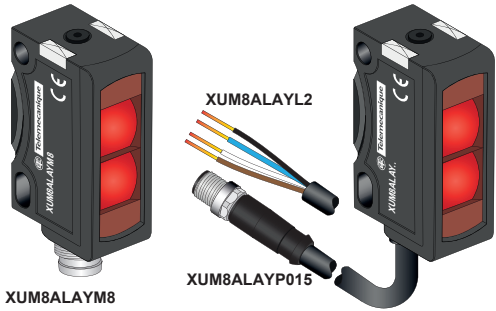


XUM8ALAYM8 / XUM8ALAYP015 / XUM8ALAYL2 (34 x 12 x 20)

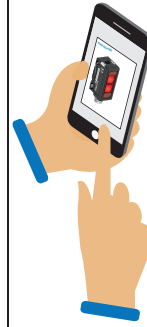
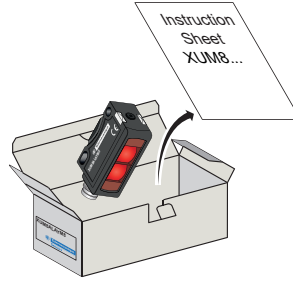
Photo-electric sensors - Miniature design



Background suppression (BGS)



Package Content (Example)



Scan the code to access this Instruction Sheet in different languages and all the product information or you can visit our website at: www.tesensors.com

We welcome your comments about this document. You can reach us through the customer support page on your local website.



DANGER

WARNING

HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

- Disconnect all power before servicing equipment.
- Do not connect this device to AC power.
- The power voltage must not exceed the rated range.

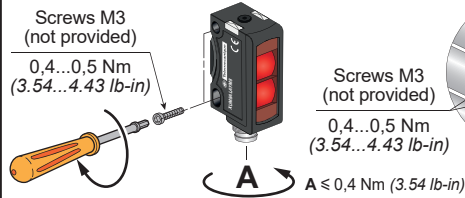
Failure to follow these instructions will result in death or serious injury.

IMPROPER SETUP OR INSTALLATION

- This equipment must only be installed and serviced by qualified personnel.
- Read, understand, and follow the compliance below, before installing the XUM Photo-electric sensor.
- Do not tamper with or make alterations on the unit.
- Comply with the wiring and mounting instructions.
- Check the connections and fastening during maintenance operations.
- The proper functioning of the XU photoelectric sensor and its operating line must be checked regularly and according to the application (for example number of operations, level of environmental pollution, etc.).

Failure to follow these instructions can result in death, serious injury, or equipment damage.

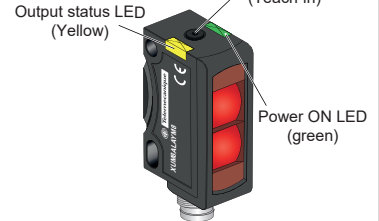
Mounting and tightening torques



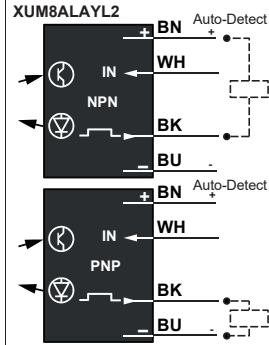
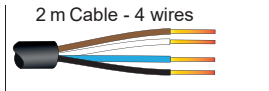
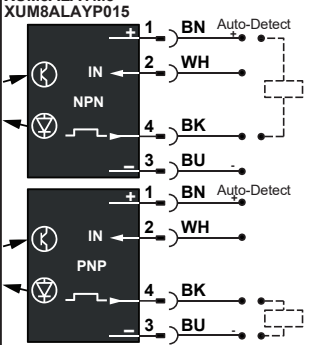
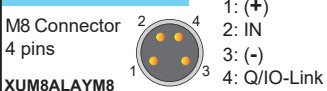
CAUTION

DEGREE OF PROTECTION DETERIORATION
Do not apply excessive torque on the sensor during the installation process.
Failure to follow these instructions can result in injury or equipment damage.

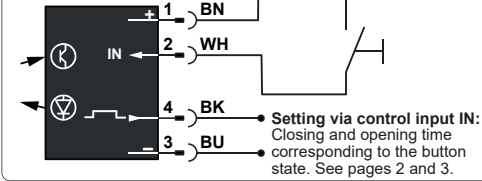
LEDs and settings



Wiring diagrams



Remote teach-in

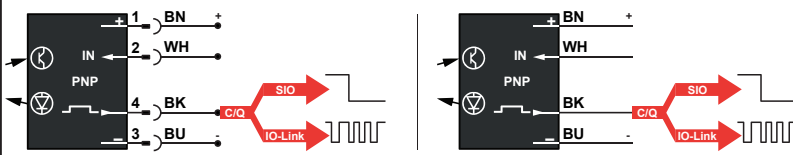


Setting via control input IN:
Closing and opening time corresponding to the button state. See pages 2 and 3.

CAUTION

INOPERABLE EQUIPMENT DUE TO CYBER ATTACK ON IO-LINK
• Apply external cybersecurity protection on IO-Link Master device.
• Download IO-Link Description files only from these web servers:
<https://tesensors.com/global/en/support/iolink> or
<https://ioddfinder.io-link.com/#/>
Failure to follow these instructions can result in injury or equipment damage.

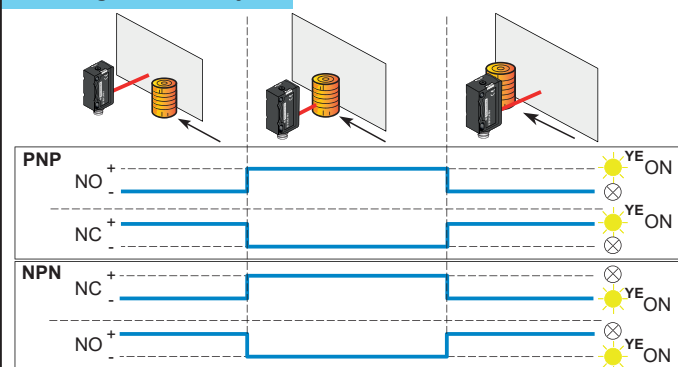
IO-Link



Pin	Wire	Signal	Definition
1	BN	+	+ 24 Vdc
2	WH	IN	+ = NO - = NC Open = NO
3	BU	-	0 Vdc
4	BK	Q	Switching signal (SIO)
		C	Communication IO-Link

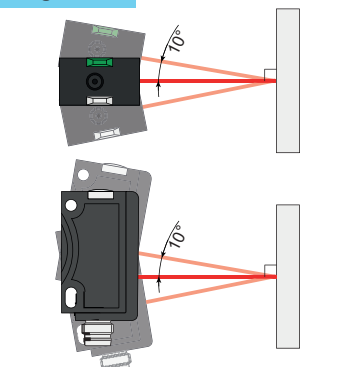
IO-Link data tables and IODD files are online:
Scan the 2D code, above

Switching mode for object

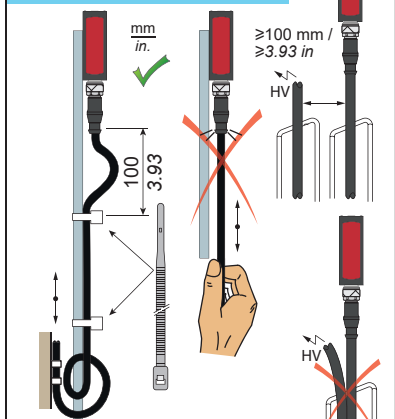


Alignment

Maximum angle tolerance



Mounting, wiring and maintenance precautions



NOTICE

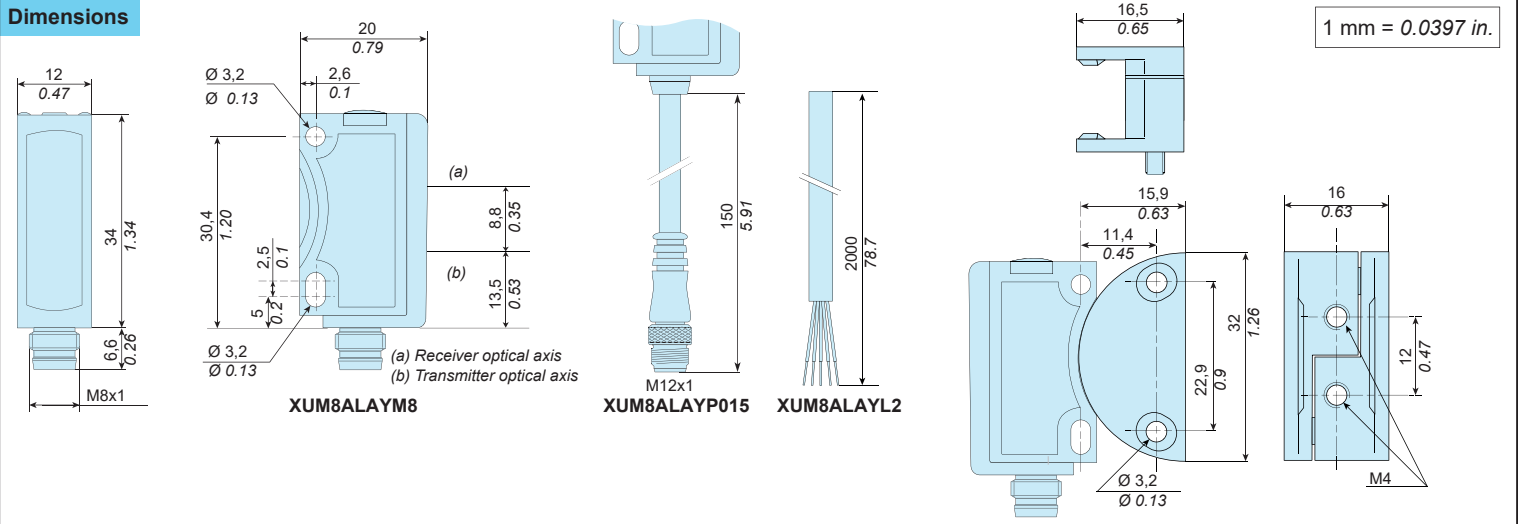
REDUCTION OF SERVICE LIFE
Do not pull on the sensor cable.
Failure to follow these instructions can result in equipment damage.

Electrical equipment should be installed, operated and maintained only by qualified personnel. Neither TMSS France nor any of its subsidiaries or other affiliated companies shall be responsible or liable for any consequences arising out of the use of this material. Telemecanique™ Sensors is a trademark of Schneider Electric Industries SAS used under license by TMSS France. Any other brands or trademarks referred to in this document are property of TMSS France or, as the case may be, of its subsidiaries or other affiliated companies. All other brands are trademarks of their respective owners.



XUM8ALAYM8 / XUM8ALAYP015 / XUM8ALAYL2 (34 x 12 x 20)

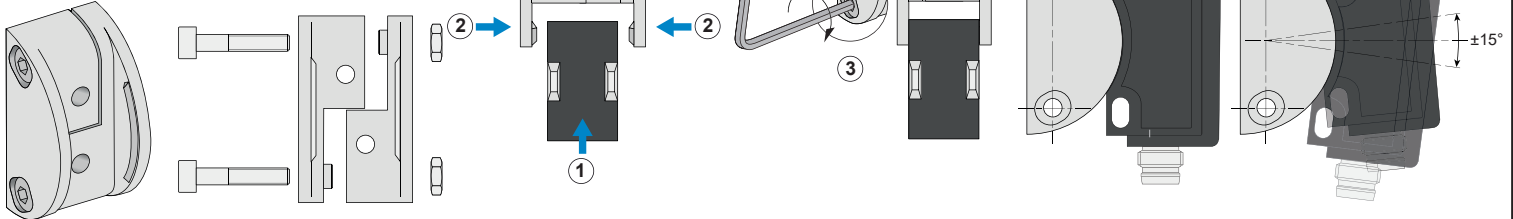
Dimensions



Accessories

Dovetail clamp mounting for flexible adjustment
 (to order separately)

XUZARM



Pre-wired connectors (examples)

PVC cable for general use
 PUR cable for severe industrial environments

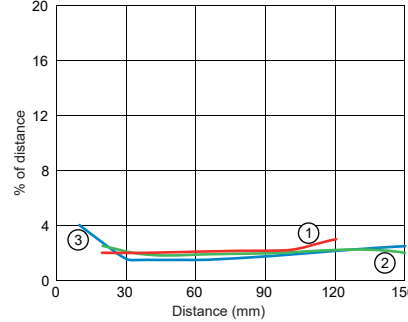


XZCPB1141L2 2m PUR | XZCR2711037T1 1m PUR | XZCR2705037R1 1m PUR
 XZCPB1141L5 5m PUR | XZCR2711037T2 2m PUR | XZCR2705037R2 2m PUR

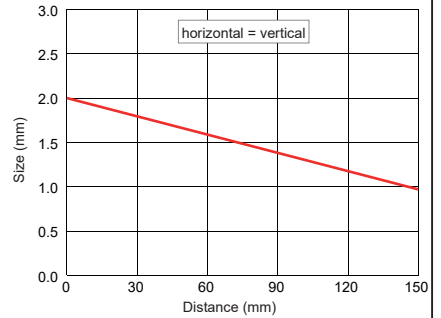
For other cables (angled or length) visit our website: Tesensors.com

Curves

Scanning properties



Light spot size



1 Min distance white object (90%) / white background (90%) (mm)
2 Min distance grey object (18%) / white background (90%) (mm)
3 Min distance black object (6%) / white background (90%) (mm)

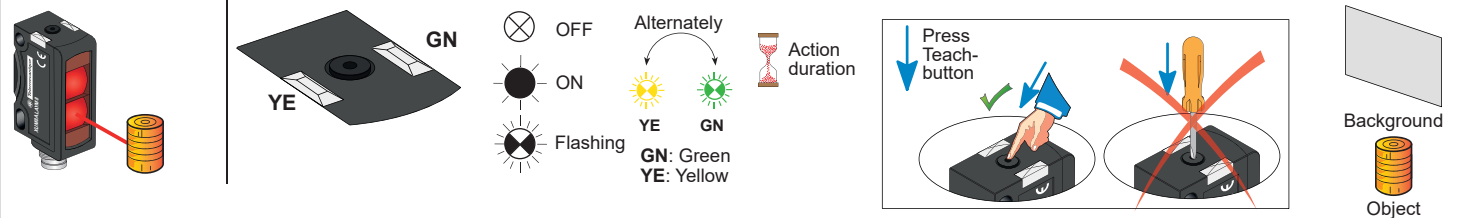
Setting

The sensor has 3 different Teach-in modes.

- A-Standard Teach-in (STI):** is suited for nearly all applications. Setting is made on object and background (see illustration A).
- B-Object-Object Teach-in (OTI):** is suited for applications where the background cannot be taught in. Setting is made 2x on the object (see illustration B).
- C-Dynamic Teach-in (DTI):** is suited for setting the sensor in the running process, particularly for small objects (see illustration C).

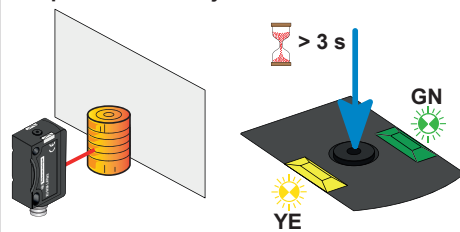
The sensor has 3 different **Switching NO/NC** settings:

- 1: NO/NC via teach-in in series
- 2: Sensor always NC
- 3: Sensor always NO



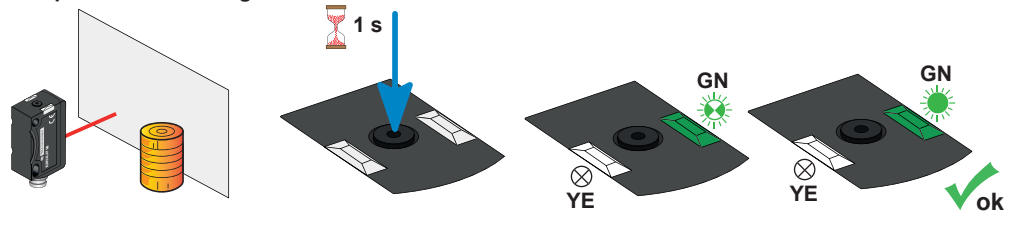
A Standard teach-in (STI)

Step 1: Teach-in object



Press teach button > 3 s until green and yellow LED flash at the same time.

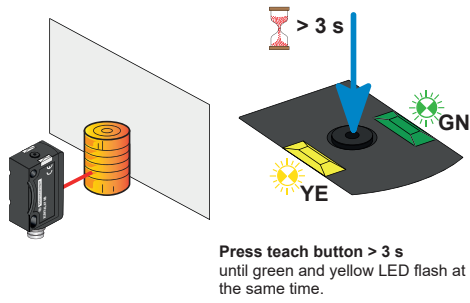
Step 2: Teach-in background



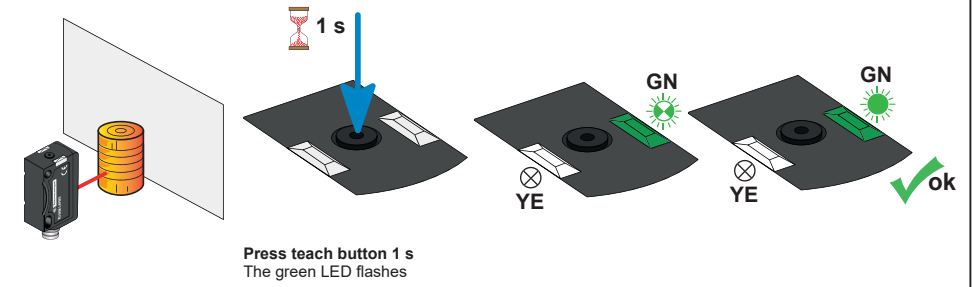
Press teach button 1 s The green LED flashes

B Object-Object Teach-in (OTI)

Step 1: Teach-in object

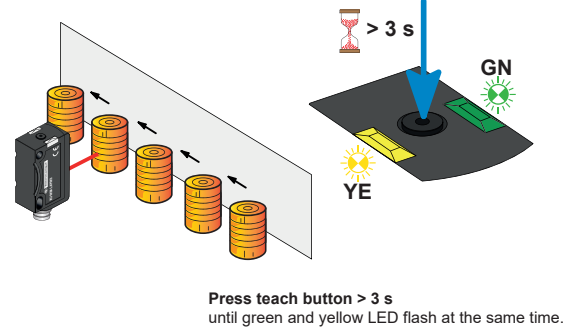


Step 2: Teach-in Object

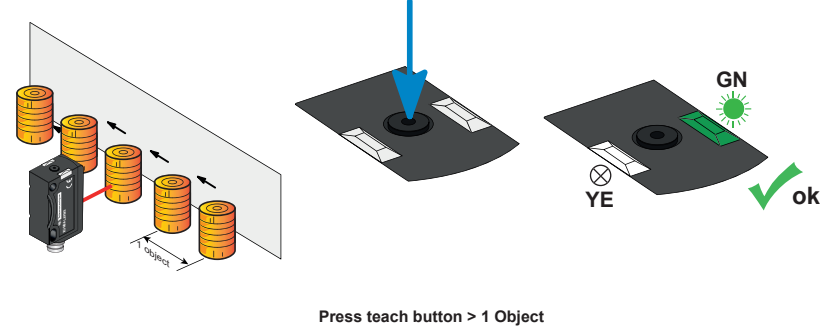


C Dynamic Teach-in (DTI)

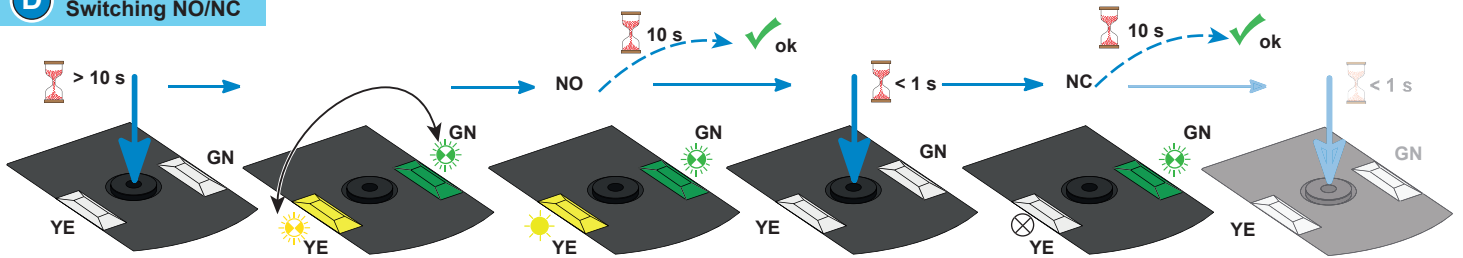
Step 1: During running process



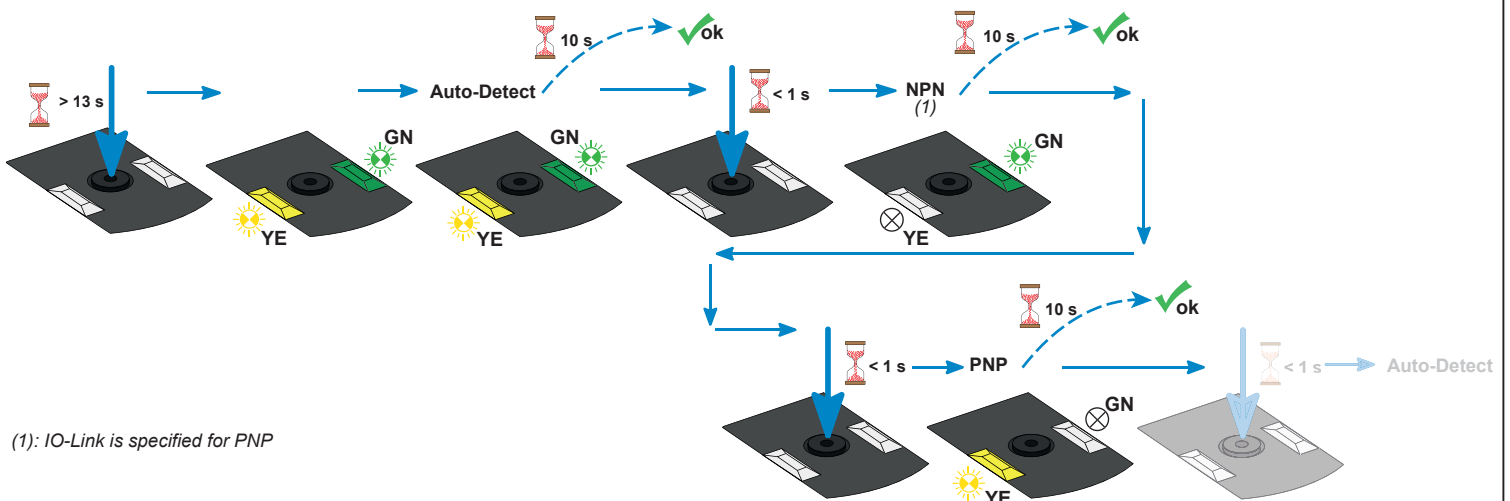
Step 2: Teach-in object during running process



D Switching NO/NC



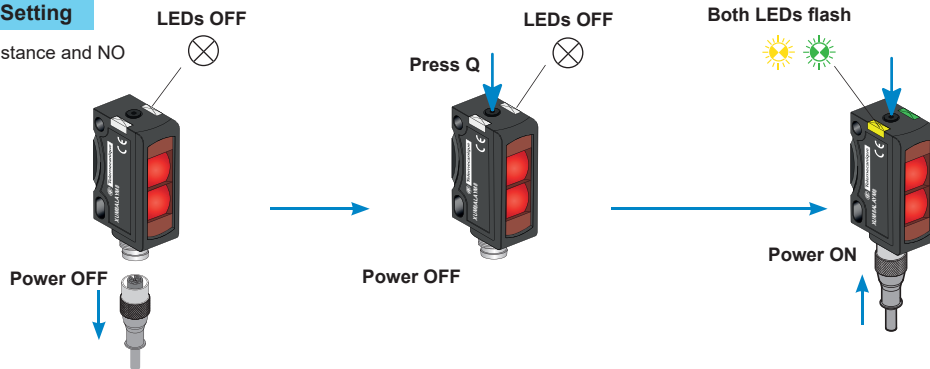
E SWITCHING AUTO-DETECT / NPN / PNP





Factory Setting

Max. scanning distance and NO



Press and hold any button and Power ON:
 → green and yellow LEDs flash simultaneously
Keep button pressed > 10 s:
 → green and yellow LEDs still flash simultaneously, but faster
 → sensor is set to factory settings

Characteristics

Certification	CE - UKCA - cULus - Ecolab	
Sensing distance	4...150 mm / 0.16...5.91 in.	
Adjustment range	12...150 mm / 0.47...5.91 in. (Reference material: white, 90 % reflectivity)	
Setting	Teach button	
Color of detection light beam	Laser class 1, red, 650 nm	
	Wavelength	$\lambda = 650 \text{ nm}$
	Puls duration	$t = 3.75 \mu\text{s}$
	Frequency	$f = 4.5 \text{ kHz}$
	Limit of radiant power pulse	$P_p \leq 2,5 \text{ mW}$
Light spot size	See spot size curve	
Switching output Q	Auto-Detect - PNP/NPN (NO or NC) - IO-LINK	
Control input IN (switching function Q):	(+) = Teach-in (-) = button locked Open = normal function	
Current consumption	$\leq 30 \text{ mA}$	
Switching capacity	$\leq 100 \text{ mA}$	
Switching frequency	$\leq 1000 \text{ Hz}$	
First-up delay	$< 300 \text{ ms}$	
Response time	$\leq 500 \mu\text{s}$	
Recovery time	$< 300 \text{ ms}$	
Ambient Temperature	Operating : $-20...+60 \text{ }^\circ\text{C}$ ($-4...+140 \text{ }^\circ\text{F}$) - UL : $-20...+50 \text{ }^\circ\text{C}$ ($-4...+122 \text{ }^\circ\text{F}$) Storage : $-20...+80 \text{ }^\circ\text{C}$ ($-4...+176 \text{ }^\circ\text{F}$)	
Power Voltage	Rated operational voltage: 12...24 Vdc Operating range: 10...30 Vdc (including ripple p-p 10% maximum)	
Product protection	Power supply : Reverse polarity protection Output: Short circuit protection	
Protection against electric shocks	<input type="checkbox"/> Protection class II	
Degree of protection	IP67 conforming to IEC 60529, IP69K conforming to DIN 40050-9	
Vibration resistance	Conforming to EN 60947-5-2	
Shock resistance	Conforming to EN 60947-5-2	
Material	Housing: ABS, Front and Lens: PMMA	

