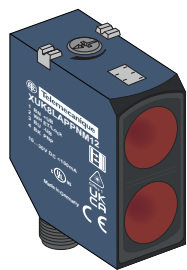


XUK8LAPPNM12 Laser diffuse sensor with background suppression



ECOLAB



Background suppression (BGS)

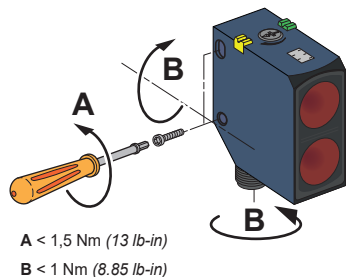


<https://tesensors.com/global/en/document/S1B75483>

Scan the QR-code to access this Instruction Sheet in different languages or you can download it from our website at: www.tesensors.com

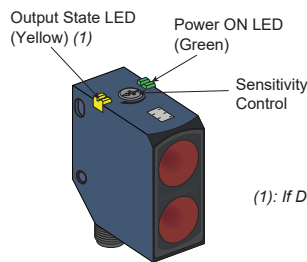
We welcome your comments about this document. You can reach us through the customer support page on your local website.

Mounting and Tightening torques



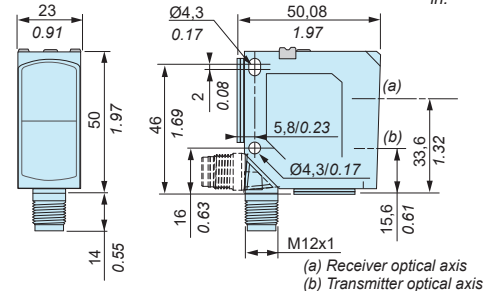
A < 1,5 Nm (13 lb-in)
B < 1 Nm (8.85 lb-in)

LEDs and Setting

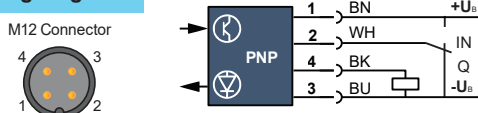


(1): If Double flash = Contamination

Dimensions



Wiring diagrams



BN	Brown
WH	White
BK	Black
BU	Blue

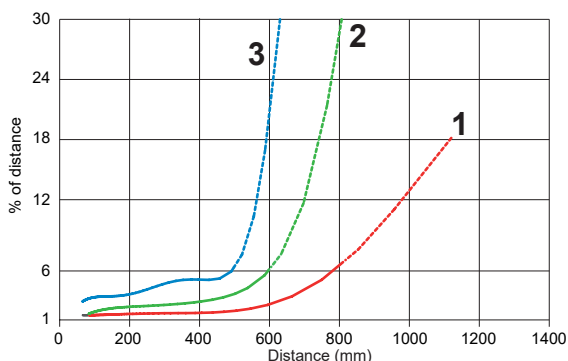


Wiring precautions

Use certified CYJV or R/C CYJV2 cable assemblies

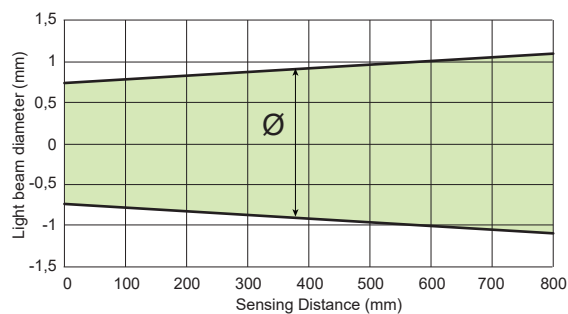
Detection curves

Scanning properties



- 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)

Light beam diameter



Characteristics

Certification	CE - UKCA - cULus - Ecolab
Sensing distance (Reference material 200 x 200 mm)	White 5...800 mm / 0.20...31.50 in Grey 10...600 mm / 0.39...23.62 in Black 30...500 mm / 1.18...19.68 in
Sensing distance setting	Potentiometer - multi-turn
Color of detection light beam	Laser class 1, red, 655 nm
Spot size of the light beam	see "Light beam diameter" curve
Wavelength	$\lambda = 655 \text{ nm}$
Puls duration	$t = 0,2 \mu\text{s}$
Frequency	$f = 7,1 \text{ kHz}$
Limit of radiant power pulse	$P_p \leq 31 \text{ mW}$
Output type	PNP (N.O. or N.C.)
Current consumption	$\leq 30 \text{ mA}$
Switching capacity	$\leq 100 \text{ mA}$
Switching frequency	$\leq 1000 \text{ Hz}$
First-up delay	300 ms max.
Response time	0,5 ms max.
Recovery time	0,5 ms max.
Ambient Temperature	Operating : - 20...+60 °C (-4...+140 °F) Storage : - 20...+80 °C (-4...+176 °F)
Power Voltage	Rated operational voltage: 12...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 class	<input type="checkbox"/>
Degree of protection	IP67 conforming to EN/IEC 60529 IP69K conforming to DIN 40050
Vibration resistance	Frequency range: 10 Hz to 55 Hz Acceleration: 7 gn
Shock resistance	Peak acceleration: 30 gn Duration of the pulse: 11 ms
Permitted cable length	100 m / 328.1 ft
Material	Housing: ABS/PC, Lens: PMMA
Factory setting	max. scanning distance and N.O.

WARNING

UNINTENDED EQUIPMENT OPERATION

- Comply with the wiring and configuration instructions.
- Clean the lens regularly, taking care not to scratch it.
- Check the connections and fixings during maintenance operations.

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

CAUTION

HAZARD OF LASER RADIATION EXPOSURE

- Do not stare into the beam.
- Do not operate below - 20°C (- 4°F)
- Follow all operating instructions.

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



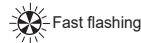
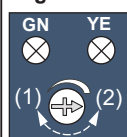
CLASS 1 LASER PRODUCT (DIN EN 60825-1)
Complies with 21 CFR 1040.10 and 1040.11
except for deviations pursuant to laser Notice No. 50 dated June 24, 2007

Electrical equipment should be installed, operated and maintained only by qualified personnel.
No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

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Adjustment and setting

Legend:



GN: Green
YE: Yellow

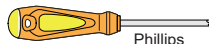


Action duration

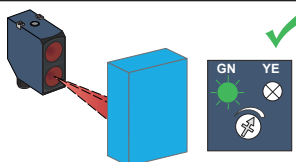
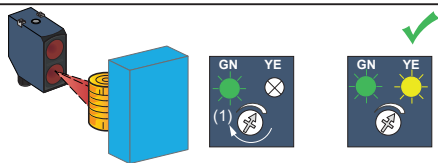
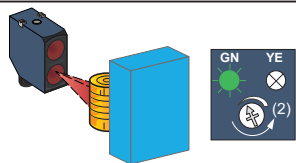
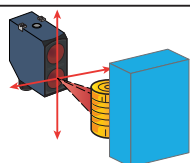
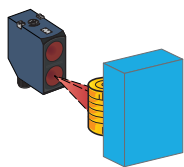


Background

(1) Clockwise direction
(2) Counter-clockwise direction



Phillips



A Scanning distance setting

Factory setting = Sn 500 mm / 19.69 in. (reference material 6 % remission).
Check operation conditions.
Position object / align sensor to object.

Turn potentiometer to the left (factory setting = 800 mm / 31.50 in on white 90 %), until output switches off (yellow LED off).

Then turn potentiometer slowly to the right until output switches and yellow LED lights up permanently [the yellow status LED is on (N.O. setting) or is off (N.C. setting)]: Object is now reliably detected.

If necessary, adapt scanning distance to application conditions.
Turning potentiometer to the right:
→ increases scanning distance.
Turning potentiometer to the left:
→ reduces scanning distance.

Background setting

Remove object.
Check the stable status of the yellow LED :
The yellow status LED is off (N.O. setting) or is on (N.C. setting)
and fine tune if necessary.

B N.O. / N.C Setting

Setting via input IN (PIN 2)
+ UB = N.C.
- UB = N.O.
Not connected = N.O.



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