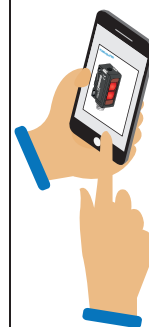


Photo-electric sensors - Miniature design


<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**

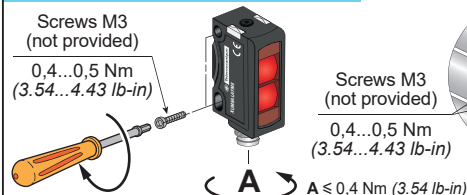
- Disconnect all power before servicing equipment.
- Do not connect this device to AC power.
- The power voltage must not exceed the rated range.

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

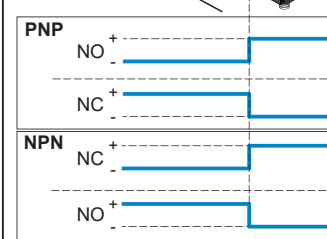
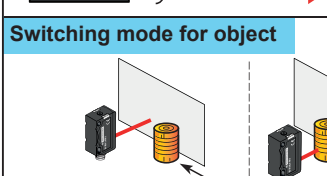
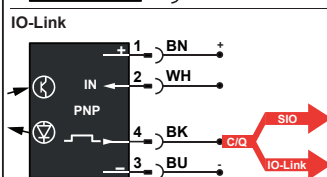
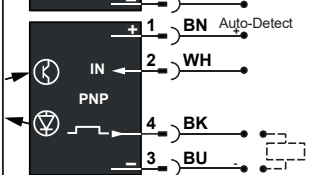
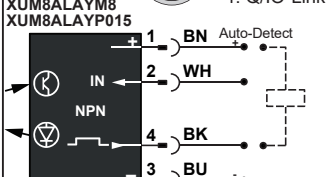
WARNING**IMPROPER SETUP OR INSTALLATION**

- 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.).

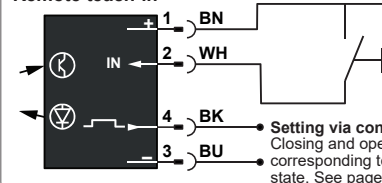
Failure to follow these instructions can result in death, serious injury, or equipment damage.

Mounting and tightening torques**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

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.

Remote teach-in**CAUTION**

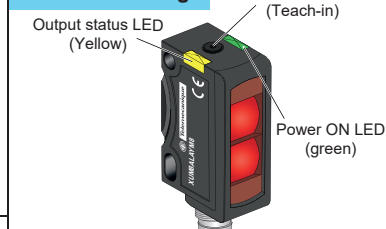
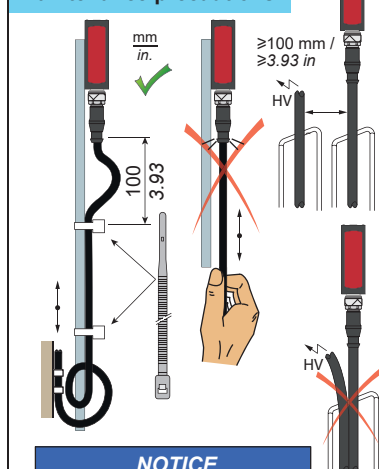
INOPERABLE EQUIPMENT DUE TO CYBER ATTACK ON IO-LINK

- 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/iolink> or
<https://ioddfinder.io-link.com/#/>

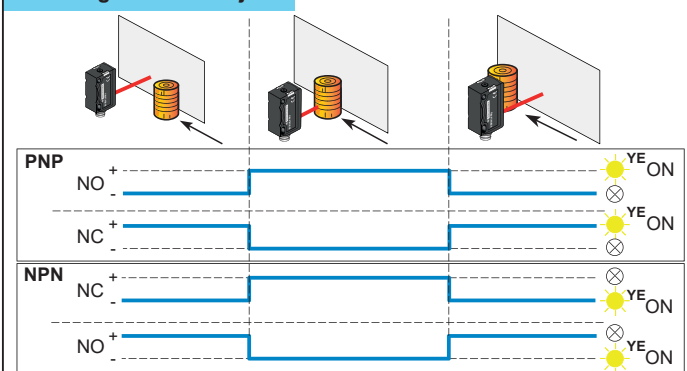
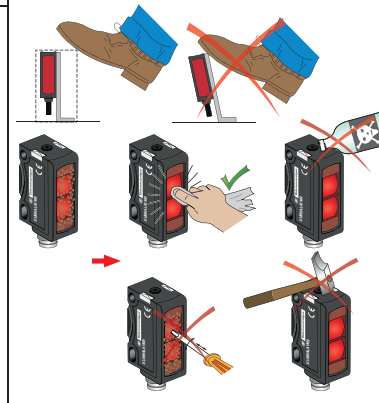
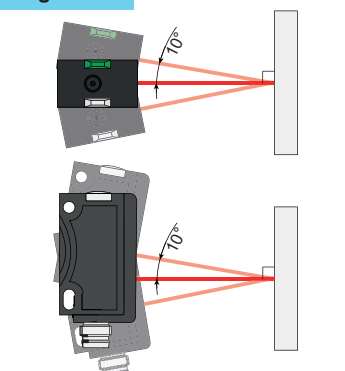
Failure to follow these instructions can result in injury or equipment damage.

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

LEDs and settings**Mounting, wiring and maintenance precautions****NOTICE**

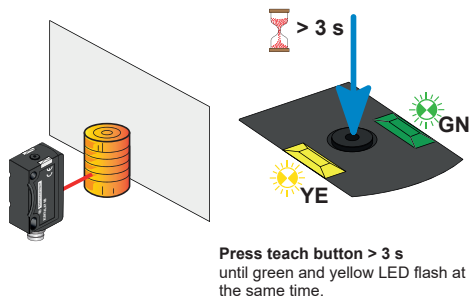
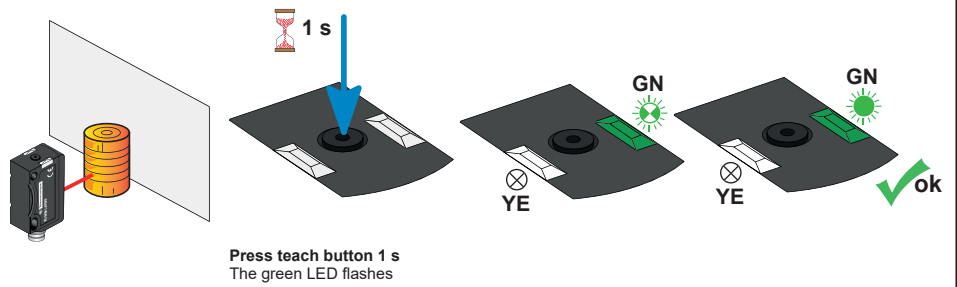
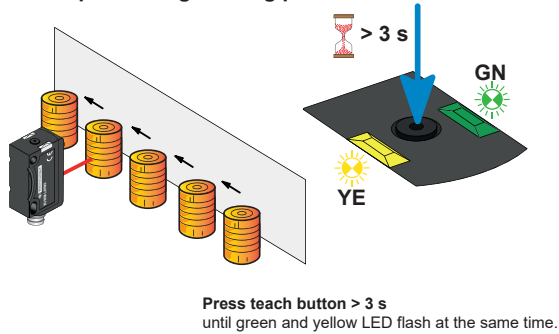
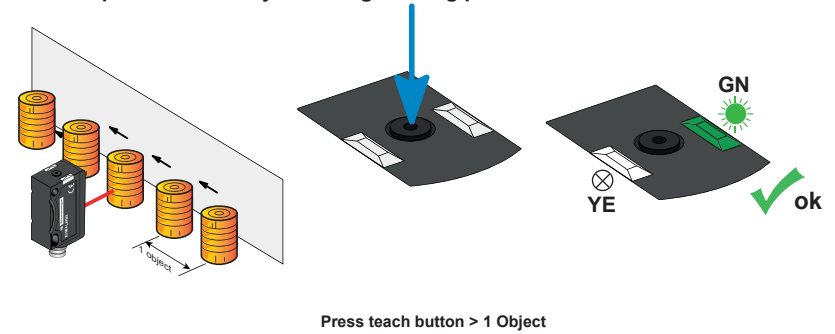
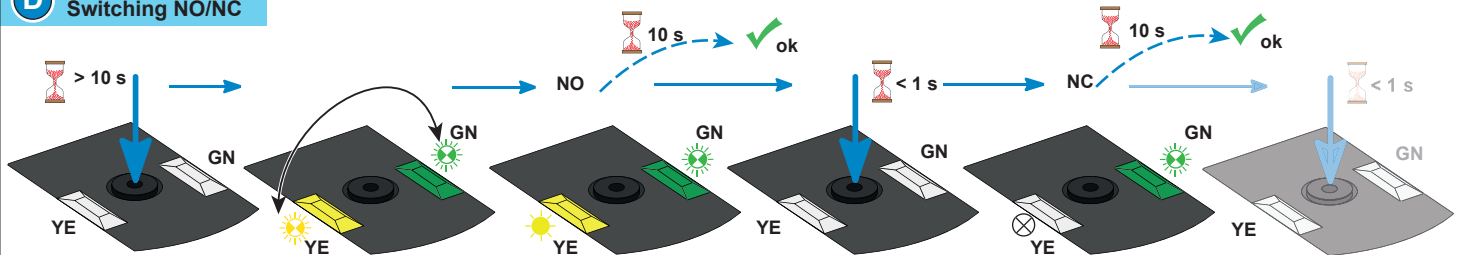
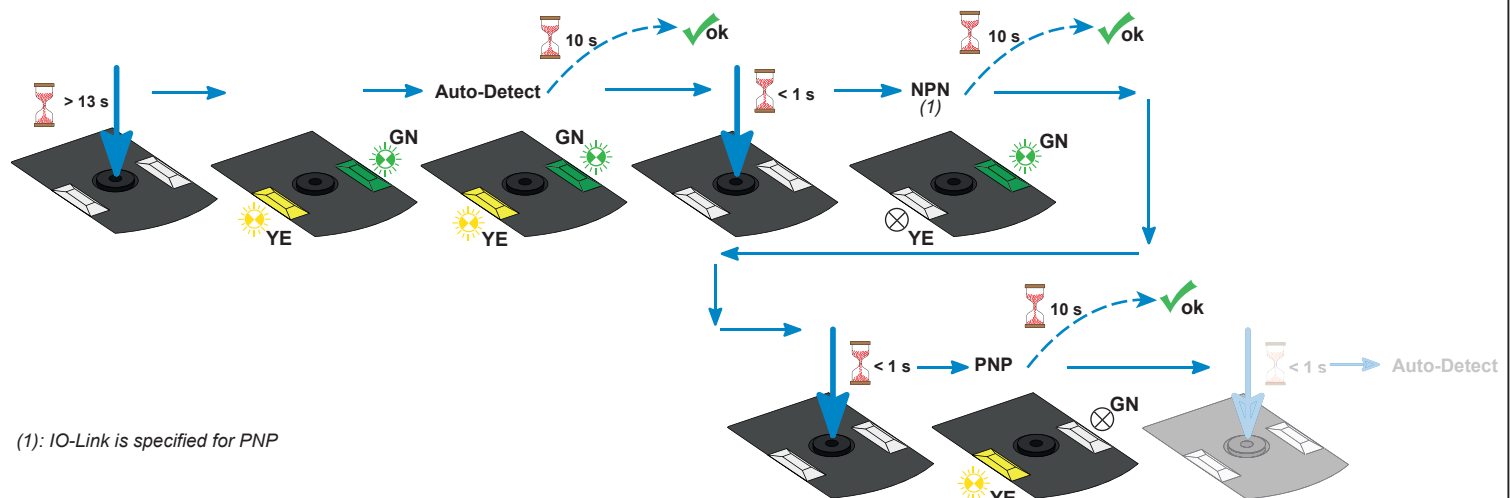
REDUCTION OF SERVICE LIFE
Do not pull on the sensor cable.
Failure to follow these instructions can result in equipment damage.

Switching mode for object**Alignment****Maximum angle tolerance**

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

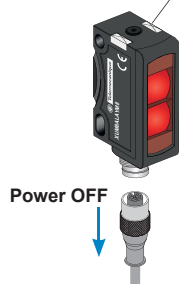


UK Representative :
Yageo TMSS UK Limited
2 North Park Road
Harrogate, HG1 5PA
United Kingdom

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**

Characteristics

LEDs OFF



Press

LEDs OFF



Power OFF




Both LEDs flash



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

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	λ = 650 nm
	Puls duration	t = 3.75 μ s
	Frequency	f = 4.5 kHz
	Limit of radiant power pulse	Pp \leq 2,5 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 mA	
Switching capacity	\leq 100 mA	
Switching frequency	\leq 1000 Hz	
First-up delay	< 300 ms	
Response time	\leq 500 μ s	
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: 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	

