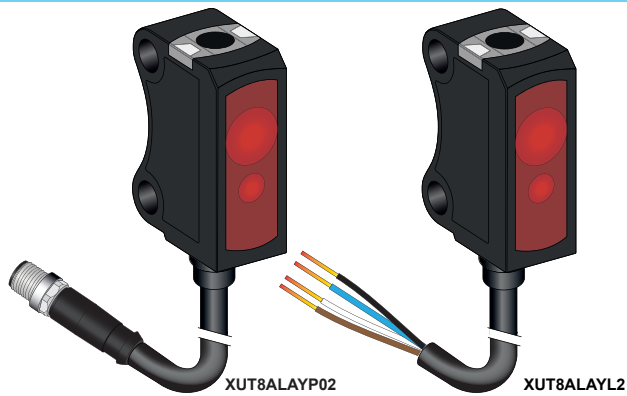


XUT8ALAYP02 / XUT8ALAYL2

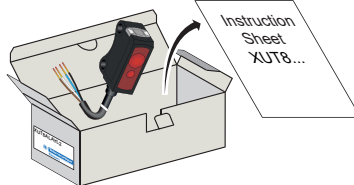
Photo-electric sensors - Sub-miniature design



Fixed 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

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.

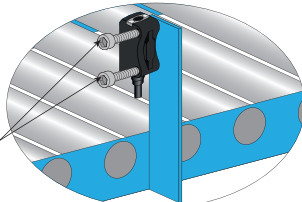
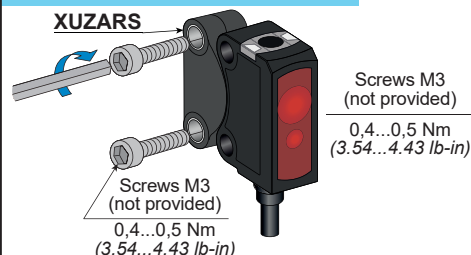
WARNING

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 XU 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 Photo-electric 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.

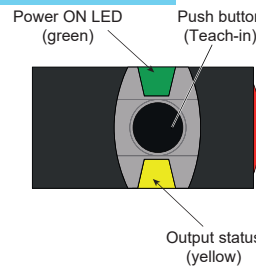
Mounting and tightening torques



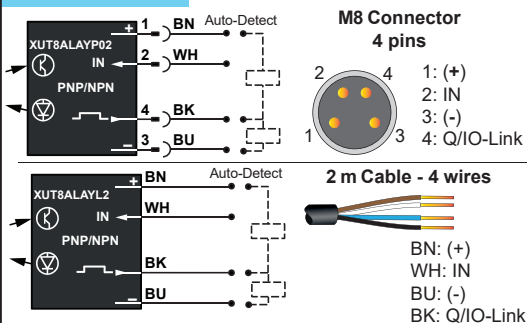
CAUTION

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.

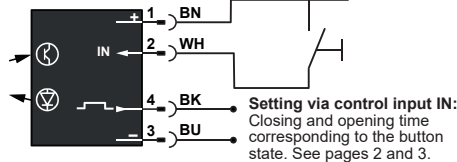
LEDs and settings



Wiring diagrams



Remote teach-in



CAUTION

INOPERABLE EQUIPMENT DUE TO CYBER ATTACK ON IO-LINK

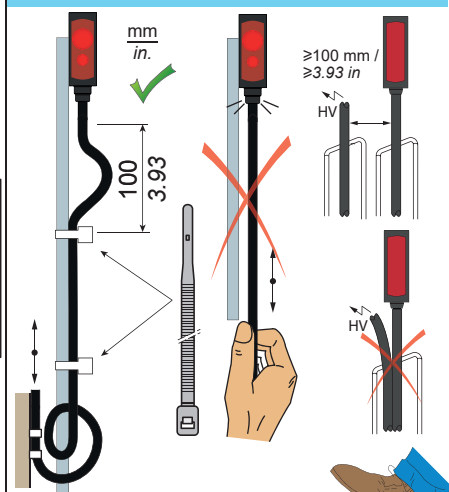
- Apply external cybersecurity protection on IO-Link Master device.
- Download IO-Link Description files only from these web servers: <https://tesensors.com/global/en/support/io-link> or <https://ioddfinder.io-link.com/#/>

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

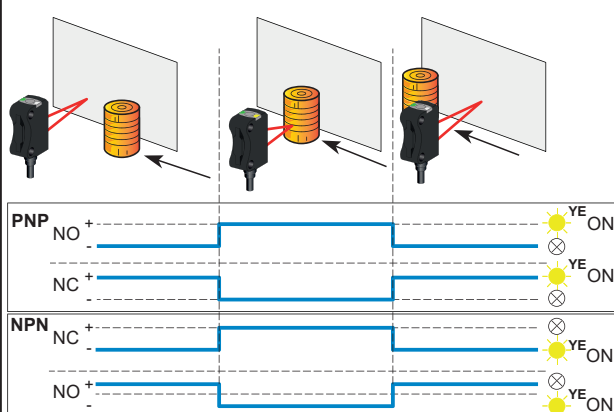
Pin	Signal	Definition
1	+	+ 24 Vdc
2	IN	+ = NO - = NC Open = NO
3	-	0 Vdc
4	Q	Switching signal (SIO)
	C	Communication IO-Link

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

Mounting, wiring and maintenance precautions

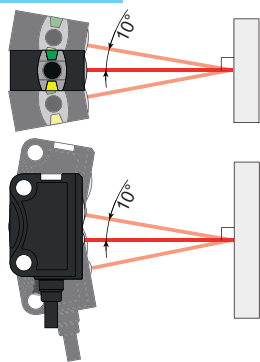


Switching mode for object



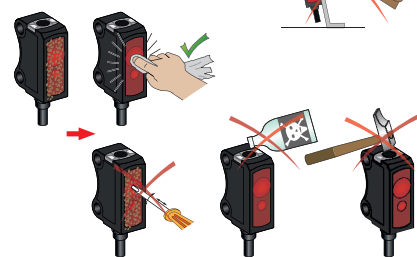
Alignment

Maximum angle tolerance



NOTICE

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



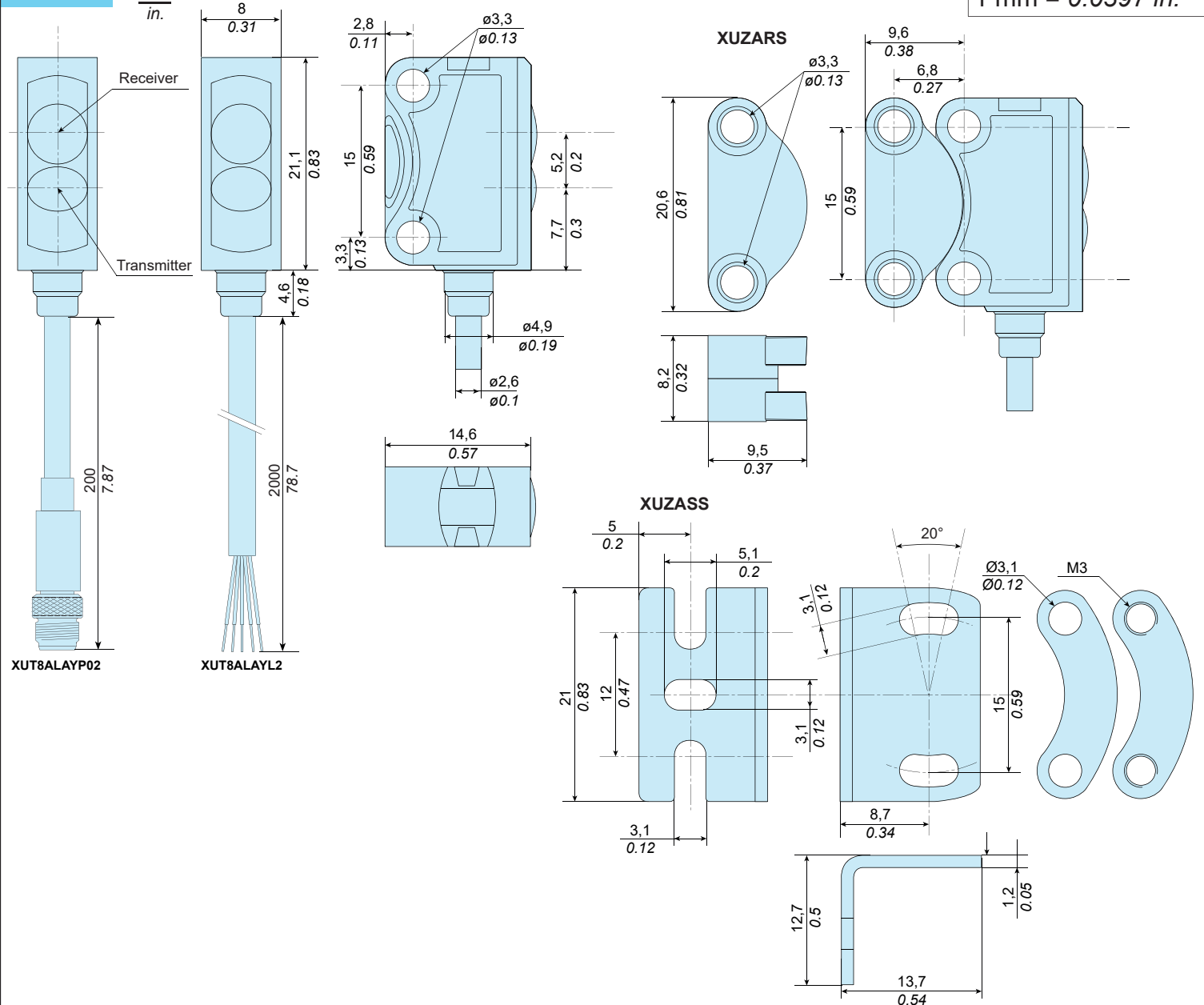
Electrical equipment should be installed, operated and maintained only by qualified personnel. Neither TMSS France nor any of its subsidiaries or other affiliated companies shall be responsible or liable for any consequences arising out of the use of this material. Telemecanique™ Sensors is a trademark 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.

XUT8ALAYP02 / XUT8ALAYL2

Dimensions

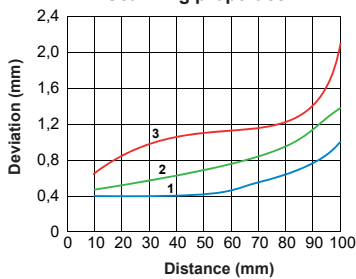
mm
in.

1 mm = 0.0397 in.



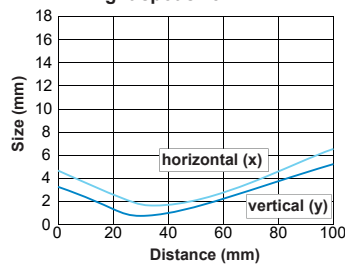
Curves

Scanning properties



- 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)

Light spot size



Pre-wired connectors (examples)

PVC cable for general use
PUR cable for severe industrial environments

Jumper
M8 - 4 pins plug
M8 - 4 pins socket



XZCPB1141L2 2m PUR
XZCPB1141L5 5m PUR

Jumper
M12 - 4 pins plug
M8 - 4 pins socket



XZCR2711037T1 1m PUR
XZCR2711037T2 2m PUR

M8 - 4 pins socket
4 wires



XZCR2705037R1 1m PUR
XZCR2705037R2 2m PUR

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

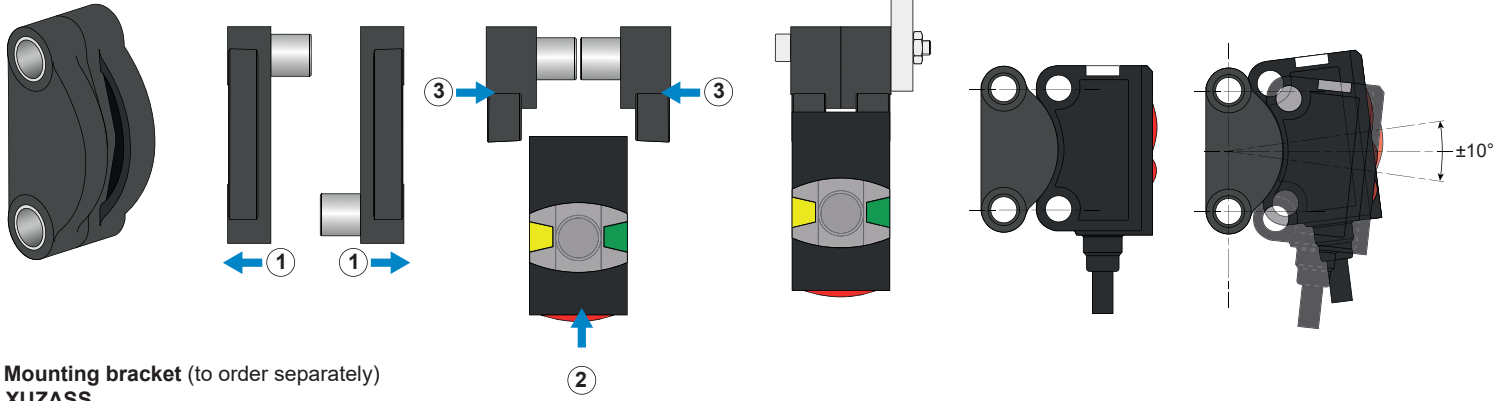
PKR87385_00

XUT8ALAYP02 / XUT8ALAYL2

Accessories

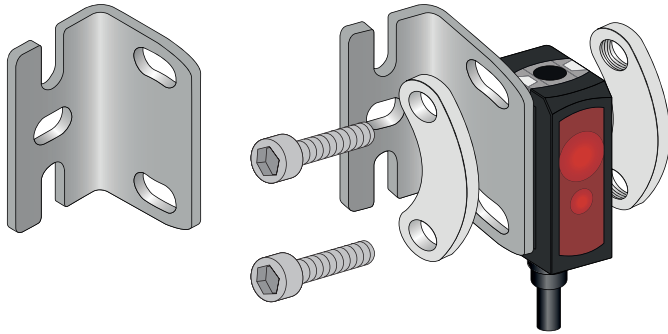
Dovetail clamp mounting (to order separately)

XUZARS



Mounting bracket (to order separately)

XUZASS



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).

GN

YE

GN: Green
YE: Yellow

OFF

ON

Flashing

Alternately

YE GN

Action duration

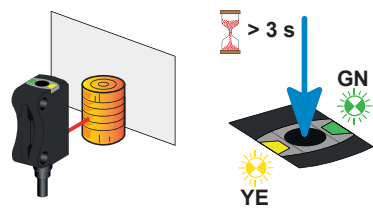
Press Teach-button

Background

Object

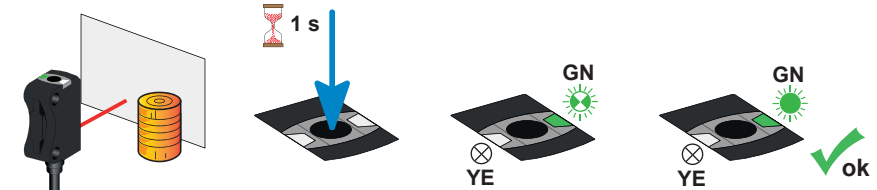
A Standard teach-in (STI)

Step 1: Teach-in object



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

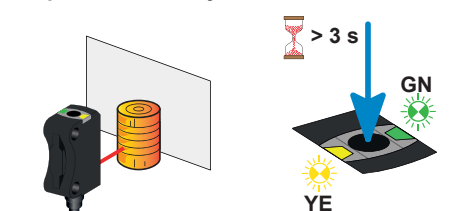
Step 2: Teach-in background



Press teach button 1 s
The green LED flashes

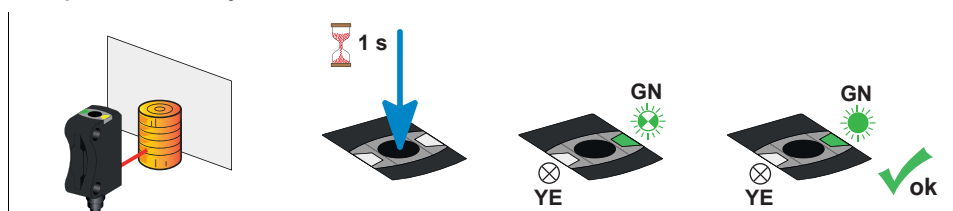
B Object-Object Teach-in (OTI)

Step 1: Teach-in object



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

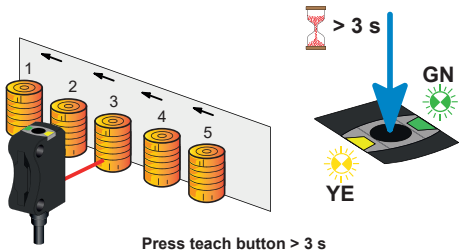
Step 2: Teach-in Object



Press teach button 1 s
The green LED flashes

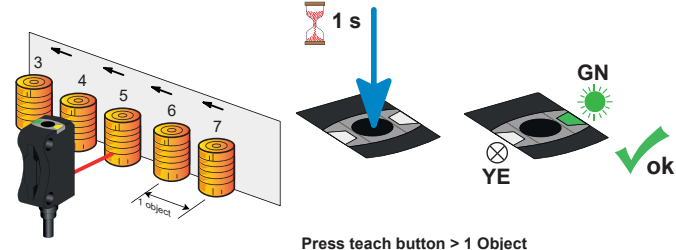
C Dynamic Teach-in (DTI)

Step 1: During running process



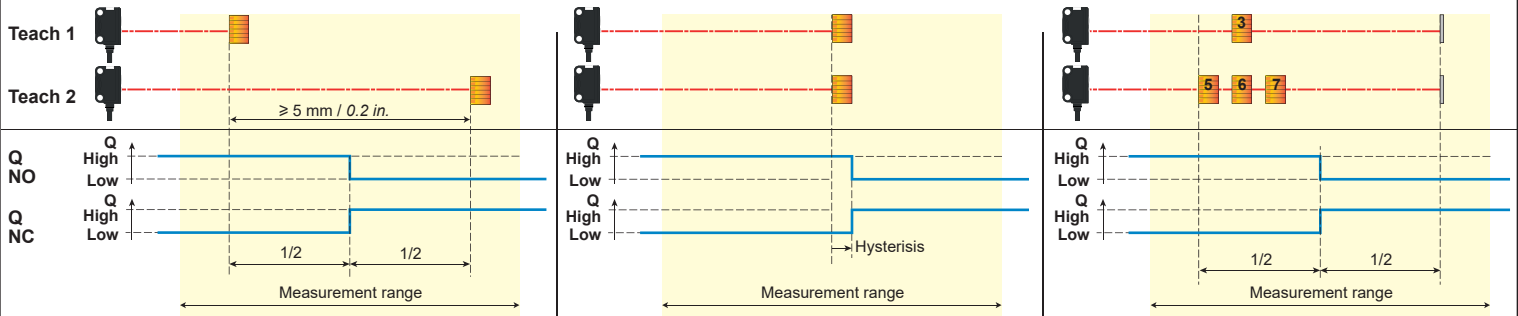
Press teach button > 3 s until green and yellow LED flash at the same time.

Step 2: Teach-in object during running process

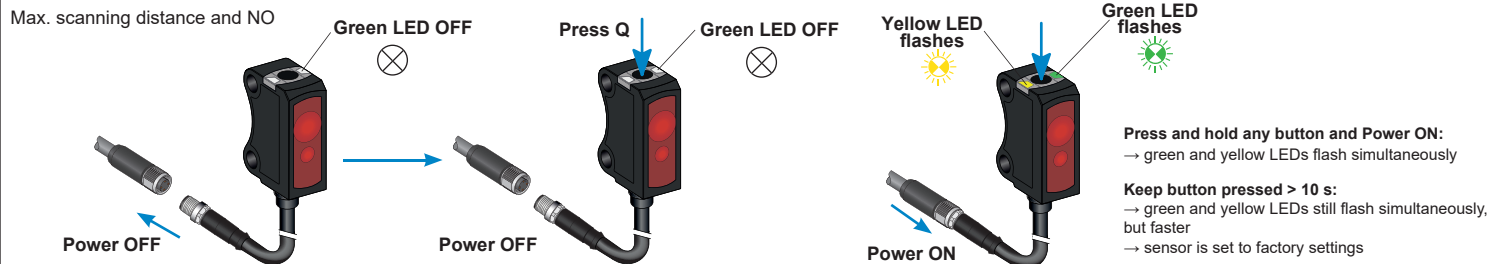


Press teach button > 1 Object

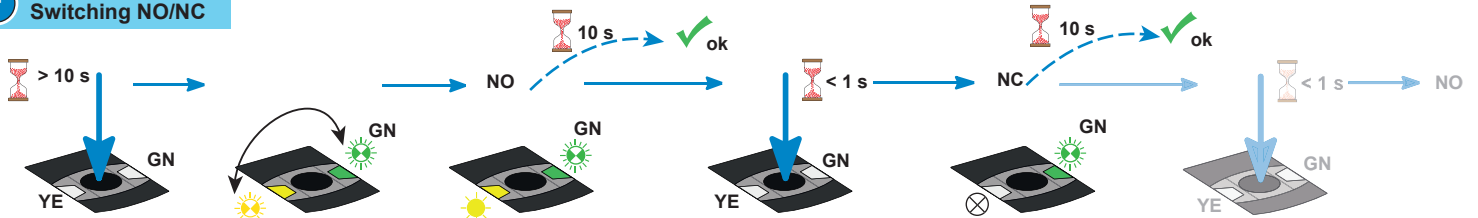
D Setting modes



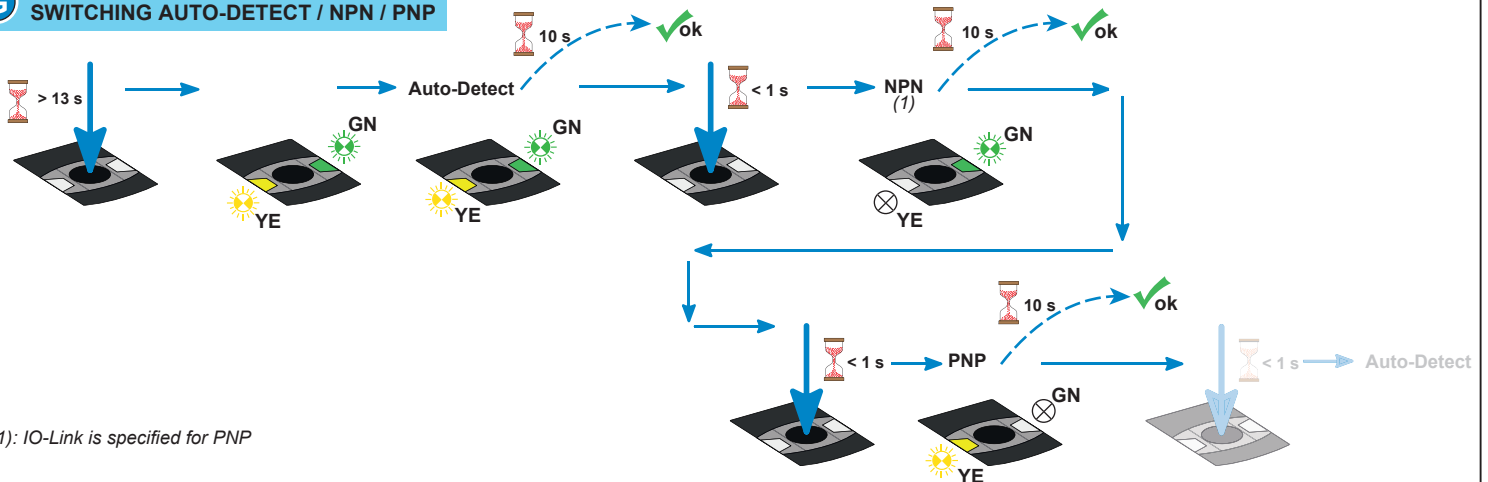
E Factory Setting



F Switching NO/NC





G SWITCHING AUTO-DETECT / NPN / PNP



(1): IO-Link is specified for PNP

XUT8ALAYP02 / XUT8ALAYL2

Characteristics

Certification	CE - UKCA - cULus - Ecolab
Sensing distance	6...70 mm / 0.24...2.76 in. (Reference material: white, 90 % reflectivity)
Adjustment range	10...70 mm / 0.39...2.76 in. (Reference material: white, 90 % reflectivity)
Detection light beam	Laser class 1, red, 655 nm
 Wavelength	$\lambda = 655 \text{ nm}$
Puls duration	$t = 3,2 \mu\text{s}$
Frequency	$f = 5 \text{ kHz}$
Limit of radiant power pulse	$P_p \leq 2,3 \text{ mW}$
Switching output Q	Auto-Detect - PNP/NPN (NO or NC) - IO-LINK
Control input IN (switching function Q):	(+) = Teach-in / disabled (Adjustable via IO-Link, default: Teach-in) (-) =  button locked Open = normal function
Current consumption	$\leq 12 \text{ mA}$
Switching capacity	$\leq 50 \text{ mA}$
Switching frequency	$\leq 1000 \text{ Hz}$
First-up delay	$< 300 \text{ ms}$
Response time	$500 \mu\text{s}$
Recovery time	$\leq 300 \text{ ms}$
Ambient Temperature	Operating : $-20...+50 \text{ }^\circ\text{C}$ ($-4...+122 \text{ }^\circ\text{F}$) - UL : $-20...+30 \text{ }^\circ\text{C}$ ($-4...+86 \text{ }^\circ\text{F}$) 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
Vibration resistance	Conforming to EN 60947-5-2
Shock resistance	Conforming to EN 60947-5-2
Material	Housing: PUR, Front and Lens: PMMA

