I000/..m	FTDL 020I175 L = 175 mm
FTDR 035I395	FTDL 035I000/..m	FTDL 035I395 L = 395 mm
	FTDL 610I000/..m	
ESG 34FP0200B		
126220		
see end of the laser distance sensors chapter		

connection diagram





* receiver axis

Pocket-size line sensor Series 22

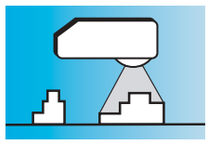
without polarization filter

400...875 mm

part number		ZADM 022x871.00xx
analog interface	ind.	K
analog interface and RS 485	ind.	H
switching outputs 1 / 2	ind.	0 / 1
switching output PNP / NPN	ind.	1 / 2

technical data	
measuring ranges [1]	400...875 mm
measuring distance to the object [1]	640...1400 mm
smallest recognizable object [1]	8...18 mm
resolution [1]	0,5...1 mm
reflector width	50 mm
light source / wave length	infrared LED / 880 nm
linearity error	max. 1%
measuring frequency	> 130/sec
analog output	4...20 mA
switching output	PNP
voltage supply	15 - 28 VDC
current consumption	< 150 mA
max. switching current	100 mA
reverse polarity protection, short circuit protection	yes
temperature range	0...+55 °C
front (optics)	glass
housing	die-cast zinc
protection class	IP 67

[1] accurate values can be calculated with the correction factors on following page



Series 22

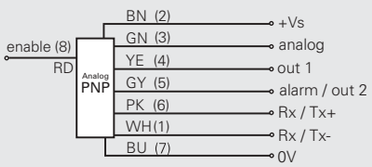
- **Large measuring range up to 875 mm**
- **Large measuring distance up to 1400 mm**
- **Integrated light and analysis**
- **Teachable switching outputs**
- **Analog output 4...20 mA**

Large measuring range

Large measuring distance

Teachable switching outputs

connection diagram



correction factors

measuring distance (mm)	measuring range (mm)
640	400
1400	875
meas. distance : meas. range	**= 1,6**

measuring distance (mm)	resolution (mm)
640	0,46
1400	1
meas. distance : resolution	**= 1400**

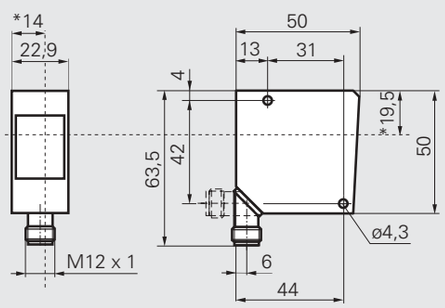
measuring distance (mm)	smallest object (mm)
640	8,23
1400	18
meas. distance : smallest obj.	**= 77,7**

example	desired measuring range = **650 mm**	
meas. distance	650 mm x 1,6	= 1040 mm
resolution	1040 mm : 1400	= 0,75 mm
smallest object	1040 mm : 77,8	= 13,4 mm

accessories

reflector tape 50 mm width	FTDL 050I000/..m
connection 8-pin (M12 x 1)	ESG 34FP0200B
mounting bracket	126220
process controller	BPCD45 (see end of the laser distance sensors chapter)

for details see accessories section



* receiver axis