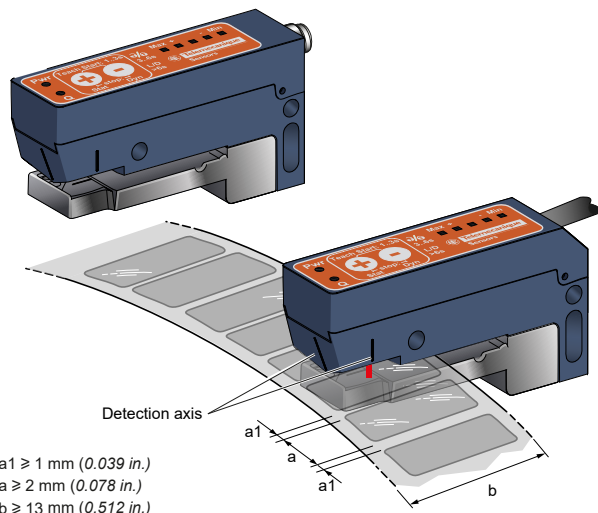


Ultrasonic fork for label detection



M12 cable connector

XUVU04M3BL02M12
XUVU04M3PL02M12
XUVU04M3NL02M12

Cable 2 m/6.56 ft

XUVU04M3BL2
XUVU04M3PL2
XUVU04M3NL2

M8 direct connector

XUVU04M3BM8
XUVU04M3PM8
XUVU04M3NM8



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

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

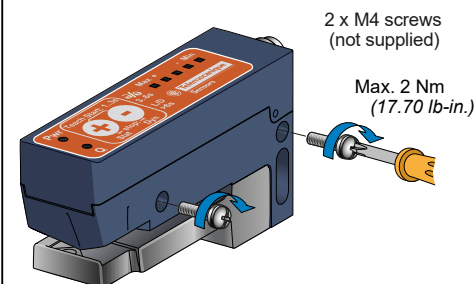
WARNING

IMPROPER SETUP OR INSTALLATION

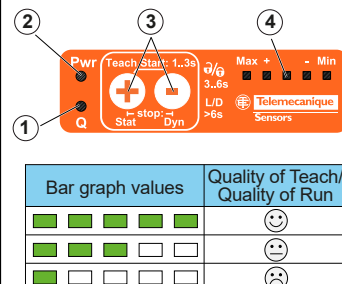
- This equipment must be installed and serviced by qualified personnel only.
- Read, understand, and follow the instructions below before installing the device.
- Do not tamper with or make alterations to the device.
- Comply with the wiring and mounting instructions.
- Check the connections and fastening during maintenance operations.
- The proper functioning of the device 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



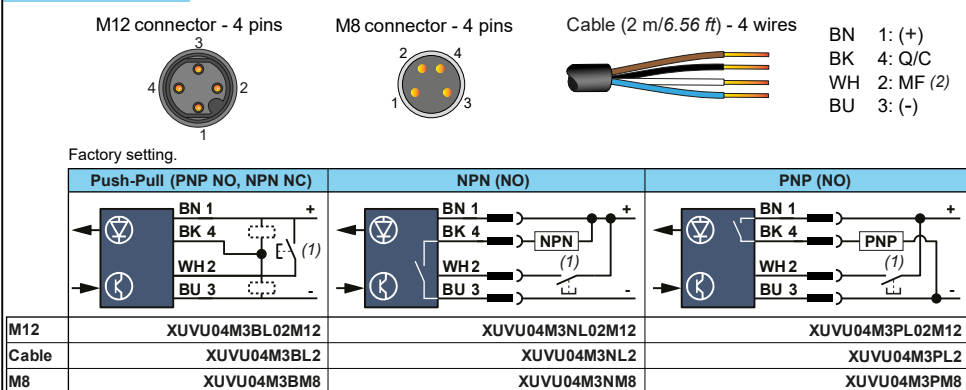
LEDs and settings



- Q LED (yellow): Status switching output Q
- Power LED (green)
- Teach-in buttons
- 5-segment LED bar graph (green): QoT/QoR indication

Q LED flashes	Description
1 Hz	Successful Static Teach-in
3 Hz	Static or Dynamic Teach-in Initialisation
6 Hz	Unsuccessful Dynamic Teach-In
2 x 1 Hz	Lock keypad
3 x 1 Hz	Output Signal NO/NC switch
4 x 1 Hz	Unlock keypad
10 x 6 Hz	Unsuccessful Static Teach-In

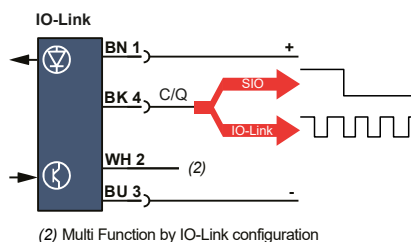
Wiring diagrams



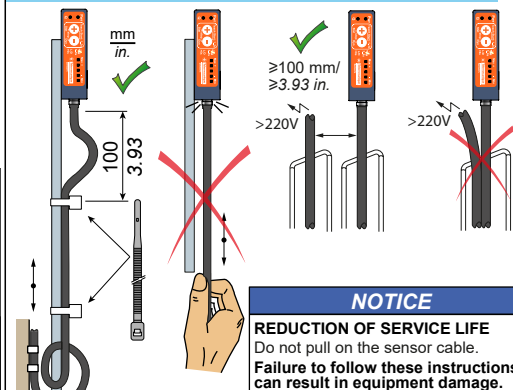
CAUTION

INOPERABLE EQUIPMENT DUE TO CYBER ATTACK ON IO-LINK

- Apply external cybersecurity protection on IO-Link Master device.
 - Download IO-Link description files from these web servers only:
<https://telemechaniquesensors.com/global/en/support/iolink> or
<https://ioddfinder.io-link.com/#/>
- Failure to follow these instructions can result in injury or equipment damage.

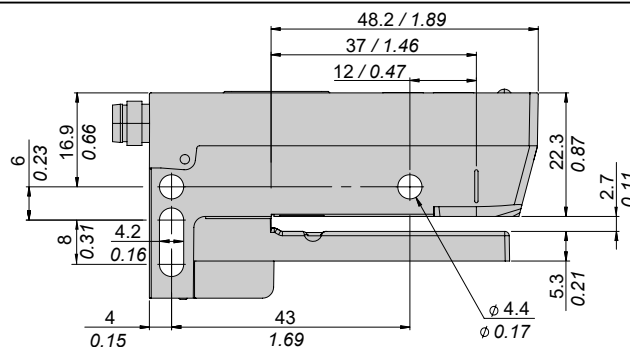
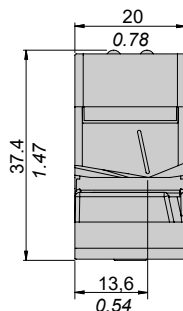
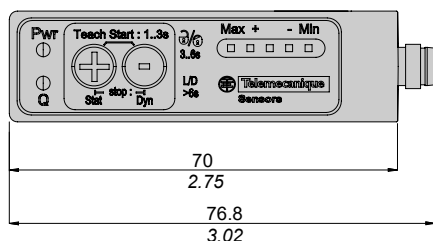


Mounting, wiring and maintenance precautions



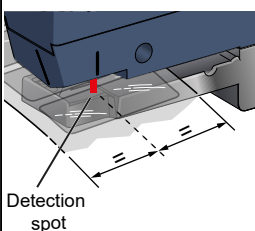
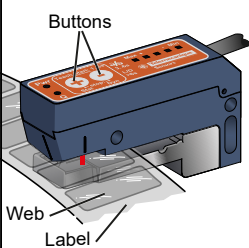
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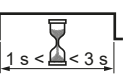
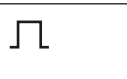
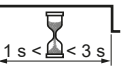
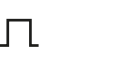
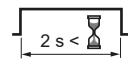
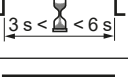
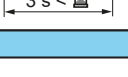
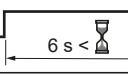
Dimensions

mm
in.

Setting

- ⊗ Off
- ⊗ On
- ⊗ 6 Hz Fast blinking
- ⊗ 3 Hz Medium blinking
- ⊗ 1 Hz Slow blinking



Action	Yellow Q LED	Bar graph
Dynamic teach with moving labels: web speed < 2,5 m/s (8.2 ft/s)		
①  &   External Teach	⊗ 3 Hz	OFF
② Wait until at least one label has passed the detection spot	-	-
③    External Teach	Contrast OK: ⊗ Q LED: Realtime detection status Contrast NOK: ⊗ 6 Hz Restart teach process	Contrast OK: Quality of Teach Contrast NOK: ⊗ 6 Hz Restart teach process
Static teach		
① Place the web under the detection spot (remove a label if needed)	Q LED: Realtime detection status	Quality of Run
②  &  	⊗ 3 Hz	OFF
③ Place a label under the detection spot	-	-
④   	Contrast OK: ⊗ 1 Hz then Q LED: Realtime detection status Contrast NOK: 10 x ⊗ 6 Hz	Contrast OK: Quality of Teach Contrast NOK: ON
Sensitivity adjustment		
Step-by-step  OR  	Q LED: Realtime detection status	 Max + - Min ON → → Max + - Min ON
Fast  OR  	Q LED: Realtime detection status	 Max + - Min 6 Hz ON → → Max + - Min 6 Hz ON
Locking/Unlocking the keypad		
Locking   &  	2 x ⊗ 1 Hz	Quality of Run
Unlocking   &  	4 x ⊗ 1 Hz	Quality of Run
Output signal: NO/NC switch		
 &  	3 x ⊗ 1 Hz	Quality of Run

Characteristics

System	Thru-beam
Type of transmission	Ultrasonic
Detection range	2,7 mm (0.11 in.)
Depth (distance between the detection spot and the bottom of the fork)	37 mm (1.46 in.)
Remote adjustment	NC or NO programmable function
Product certifications	IEC 60947-5-2; CE; UKCA; cULus
Materials	Plastic, metal
Detection performance	Minimum length of label 2 mm (0.078 in.)
	Minimum distance between 2 labels 1 mm (0.039 in.)
	Maximum flow rate For 2 mm label length, 2 mm gap: 4 m/s (240 m/min) - 13.12 ft/s (787.4 ft/min)
	Detection accuracy For v = 2 m/s: +/- 0.25 mm (6.56 ft/s: +/- 0.0098 in.)
Supply	Rated supply voltage 12...24 Vdc
	Voltage limits 10...30 Vdc
	Current consumption, no-load 45 <50 mA

Output	Maximum rated current	100 mA
	Maximum switching frequency	1.1 kHz
	LEDs	Output state Quality of Teach/ Quality of Run Power
Response time		440 μs
Environment	Operating temperature	+5...+55 °C (+41...+131 °F)
	Storage temperature	-20...+70 °C (-4...+158 °F)
	Degree of protection	IP65

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

UK **UK Representative:**
SE TESE UK Limited
2 North Park Road
Harrogate, HG1 5PA
United Kingdom