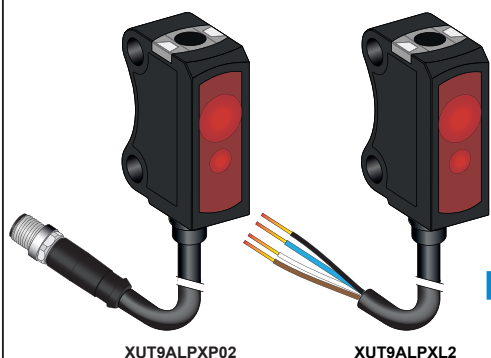


Photo-electric sensors - Miniature design



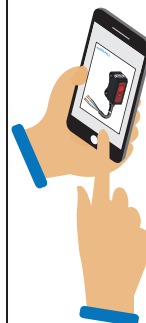
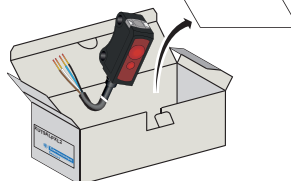
CE

UK
CA

C UL US

ECOLAB

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: 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.

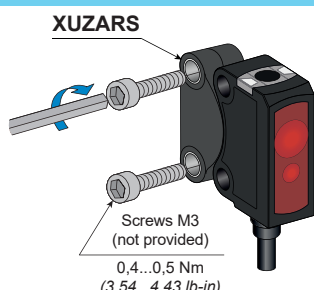
Failure to follow these instructions will result in death or serious injury.

WARNING

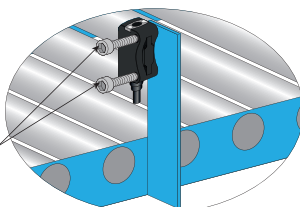
IMPROPER SETUP OR INSTALLATION

- This equipment must only be installed and serviced by qualified personnel.
 - Read, understand, and follow the compliance below, before installing the 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

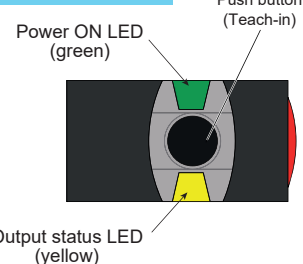


Screws M3
(not provided)
0.4...0.5 Nm
(3.54...4.43 lb-in)

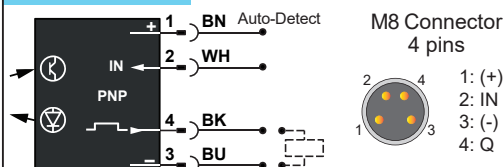
**CAUTION**

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.

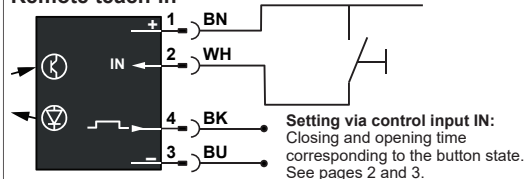
LEDs and settings



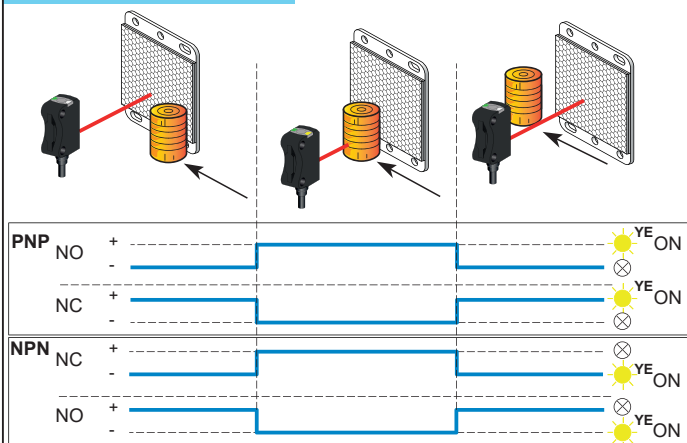
Wiring diagrams



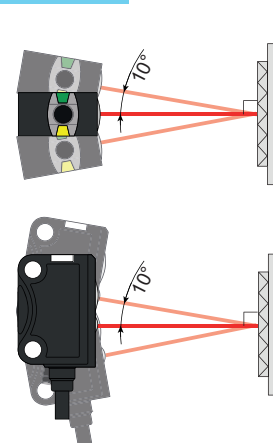
Remote teach-in



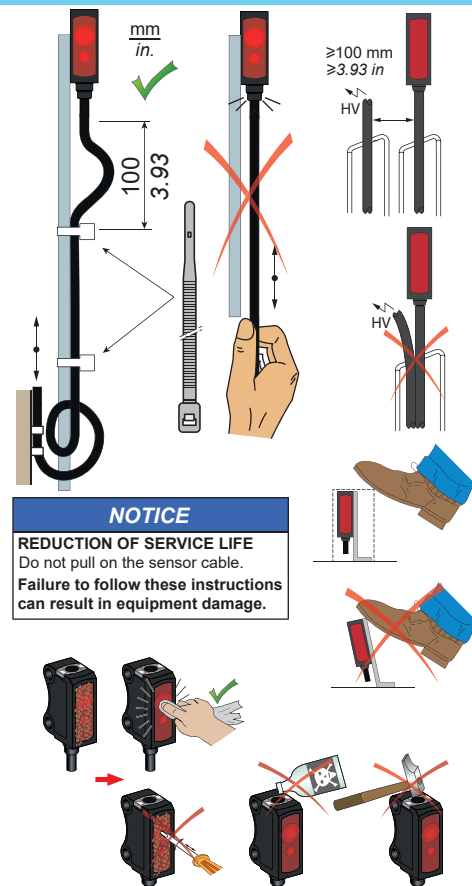
Switching mode for object



Alignment



Mounting, wiring and maintenance precautions



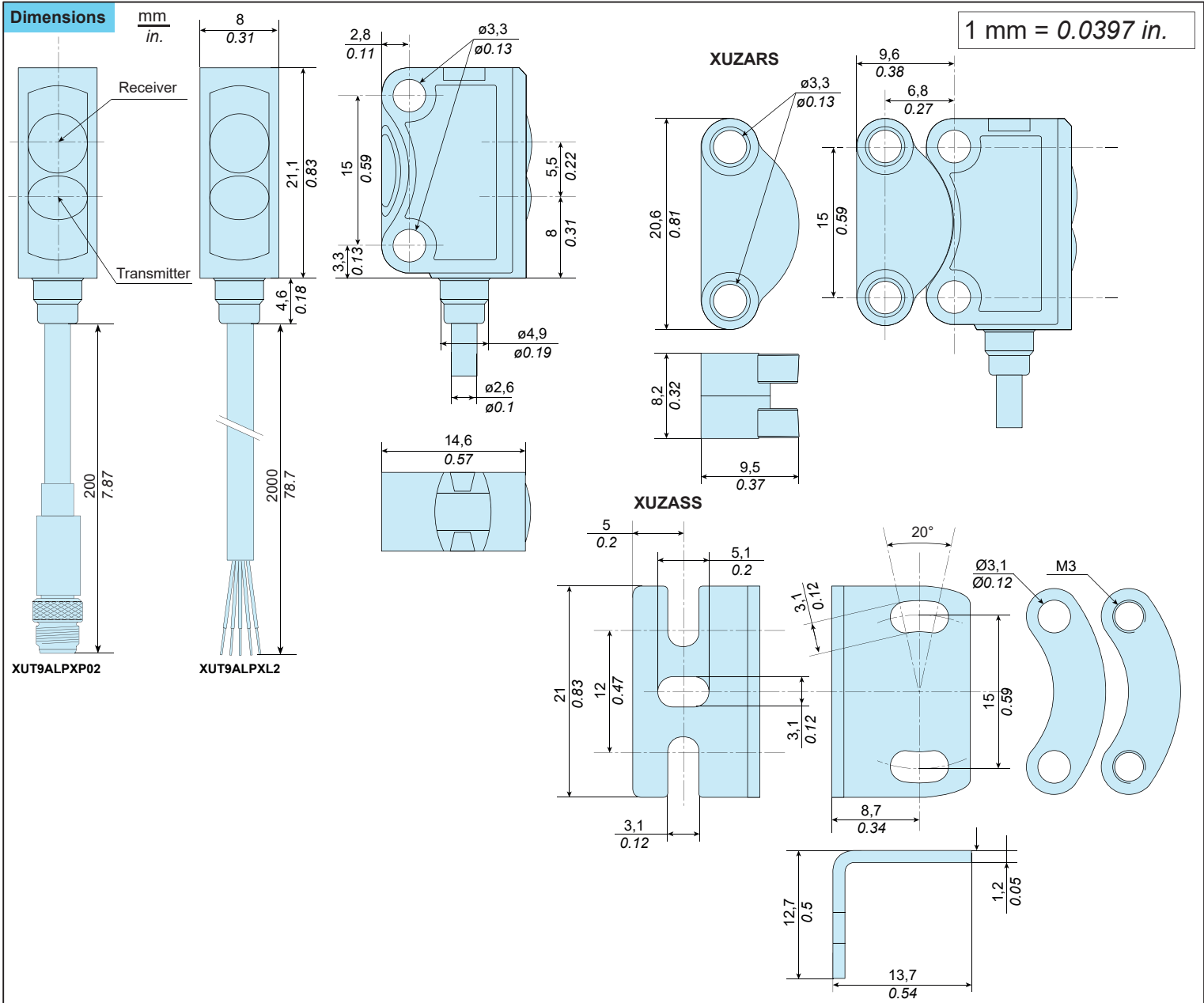
Electrical equipment should be installed, operated and maintained only by qualified personnel. Neither TMSS France nor any of its subsidiaries or other affiliated companies shall be responsible or liable for any consequences arising out of the use of this material. Telemecanique™ Sensors is a trademark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

CE

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

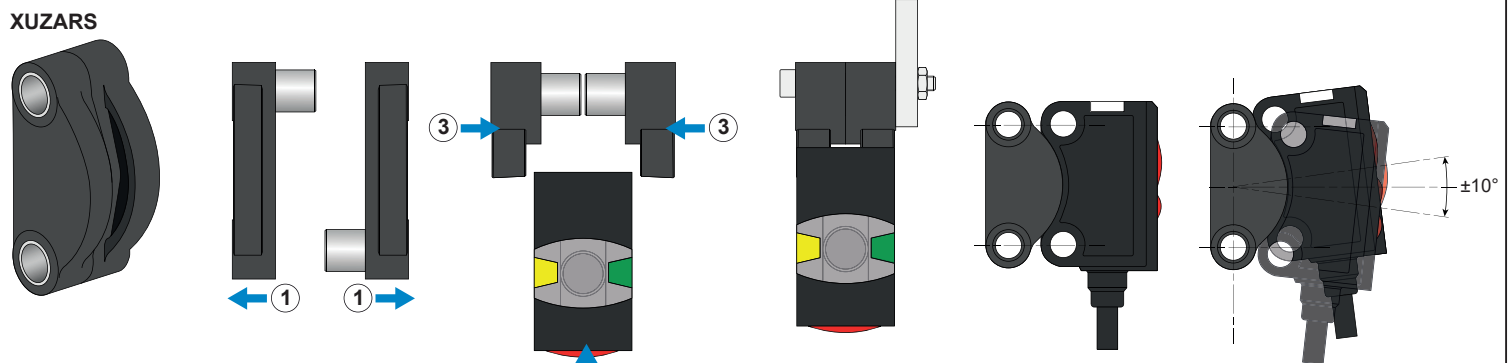
UK
CA

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



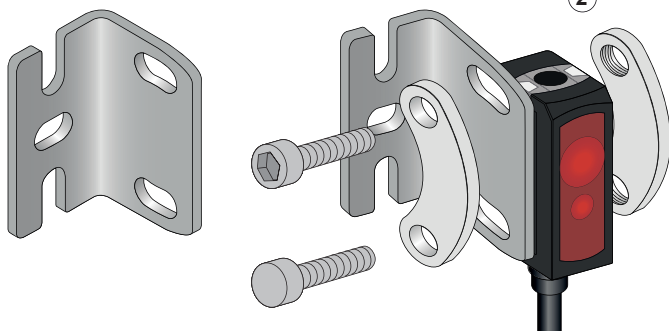
Accessories

Dovetail clamp mounting (to order separately)

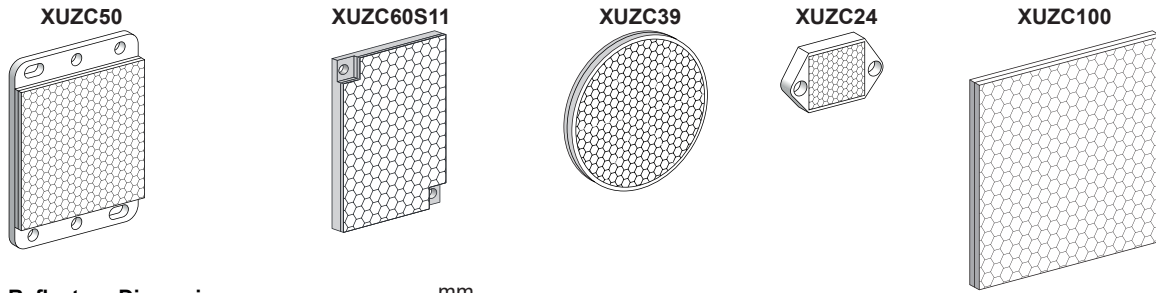


Mounting bracket (to order separately)

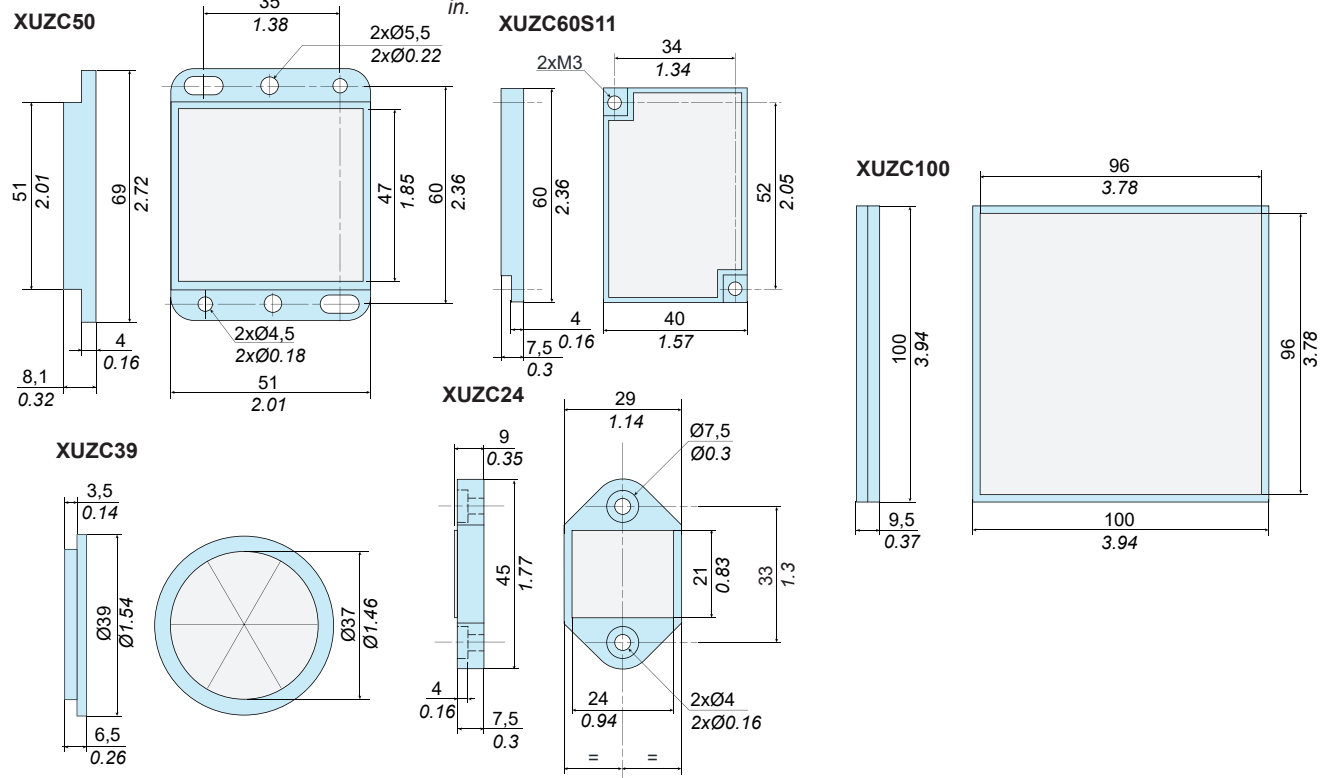
XUZASS



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



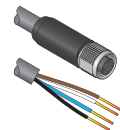
XZCPB1141L2 2m PUR
XZCPB1141L5 5m PUR

Jumper
M12 - 4 pins plug
M8 - 4 pins socket



XZCR2711037T1 1m PUR
XZCR2711037T2 2m PUR

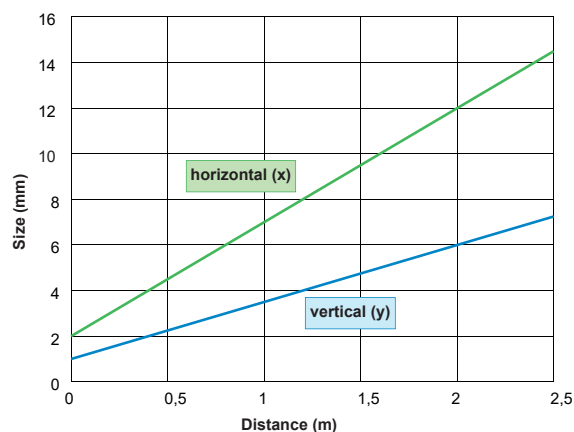
M8 - 4 pins socket
4 wires



XZCR2705037R1 1m PUR
XZCR2705037R2 2m PUR

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

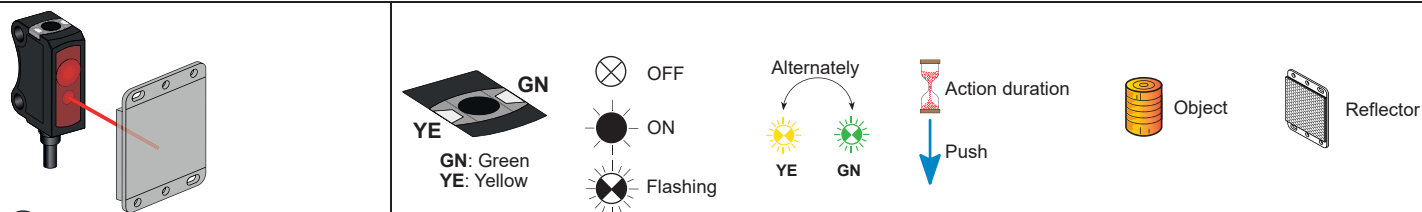
Light spot size



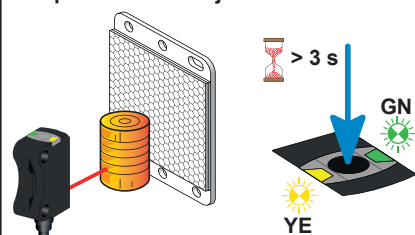
The sensor has 3 different Teach-in modes:

A-Standard Teach-in (STI): is suited for nearly all applications. Setting is made on object and background (see illustration A).

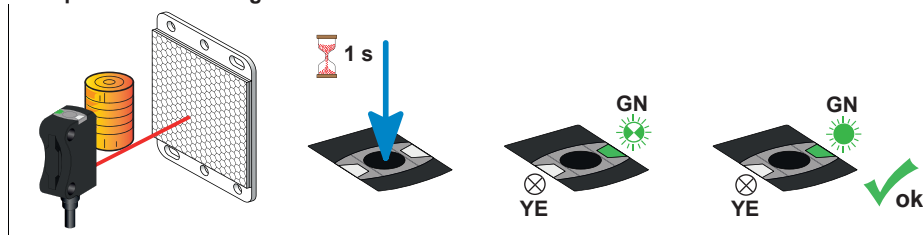
B-Dynamic Teach-in (DTI): is suited for setting the sensor in the running process, particularly for small objects (see illustration B).



Step 1: Teach-in object

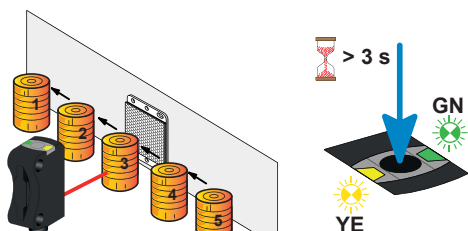


Press Q > 3 s
until green and yellow LED flash at the same time.

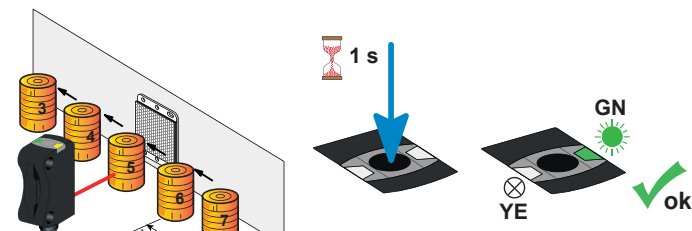


Press Q 1s
The green LED flashes

Step 1: During running process




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




Press Q > 1 Object

D Factory Setting

Max. scanning distance and NO




Green LED OFF



Press Q

Green LED OFF



Yellow LED flashes

Green LED flashes

Power OFF



Power OFF


Power ON

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 Range (using a 50 mm x 50 mm reflector XUZC50)	Maximum sensing distance: 0,1...4 m / 0.33...13.1 ft. Nominal sensing distance: 0,1...3 m / 0.33...9.84 ft.
Setting	Teach button
Color of detection light beam	Laser class 1, red, 655 nm
 Wavelength	λ = 655 nm
Puls duration	t = 3,2 μs
Frequency	f = 5 kHz
Limit of radiant power pulse	Pp ≤ 2,3 mW
Light spot size	See spot size curve
Switching output Q	PNP (NO or NC)
Control input IN (switching function Q):	(+) = Teach-in (-) =  button locked Open = normal function
Current consumption	≤ 12 mA
Switching capacity	≤ 50 mA
Switching frequency	≤ 1000 Hz
First-up delay	< 300 ms
Response time	500 μs
Recovery time	< 300 ms
Ambient Temperature	Operating : - 20...+50 °C (-4...+122 °F) - UL : - 20...+30 °C (-4...+86 °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	<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



Class 1

(IEC 60825-1)