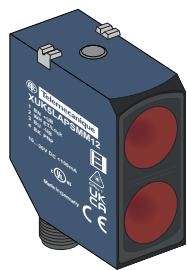


## XUK5LAPSMM12 Laser diffuse sensor, energetic



ECOLAB®



Diffuse

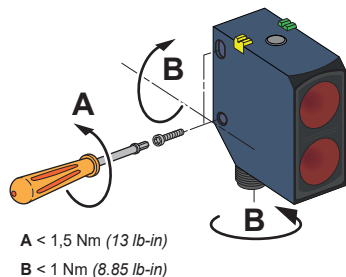


<https://tesensors.com/global/en/document/S1B75482>

Scan the Qr-code to access this Instruction Sheet in different languages or you can download it from our website at: [www.tesensors.com](http://www.tesensors.com)

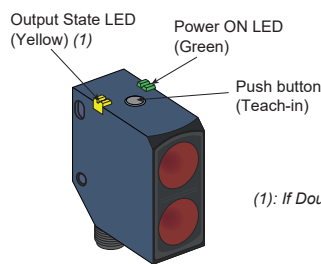
We welcome your comments about this document. You can reach us through the customer support page on your local website.

### Mounting and Tightening torques



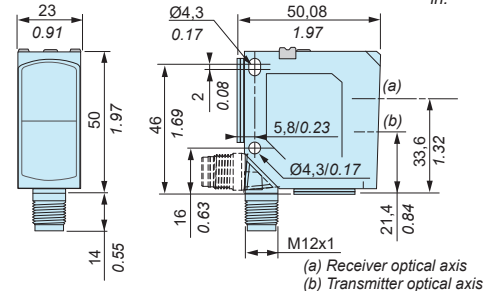
A < 1,5 Nm (13 lb-in)  
B < 1 Nm (8,85 lb-in)

### LEDs and Setting

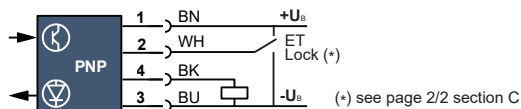


(1): If Double flash = Contamination

### Dimensions



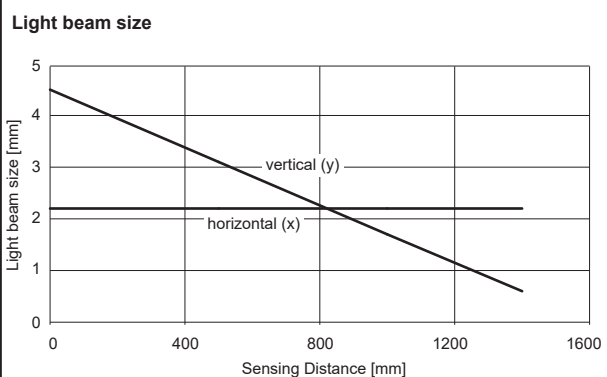
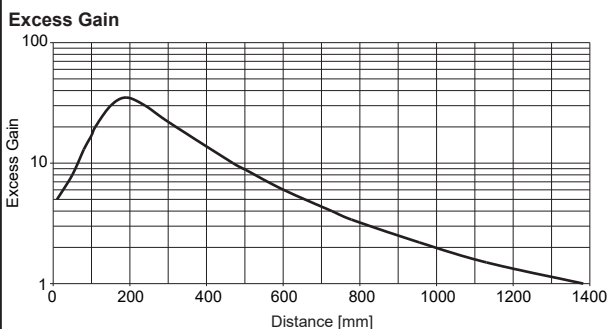
### Wiring diagrams



BN	Brown
WH	White
BK	Black
BU	Blue

**Wiring precautions**  
Use certified CYJV or R/C CYJV2 cable assemblies

### Detection curves



### Characteristics

Certification	CE - UKCA - cULus - Ecolab
Sensing distance (Reference material)	White 5...1200 mm / 0.20...47.24 in Grey 10...700 mm / 0.39...27.56 in Black 100...400 mm / 3.94...15.75 in
Hysteresis	≤ 15 %
Sensing distance setting	Teach button or control input ET / Lock
Color of detection light beam	Laser class 1, red, 655 nm
Spot size of the light beam	see "Light beam size" curve
	Wavelength λ = 655 nm
	Puls duration t = 2 μs
	Frequency f = 8.6 kHz
	Limit of radiant power pulse Pp = 4 mW
Output type	PNP (N.O. or N.C.)
Current consumption	≤ 30 mA
Switching capacity	≤ 100 mA
Switching frequency	≤ 3500 Hz
First-up delay	300 ms max.
Response time	0,8 ms max.
Recovery time	0,8 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	
Degree of protection	IP67 conforming to <b>EN/IEC 60529</b> IP69K conforming to <b>DIN 40050</b>
Vibration resistance	Frequency range: 10 Hz to 55 Hz Acceleration: 7 gn
Shock resistance	Peak acceleration: 10 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.



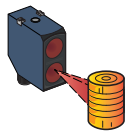
CLASS 1 LASER PRODUCT (DIN EN 60825-1)  
Complies with 21 CFR 1040.10 and 1040.11  
except for deviations pursuant to laser Notice No. 50 dated June 24, 2007

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.

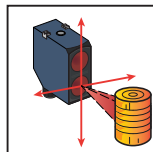
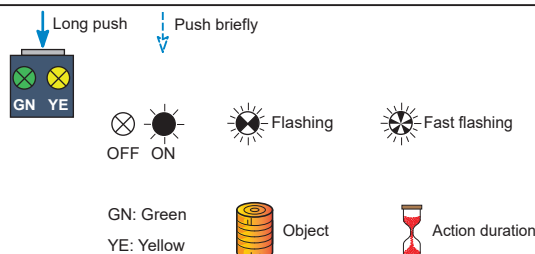
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## Adjustment and setting

By button or control input.  
Factory setting = max. scanning distance

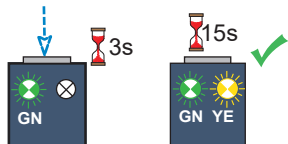
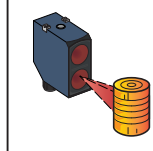


### Legend:

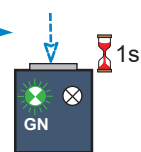
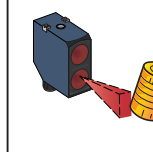


### A Setting of scanning distance / sensitivity

Factory setting = max. sensing range.  
Check operation conditions.  
Position object / align sensor to object.

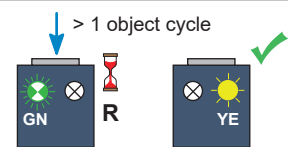
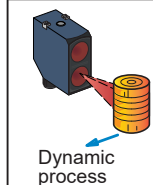


Press the button.  
The green LED flashes (3 s).  
As soon as the LEDs flash asynchronously (15 s),  
release the button, the learning process is ready.



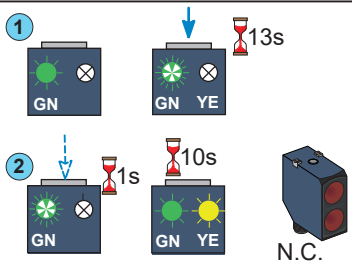
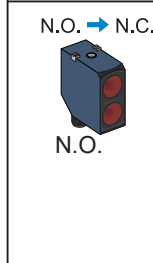
### When object is not moving (static):

Remove object.  
Push button briefly (1 s).  
Release button. The setting is saved. The sensor is ready for use.  
If the object is detected, the yellow status LED is on (N.O. setting) or is off (N.C. setting).



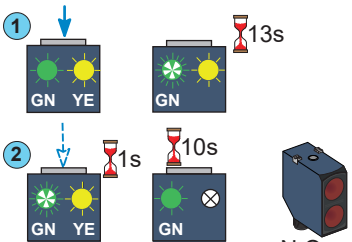
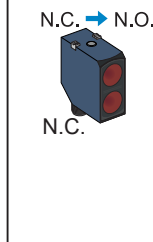
### When object is moving (dynamic):

Press the pushbutton and keep it pressed until the object has passed at least once.  
Release the button. The setting is saved.  
The sensor is ready for use.  
If the object is detected, the yellow status LED is on (N.O. setting) or is off (N.C. setting).



### B Setting of N.O. / N.C

- Without object, press the receiver learning button for (about) 13 s. The green LED flashes rapidly.
  - As long as the green LED is flashing, press the learning button for 1 s to invert the output.  
Without object, yellow LED off = N.O., yellow LED on = N.C.
- When OK, do not push the button for 10 s.  
Setting is saved. Sensor is ready to operate.



### D Setting with input (ET - External Teach / Lock)

+U<sub>B</sub> = Teach-in (as button)  
- U<sub>B</sub> = Button locked  
not connected = Normal operation (free run).

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