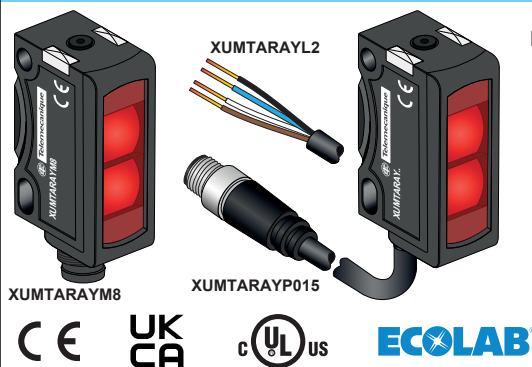
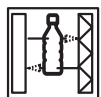


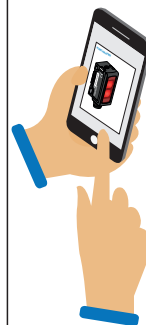
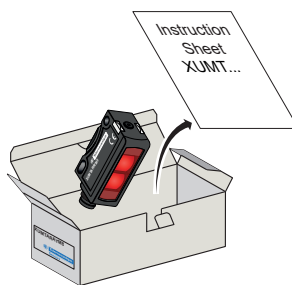
Photo-electric sensors - Miniature design



Polarised reflex



Package Content (Example)



<http://qr.tesensors.com/XU0020>

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

www.telemecaniquesensors.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.

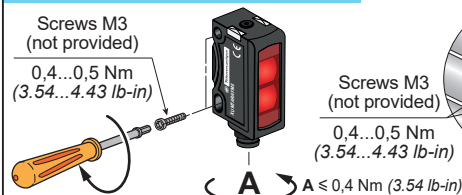
Failure to follow these instructions will result in death or serious injury.

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 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.

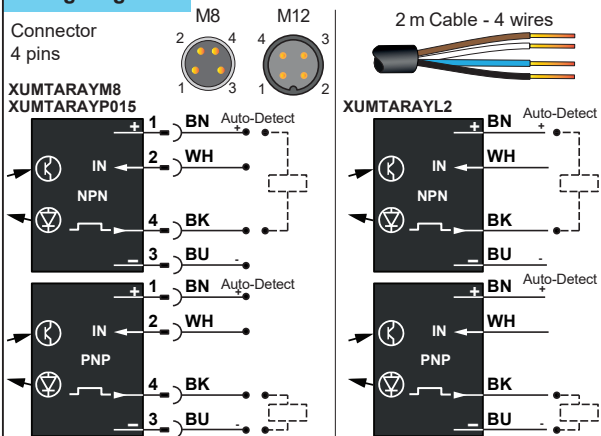
Mounting and tightening torques



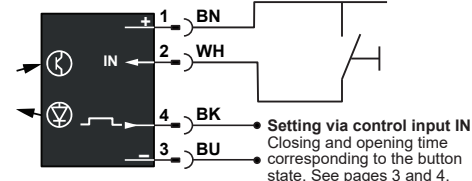
CAUTION

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.

Wiring diagrams



Remote teach-in



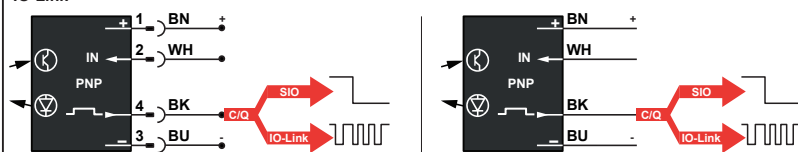
CAUTION

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://telemecaniquesensors.com/global/en/support/iolink> or
<https://ioddfinder.io-link.com/#/>

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

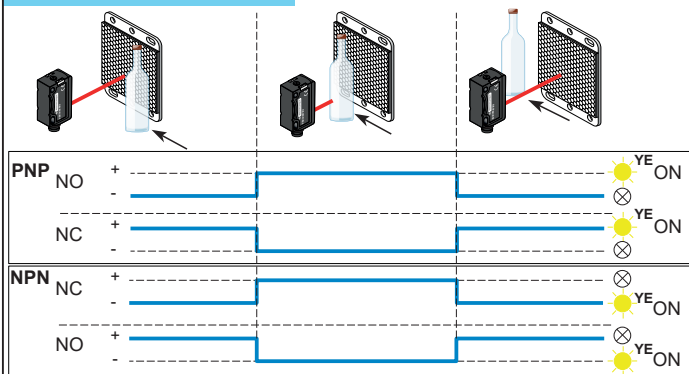
IO-Link



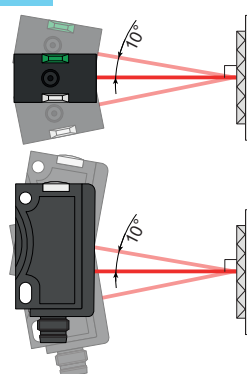
Pin	Wire	Signal	Definition
1	BN	+	+ 24 Vdc
2	WH	IN	+ = NO - = NC Open = NO
3	BU	-	0 Vdc
4	BK	Q	Switching signal (SIO)
		C	Communication IO-Link

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

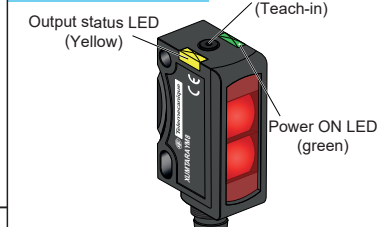
Switching mode for object



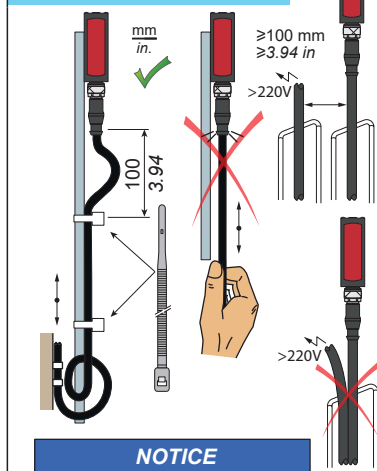
Alignment



LEDs and settings

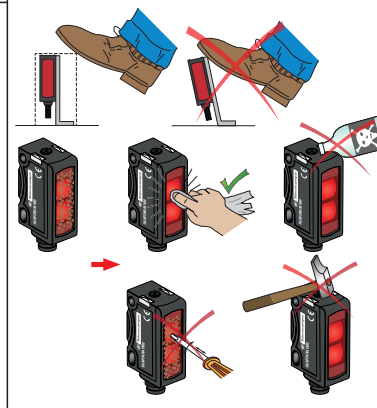


Mounting, wiring and maintenance precautions



NOTICE

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



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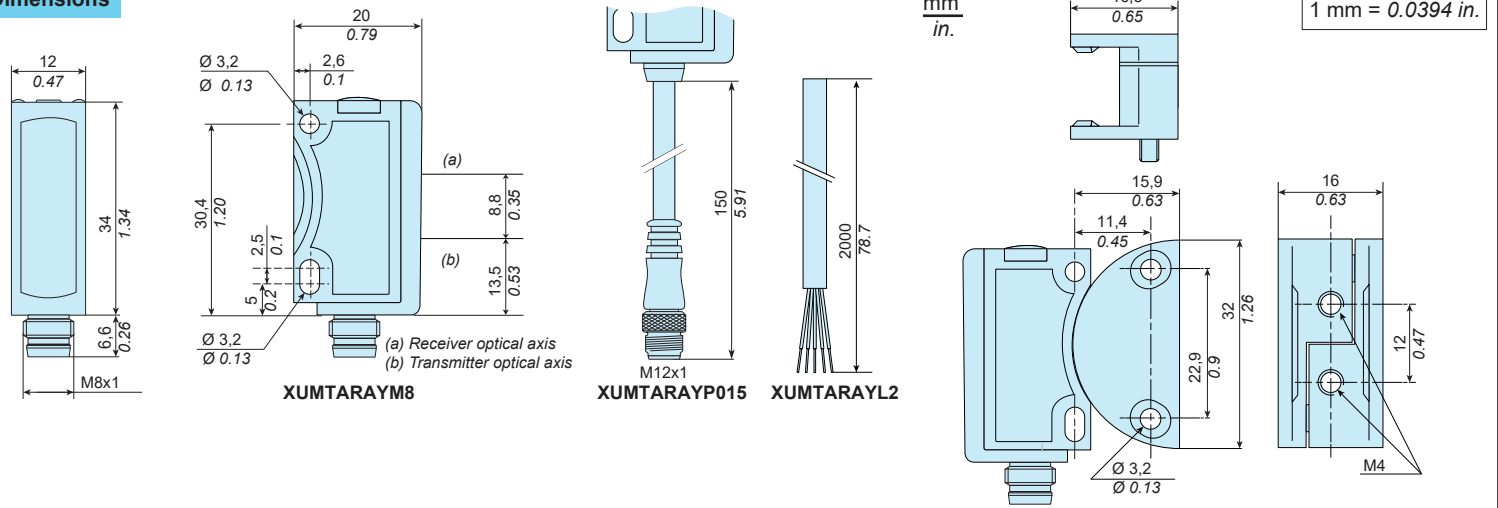


Manufacturer :
TMSS France
Tour Echo - 2 avenue Gambetta
92400 Courbevoie
France



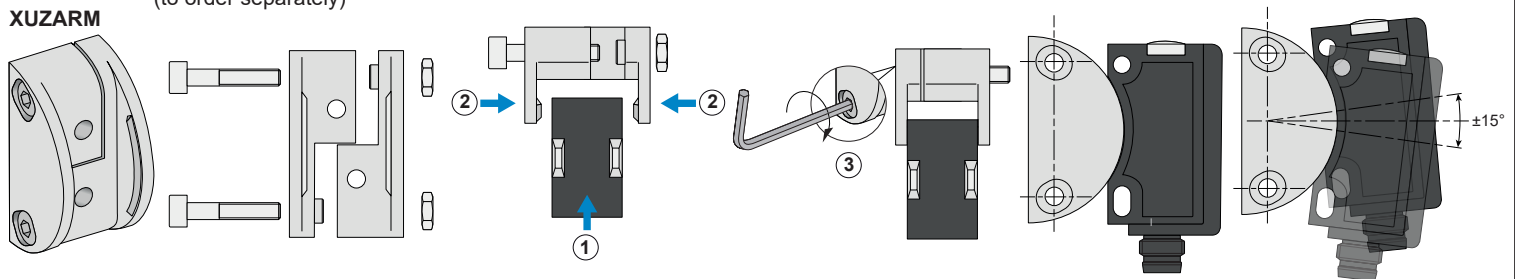
UK Representative :
Yageo TMSS UK Limited
2 North Park Road
Harrogate, HG1 5PA
United Kingdom

Dimensions

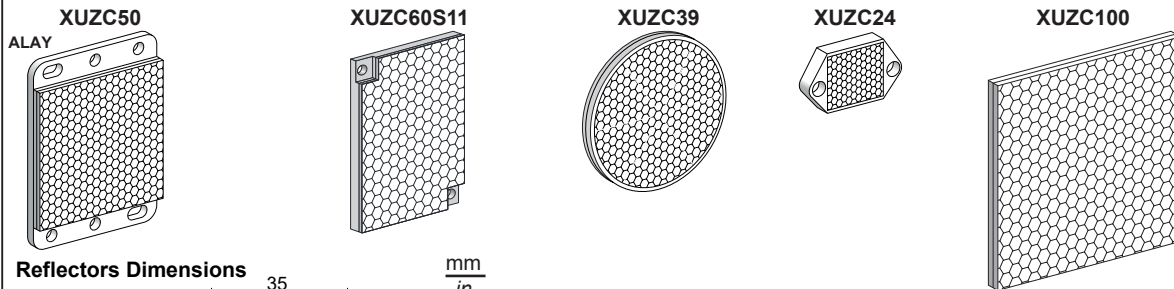


Accessories

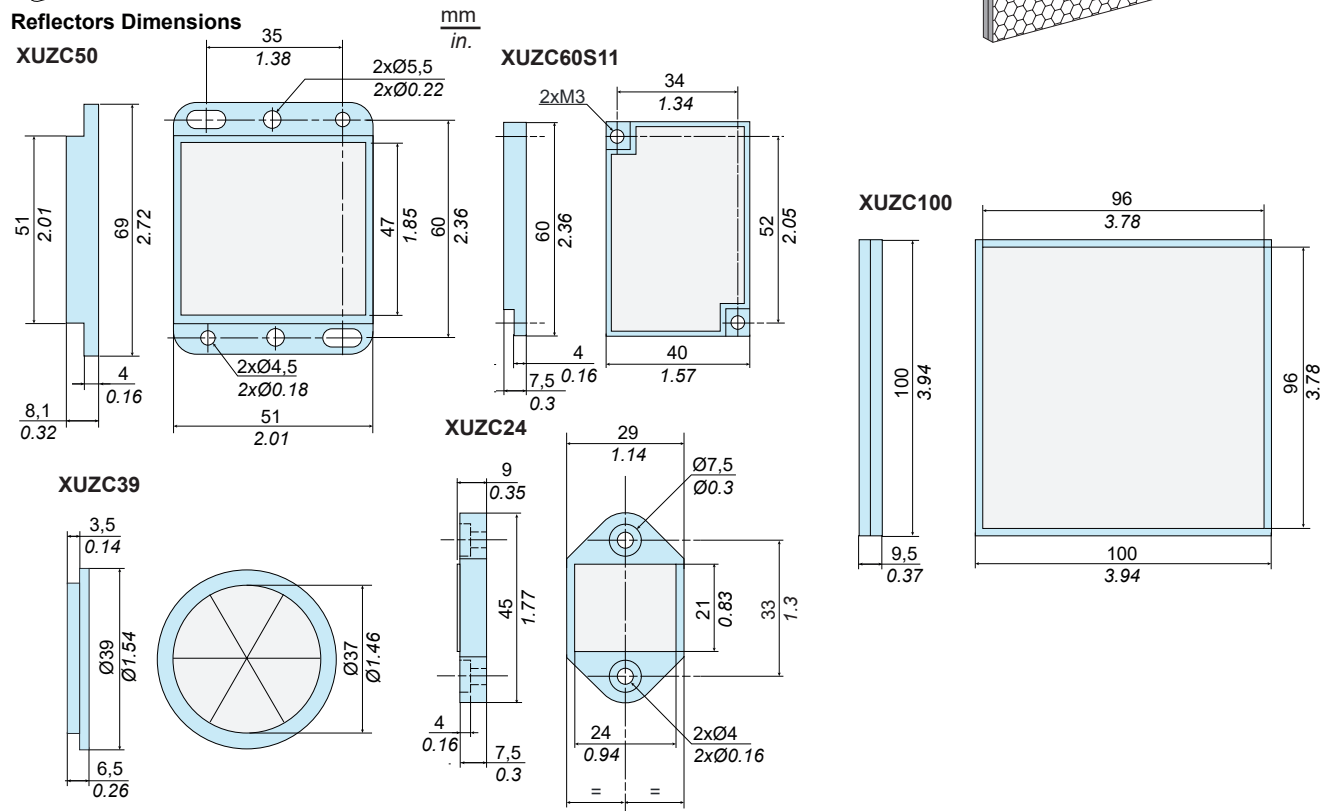
Dovetail clamp mounting for flexible adjustment
(to order separately)



Reflector examples (to order separately)



Reflectors Dimensions



Pre-wired connectors (examples)

PVC cable for general use
PUR cable for severe industrial environments

Jumper



M8 - 4 pins plug
M8 - 4 pins socket
XZCR2609P2Y1 1m PUR
XZCR2609P2Y2 2m PUR

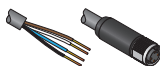
M12 - 4 pins plug
M12 - 4 pins socket
XZCRB151151C2 2m PUR
XZCRB151151C5 5m PUR

Jumper



M12 - 4 pins plug
M8 - 4 pins socket
XZCR1509041J1 1m PUR
XZCR1509041J2 2m PUR

Cable

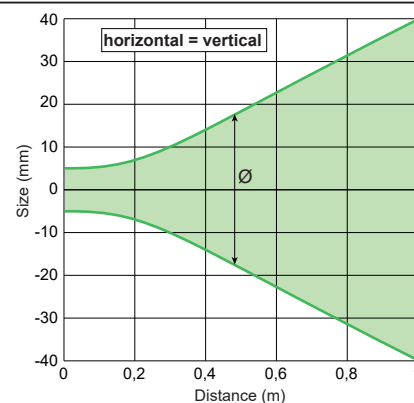


M8 - 4 pins socket
4 wires
XZCP0941L2 2m PUR
XZCP0941L5 5m PUR

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

Curves

Light spot diameter



Setting

The sensor has 2 different Teach-in modes:

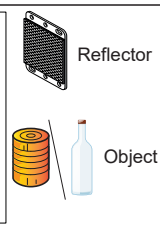
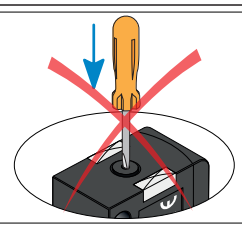
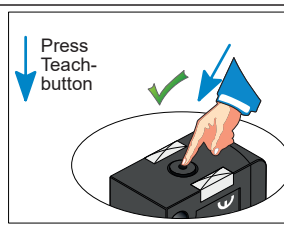
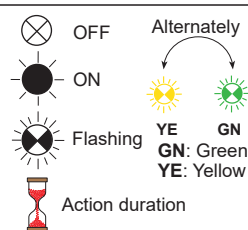
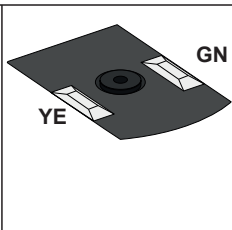
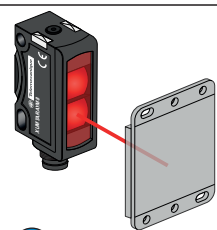
A-Reflector - Reflector Teach-in (RTI): is suited for the detection of transparent objects. The setting is made 2x to the reflector (see illustration A). Switching threshold control active.

B-Dynamic Teach-in (DTI): is suited for nearly all applications. The setting is performed during the running process (see illustration B). The reflector must be completely exposed to the beam route at least once. Switching threshold control active.

C-Reflector-Object Teach-in (ROTI): is suitable for the detection of non-transparent objects. The setting is made to the reflector and the object (see illustration C). Switching threshold control inactive.

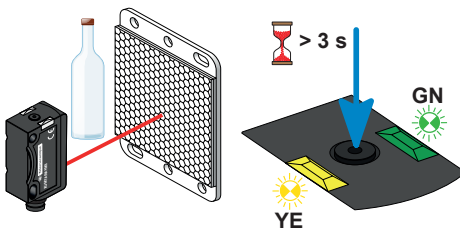
The sensor has 3 different **Switching NO/NC** settings:

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

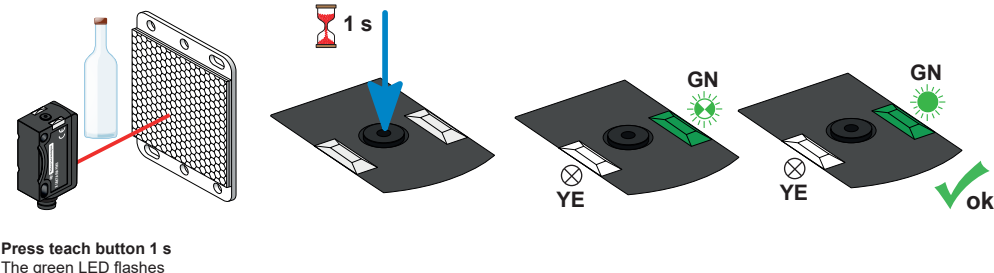


A Reflector - reflector teach-in (RTI)

Step 1: Teach-in reflector

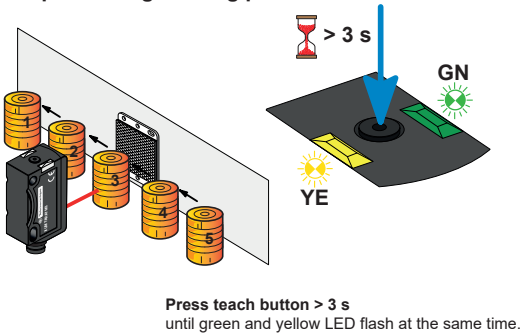


Step 2: Teach-in reflector

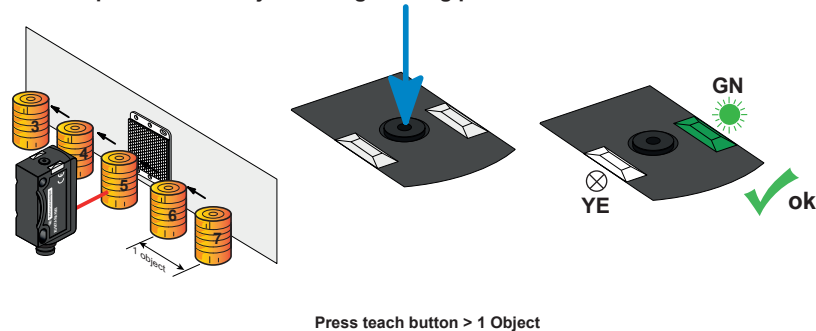


B Dynamic Teach-in (DTI)

Step 1: During running process

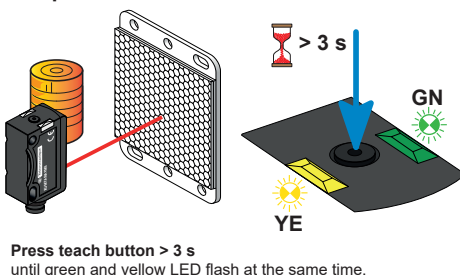


Step 2: Teach-in object during running process

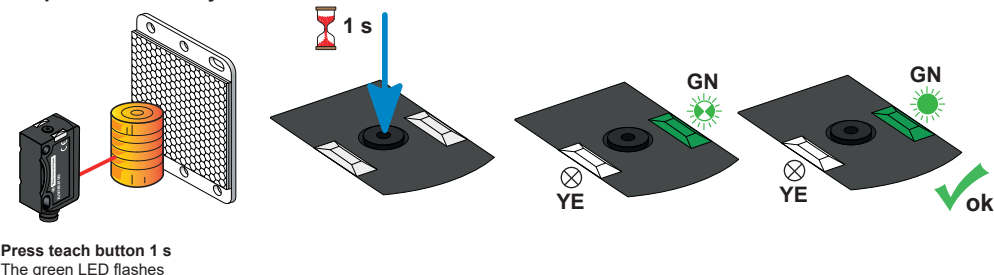


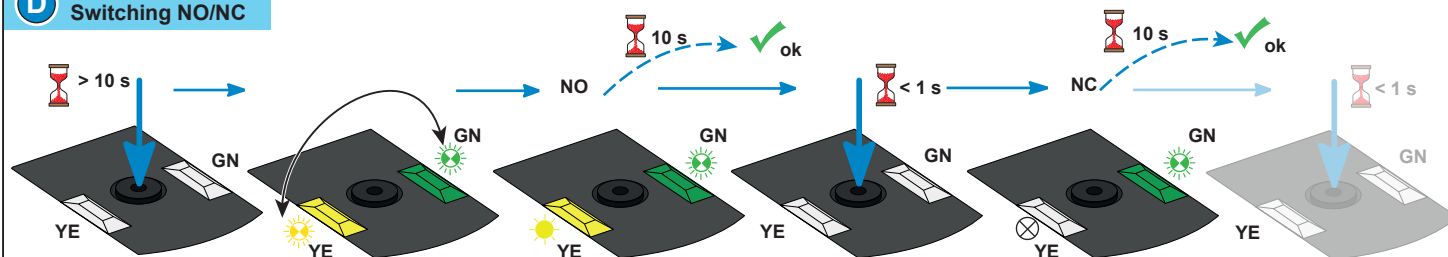
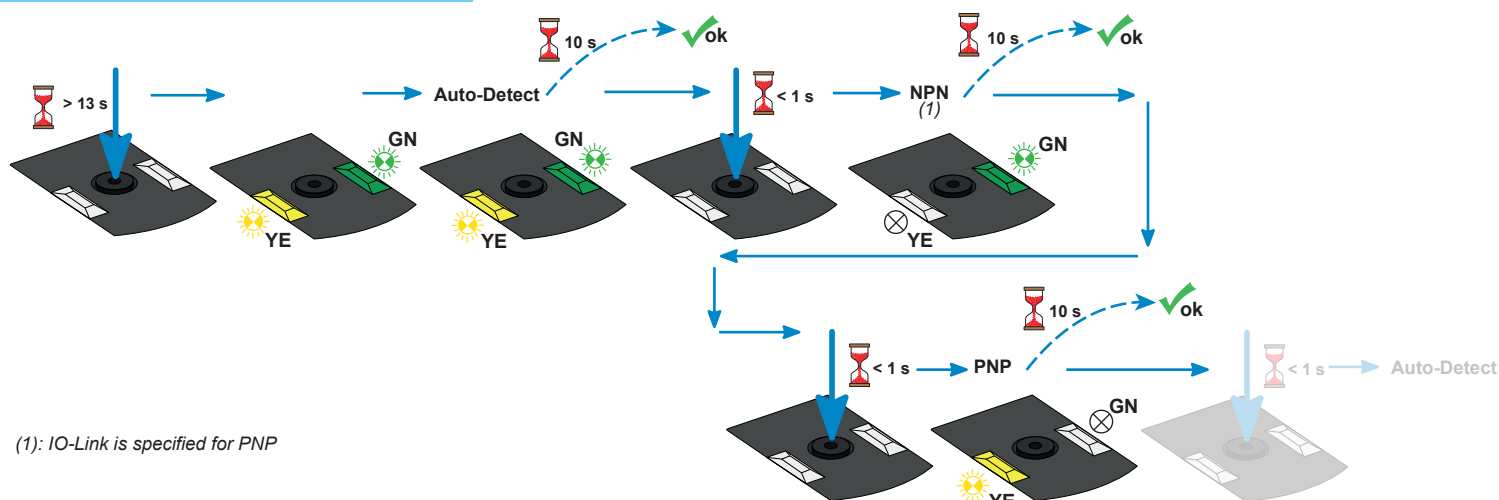
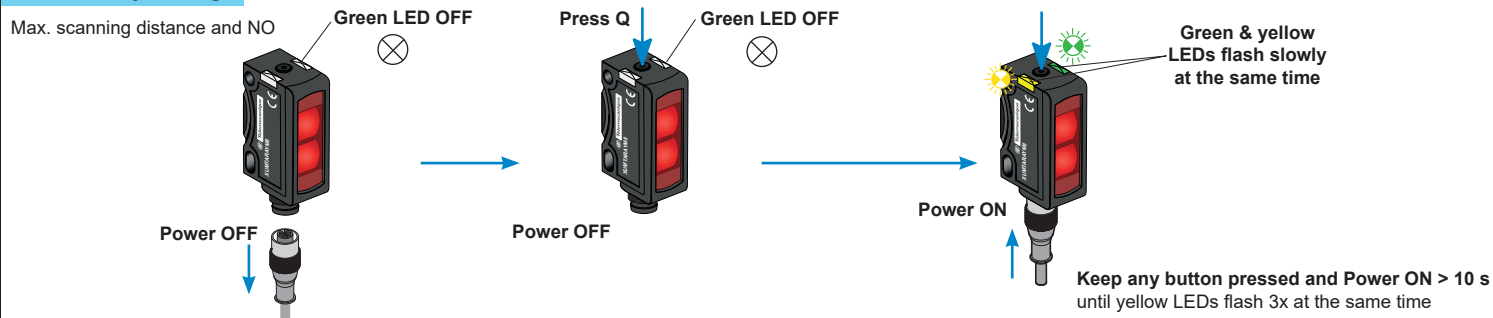
C Reflector - Object teach-in (ROTI)

Step 1: Teach-in reflector



Step 2: Teach-in Object



D Switching NO/NC**E SWITCHING AUTO-DETECT / NPN / PNP****F Factory Setting****Characteristics**

Certification	CE - UKCA - cULus - Ecolab
Sensing distance	0...2 m / 0...6.56 ft. (Reference material: XUZC50 reflector)
Setting	Teach button
Color of detection light beam	LED Red, 632 nm
Light spot size	See spot diameter 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	≤ 30 mA
Switching capacity	≤ 100 mA
Switching frequency	≤ 1000 Hz
First-up delay	< 300 ms
Response time	500 μs
Recovery time	< 300 ms
Ambient Temperature	Operating : - 20...+60 °C (-4...+140 °F) - UL : - 20...+50 °C (-4...+122 °F) Storage : - 20...+80 °C (-4...+176 °F)
Power Voltage	Rated operational voltage: 24 Vdc Ripple p-p 10% maximum Operating range: 10...30 Vdc (including ripple)
Product protection	Power supply : Reverse polarity protection Output: Short circuit protection
Protection against electric shocks	☐ 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