XUMRACAYM8 (34 x 12 x 20)

www.telemecaniquesensors.com

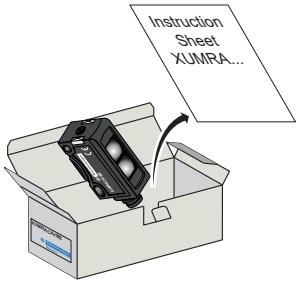
Photo-electric sensors - Miniature design

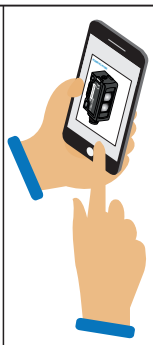


Contrast - Color



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.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.

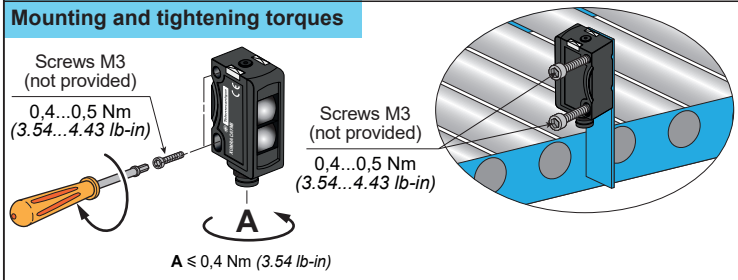
WARNING

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 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 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

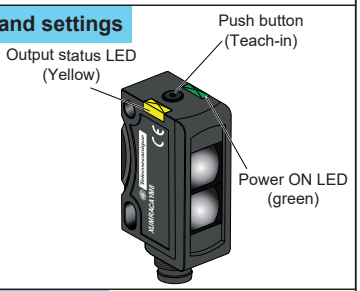


A ⩽ 0,4 Nm *(3.54 lb-in)*

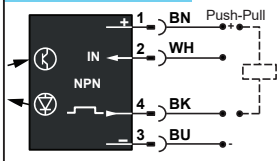
CAUTION

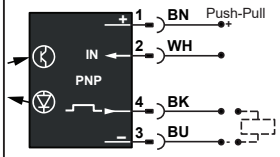
DEGREE OF PROTECTION DETERIORATION
Do not apply excessive torque on the sensor during the installation process.
Failure to follow these instructions can result in injury or equipment damage.

LEDs and settings

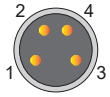


Wiring diagrams

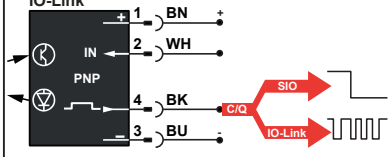




M8 Connector
4 pins



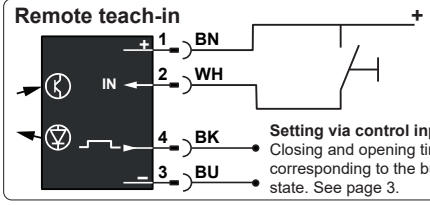
IO-Link



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

Remote teach-in



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

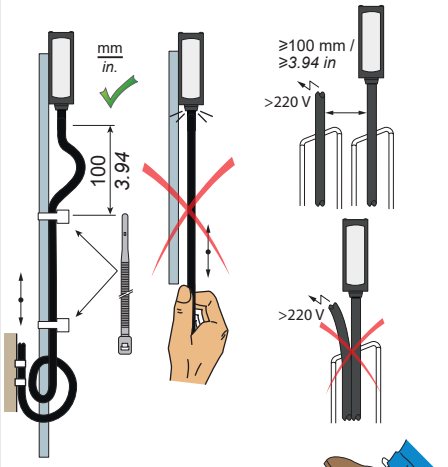
CAUTION

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

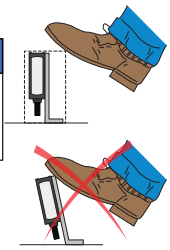
Failure to follow these instructions can result in injury or equipment damage.

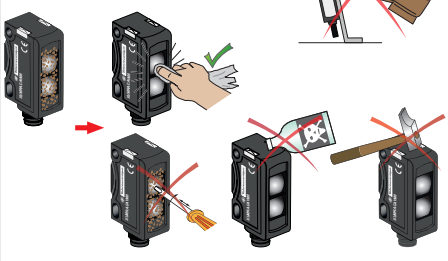
Wiring precaution



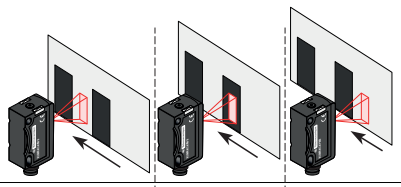
NOTICE

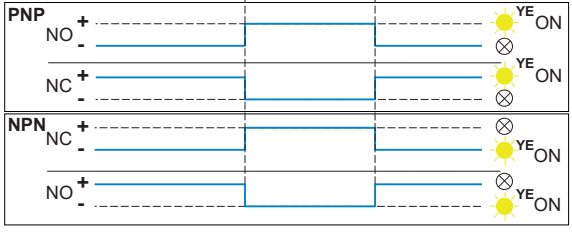
REDUCTION OF SERVICE LIFE
Do not pull on the sensor cable.
Failure to follow these instructions can result in equipment damage.



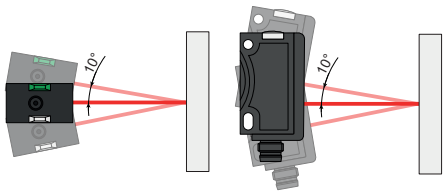


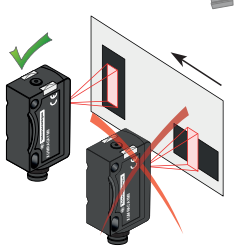
Switching mode for object





Recommended Alignment - Distance - Orientation





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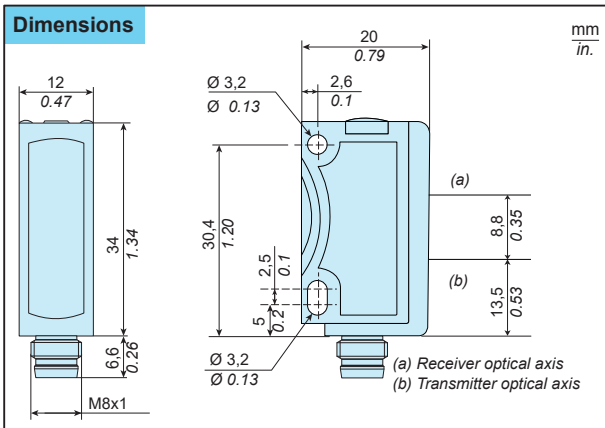
Telemecanique Sensors

XUMRACAYM8 (34 x 12 x 20)

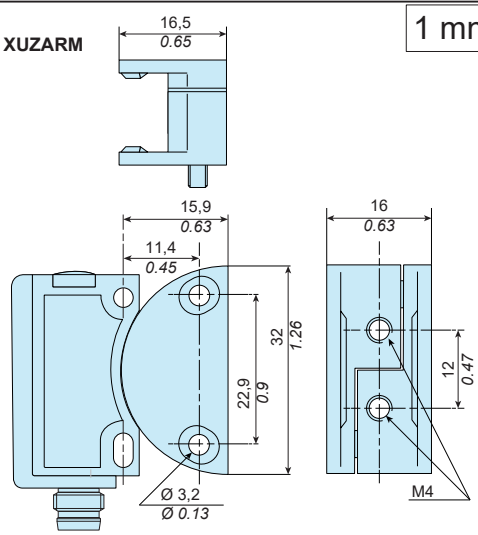
Dimensions

mm / in.

1 mm = *0.0394 in.*



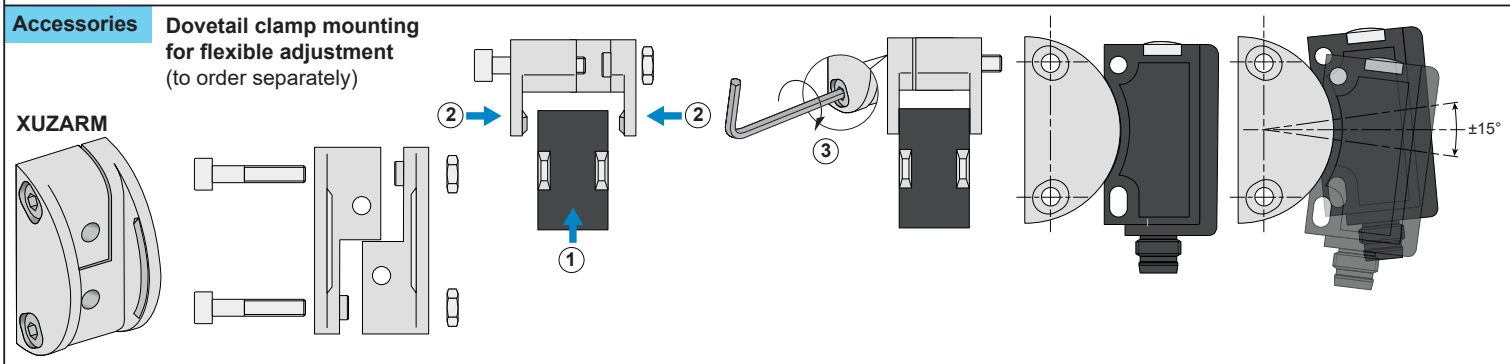
XUZARM



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

Jumper



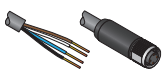
M8 - 4 pins plug
M8 - 4 pins socket
XZCR2609P2Y1 1m PUR
XZCR2609P2Y2 2m PUR

Jumper



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

Cable

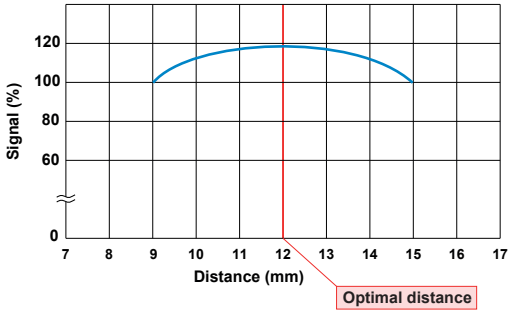


M8 - 4 pins socket
4 wires
XZCP0941L2 2m PUR
XZCP0941L5 5m PUR

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

Curves

Signal process



Setting

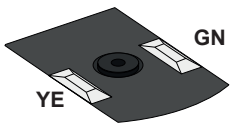
The sensor has 4 different Teach-in modes:
A. Color-Background Teach-in (CBTI): is suited for the distinction between a color level and a fixed background. Setting is made to the color and the background (see illustration A).

B. Color-Color Teach in (CCTI): The setting is made twice on the color that is to detect. Different accuracy settings can be chosen:

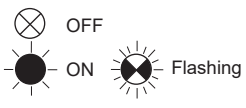
B1: Standard (3s): Medium color accuracy, depth of field ± 3 mm (see illustration B1).

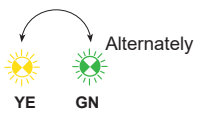
B2: Fine (6s): Precise color accuracy, depth of field ± 2 mm (see illustration B2).
→ *If the background change or if the sensor can not teach the background.*

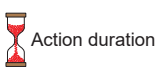
B3: Rough (10s): Rough color accuracy, depth of field ± 6 mm (see illustration B3).
→ *Depth of field: variation de la distance entre le capteur et la marque à detecter.*



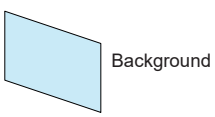
GN: Green
YE: Yellow

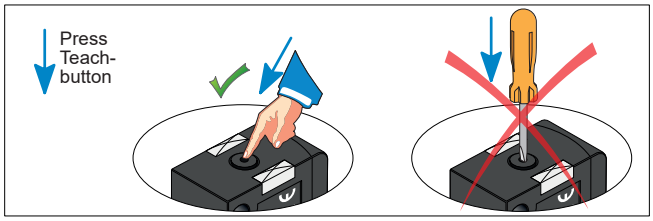








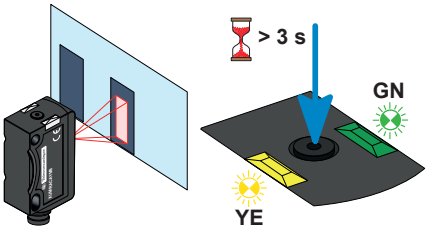




Telemecanique Sensors

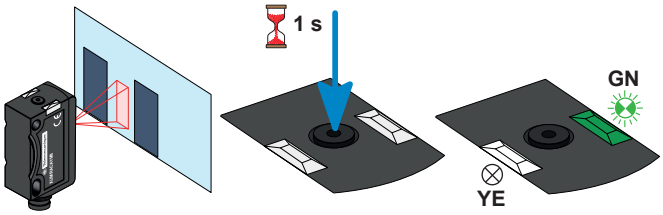
A Color - Background Teach-in (CBTI)

Step 1: Teach-in color

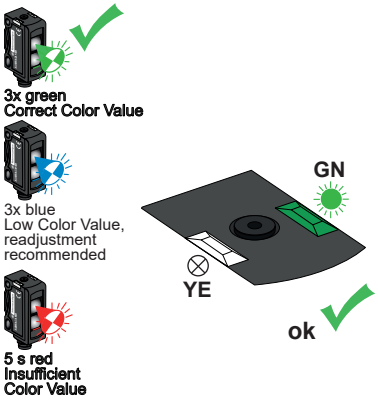


Press teach button > 3 s
until green and yellow LED flash at the same time.

Step 2: Teach-in Background



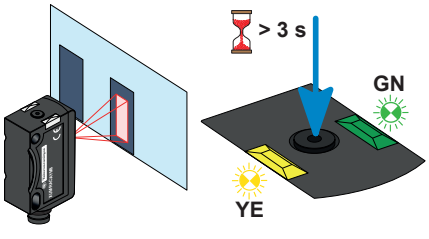
Press teach button 1s
The green LED flashes & the sensor beam flashes 3 times as described on the right side



B Color - Color Teach-in (CCTI)

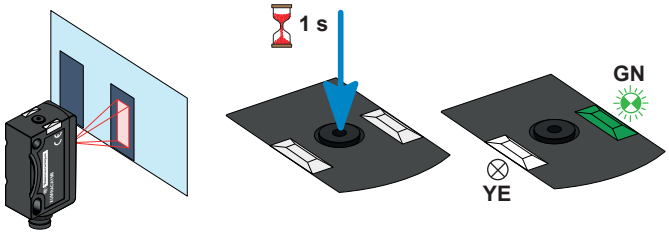
B1 Color - Color Standard Teach-in

Step 1: Teach-in color

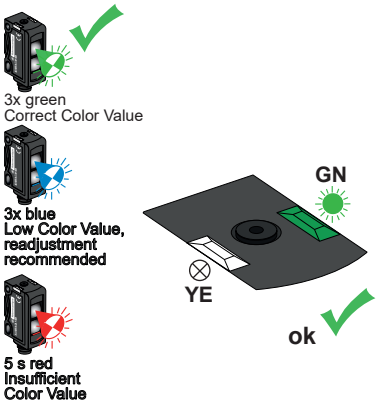


Press teach button > 3 s
until green and yellow LED flash at the same time.

Step 2: Teach-in Color

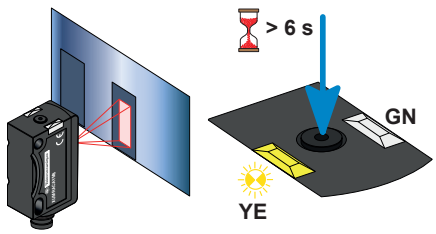


Press teach button 1s
The green LED flashes & the sensor beam flashes 3 times as described on the right side



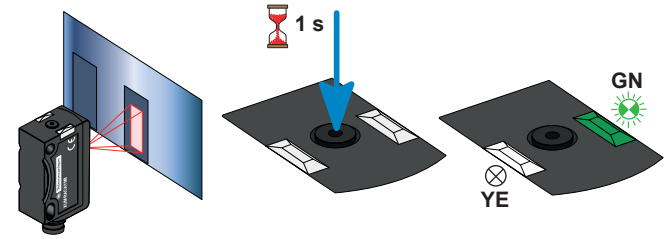
B2 Color - Color Fine Teach-in

Step 1: Teach-in color

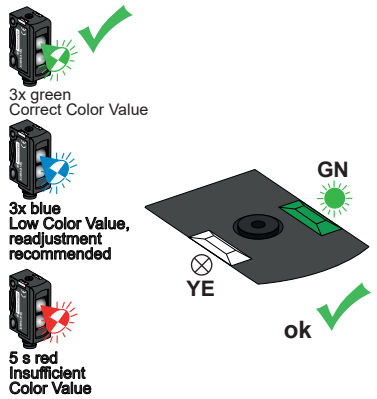


Press teach button > 6 s
until yellow LED flashes

Step 2: Teach-in Color

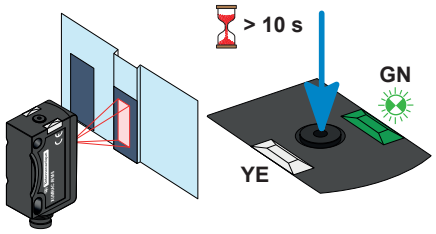


Press teach button 1s
The green LED flashes & the sensor beam flashes 3 times as described on the right side



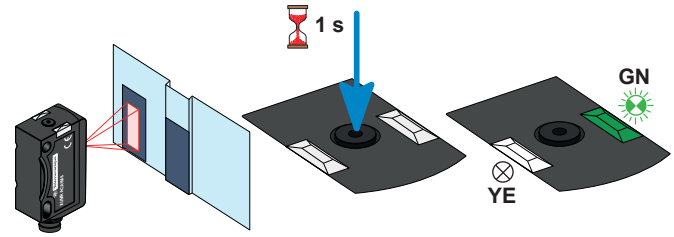
B3 Color - Color Rough Teach-in

Step 1: Teach-in color

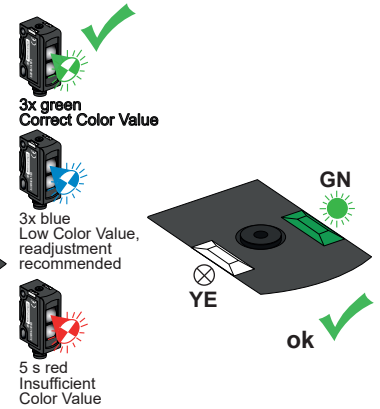


Press teach button > 10 s
until green LED flashes

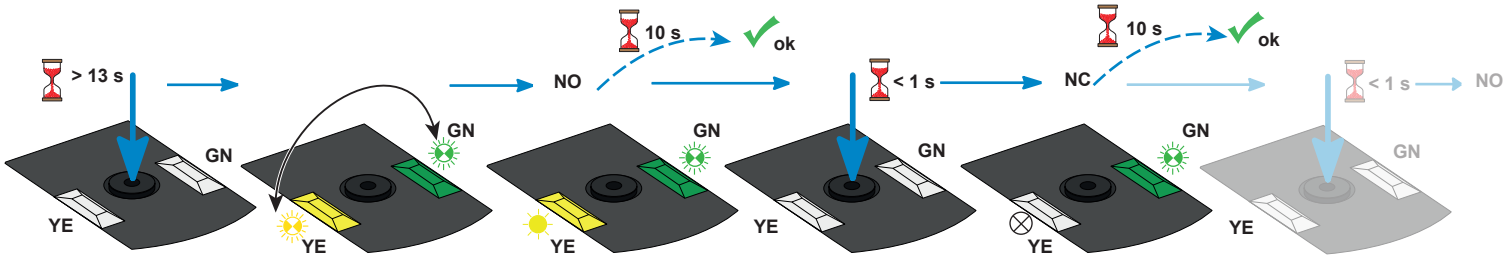
Step 2: Teach-in Color



Press teach button 1s
The green LED flashes & the sensor beam flashes 3 times as described on the right side



C Switching NO/NC



Characteristics

Certification	CE - UKCA - cULus - Ecolab
Sensing distance	12 mm / *0.47 in.* [± (2, 3 or 6) mm, depending on teach mode]
Setting	Teach button
Detection light beam	Red, Green and blue
Wavelength	λ = 633 nm (LED red) / 525 nm (LED green) / 460 nm (LED blue)
Spot size	1 x 5 mm / *0.04 x 0.2 in.*
Output function	NO / NC via Teach-in
Switching output Q	Auto-Detect - PNP/NPN (NO or NC) - IOLINK
Control input IN (switching function Q):	**(+)** = Teach-in / disabled (Adjustable via IO-Link, default: Teach-in) **(-)** = 🔒 button locked Open = normal function
Current consumption	≤ 30 mA
Switching capacity	≤ 100 mA
Switching frequency	≤ 2500 Hz
First-up delay	< 300ms
Response time	≤ 200 µs
Recovery time	< 300ms
Ambient Temperature	Operating : - 20...+55 °C *(-4...+131 °F)* - UL : - 20...+50 °C *(-4...+122 °F)* Storage : - 20...+80 °C *(-4...+176 °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	⧈ 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

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

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