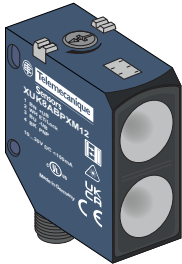


Photo-electric sensor - Compact design



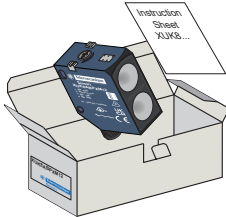
ECOLAB®



Background suppression (BGS)



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.

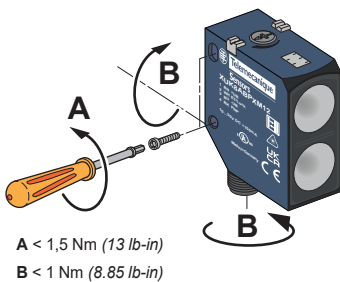
⚠ WARNING

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 XU Photo-electric sensor.
- Do not tamper with or make alterations on the unit.
- Comply with the wiring and mounting instructions.
- Clean the lens regularly, taking care not to scratch it.
- 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.).

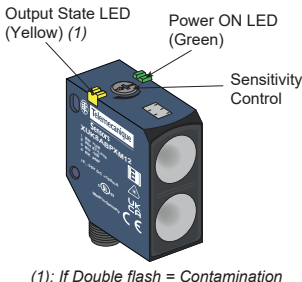
Failure to follow these instructions can result in death, serious injury, or equipment damage.

Mounting and Tightening torques



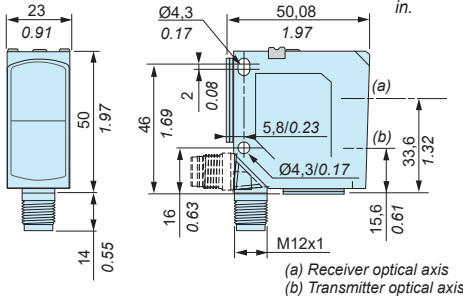
⚠ CAUTION
DEGREE OF PROTECTION DETERIORATION
Do not apply excessive torque on the sensor during the installation process.
Failure to follow these instructions can result in injury or equipment damage.

LEDs and Setting

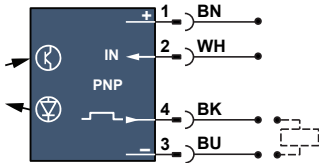
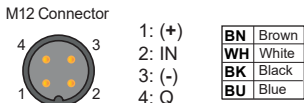


(1): If Double flash = Contamination

Dimensions

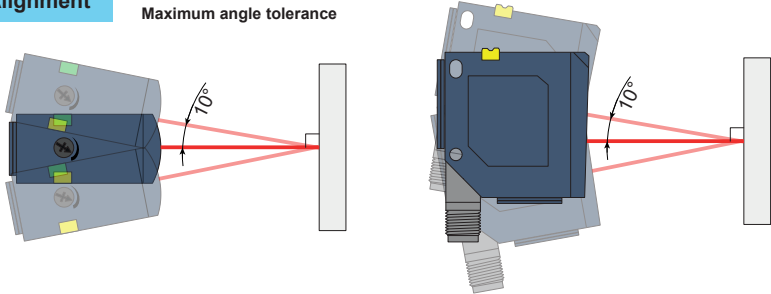


Wiring diagrams

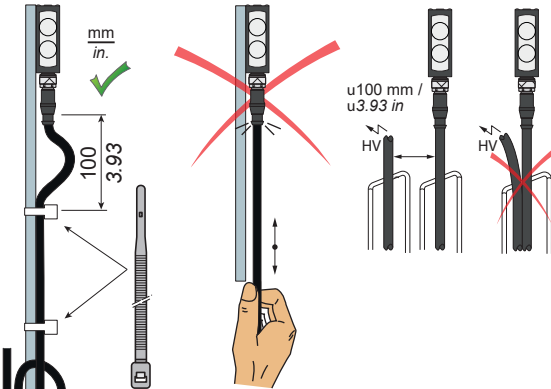


Alignment

Maximum angle tolerance



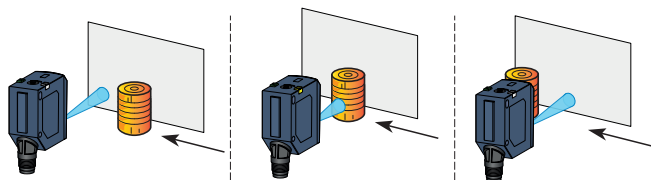
Mounting, wiring and maintenance precautions



NOTICE

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

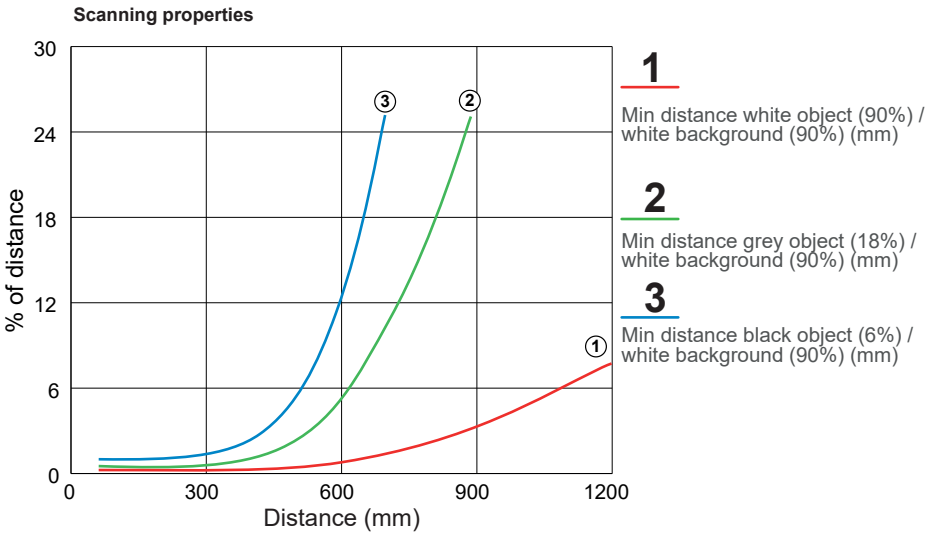
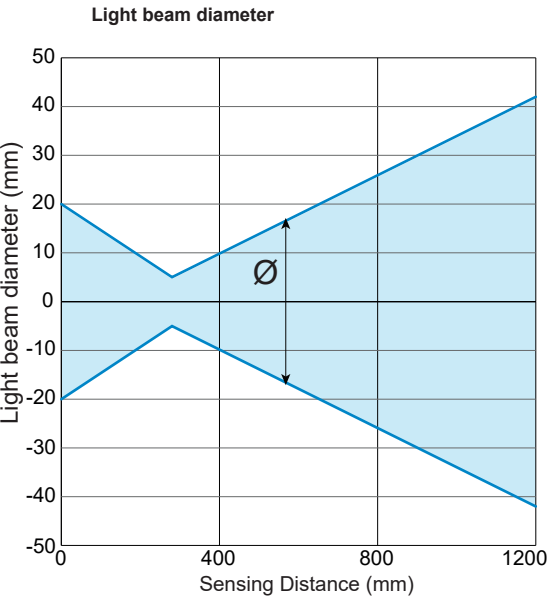
Switching mode for object



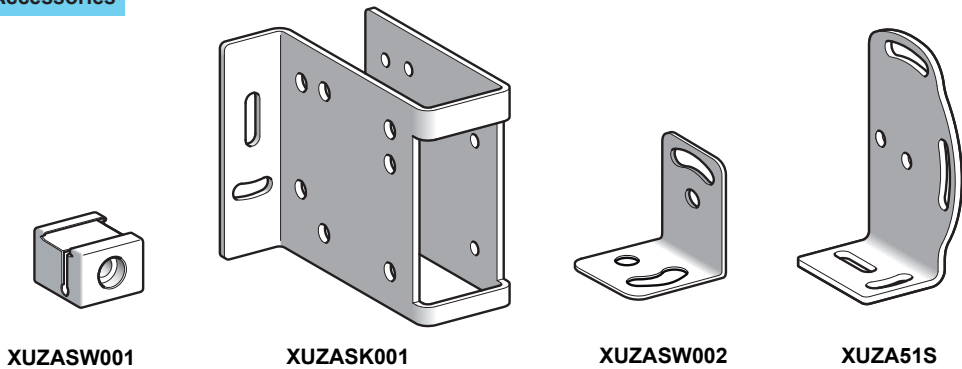
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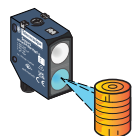
Detection curves



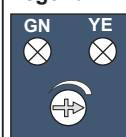
Accessories



Adjustment and setting



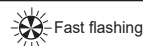
Legend:



OFF ON
GN: Green
YE: Yellow



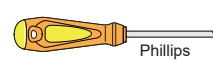
Flashing



Fast flashing



Object



Phillips



Background

A

Scanning distance setting

Turn potentiometer at the minimum value
Position object / align sensor to object.

Set the object point

Turn potentiometer clockwise until green LED ON & yellow LED ON (NO) / OFF (NC)

Set the background point

Remove the object
Turn potentiometer clockwise until green LED ON & yellow LED ON (NO) / OFF (NC)

Final setting

Turn potentiometer anti-clockwise between the object point and the background point
until green LED ON & yellow LED OFF (NO) / ON (NC)

B

NO / NC Setting

Setting via input IN (PIN 2)

+ = NC

- = NO

Not connected = NO

Characteristics

Certification	CE - UKCA - cULus - Ecolab
Sensing distance	White 3...1200 mm / 0.12...47.2 in Grey 5...750 mm / 0.2...29.5 in Black 10...600 mm / 0.39...23.6 in
Sensing distance setting	Potentiometer
Color of detection light beam	LED, blue, 450 nm - Risk group 2 according to EN62471
Spot size of the light beam	see "Light beam diameter" curve
Output type	PNP (NO or NC)
Current consumption	≤ 30 mA
Switching capacity	≤ 100 mA
Switching frequency	≤ 600 Hz
First-up delay	< 300 ms
Response time	830 μs max.
Recovery time	300 ms max.
Ambient Temperature	Operating : - 20...+60 °C (-4...+140 °F) - UL: max. +45 °C / 113°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
Permitted cable length	100 m / 328.1 ft
Material	Housing: ABS/PC, Lens: PMMA
Factory setting	Scanning distance = 500 mm (6%) and NO



Risk group 2

CAUTION

EYE INJURY DUE TO HAZARDOUS OPTICAL RADIATION

- Do not stare at the beam.
- Avoid any eye contact with the beam.

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



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

We welcome your comments about this document. You can reach us through the customer support page on your local website.

- 1**
Min distance white object (90%) / white background (90%) (mm)
- 2**
Min distance grey object (18%) / white background (90%) (mm)
- 3**
Min distance black object (6%) / white background (90%) (mm)

Sensing Distance (mm)	Light beam diameter (mm)
0	20
300	5
600	15
1200	42

We welcome your comments about this document. You can reach us through the customer support page on your local website.

[illegible]

M12 Connector

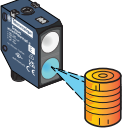
1: (+)
2: IN
3: (-)
4: 0

BN	Brown
WH	White
BK	Black
BU	Blue

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

XUZWASW001 **XUZWASK001** **XUZWASW002** **XUZA51S**

Adjustment and setting



GN

YE

OFF

ON

GN: Green

YE: Yellow

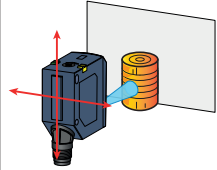
 Flashing

 Fast flashing

 Object

 Phillips

 Background

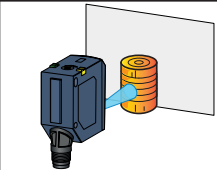


GN

YE

NO

NC

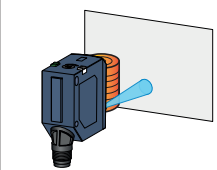


GN

YE

NO

NC

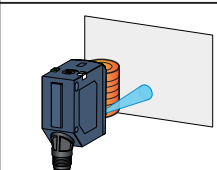


GN

YE

NO

NC



GN

YE

NO

NC

A

Scanning distance setting

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Position object / align sensor to object.

Set the object point

Turn potentiometer clockwise until green LED ON & yellow LED ON (NO) / OFF (NC)

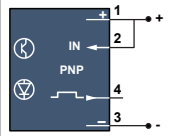
Set the background point

Remove the object
Turn potentiometer clockwise until green LED ON & yellow LED ON (NO) / OFF (NC)

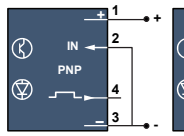
Final setting

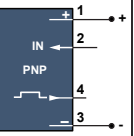
Turn potentiometer anti-clockwise between the object point and the background point
until green LED ON & yellow LED OFF (NO) / ON (NC)

NC



NO





B

NO / NC Setting

Setting via input IN (PIN 2)
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Not connected = NO

Characteristics

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Vibration resistance	conforming to EN 60947-5-2
Shock resistance	conforming to EN 60947-5-2
Permitted cable length	100 m / 328.1 ft
Material	Housing: ABS/PC, Lens: PMMA
Factory setting	Scanning distance = 500 mm (6%) and NO

 BlueLight

Risk group 2

CAUTION

EYE INJURY DUE TO HAZARDOUS OPTICAL RADIATION

• Do not stare at the beam.
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CE

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3/3

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