

XUK2LA•SMM12R/T Laser Through-beam sensor

XUK2LAKSMM12T

XUK2LAPSMM12R

ECOLAB



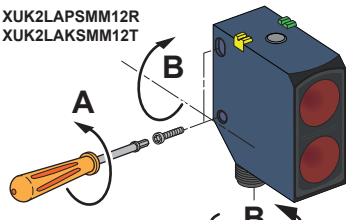
Thru-beam


<https://tesensors.com/global/en/document/S1B75481>

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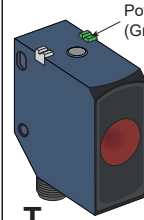
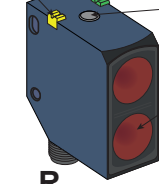
Mounting and Tightening torques

XUK2LAPSMM12R
XUK2LAKSMM12T

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

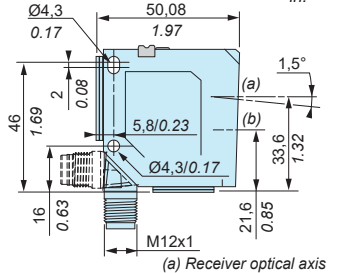
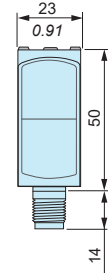
B < 1 Nm (8.85 lb-in)

LEDs and Setting

Power ON LED
(Green)Output State LED
(Yellow) (1)Power ON LED
(Green)Push button
(Teach-in)Alignment
indication LED

(1): If Double flash = Contamination

Dimensions

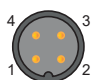


(a) Receiver optical axis

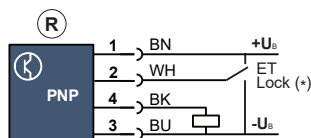
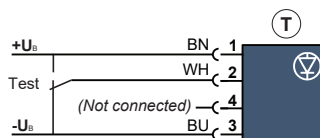
(b) Transmitter optical axis

Wiring diagrams

M12 Connector



Transmitter control input:

Test → +U_s = Test (transmitter OFF)Test → -U_s or not connected = Normal operation

(*) see page 2/2 section D

BN	Brown
WH	White
BK	Black
BU	Blue

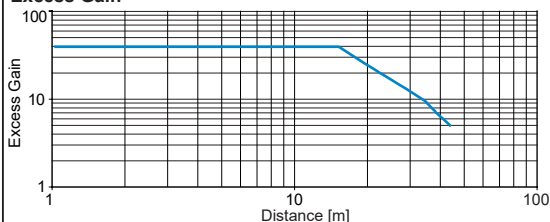


Wiring precautions

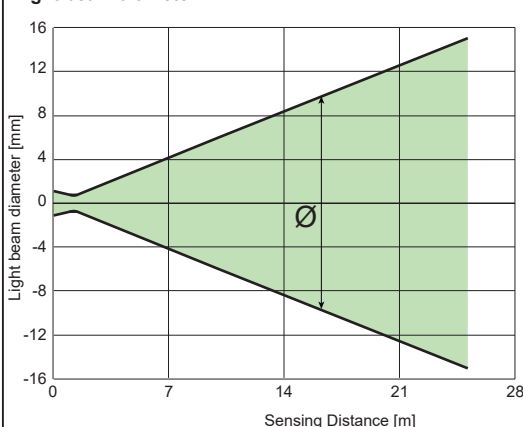
Use certified CYJV or R/C CYJV2 cable assemblies

Detection curves

Excess Gain



Light beam diameter



Characteristics

Certification	CE - UKCA - cULus - Ecolab
Maximum sensing distance	30 m / 98.42 ft
Scanning range	0...25 m / 0...82.02 ft
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 diameter" curve
Wavelength	λ = 655 nm
Puls duration	t = 0.7 μs
Frequency	f = 70 kHz
Limit of radiant power pulse	Pp = 4.5 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	0,14 ms max.
Recovery time	0,14 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
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.



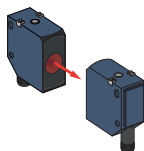
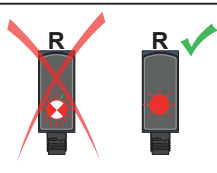
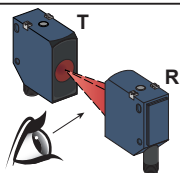
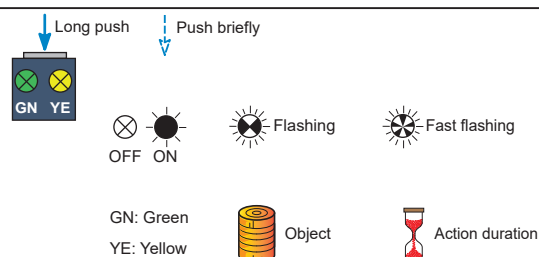
CLASS 1 LASER PRODUCT (DIN EN 60825-1)
Complies with 21 CFR 1040.10 and 1040.11
except for deviations pursuant to laser Notice No.
50 dated June 24, 2007

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.

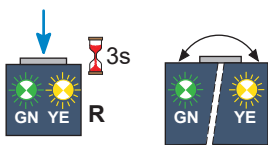
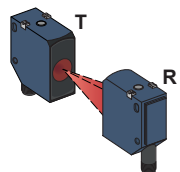
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Adjustment and setting

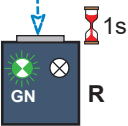
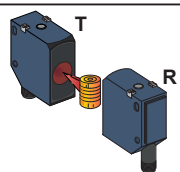
By button or control input.
Factory setting = max. scanning distance

**Legend:****A Initial setting with XUK2LAKSMM12T****1** Check operation conditions.

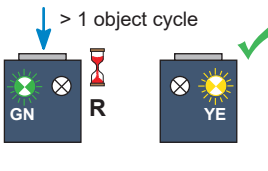
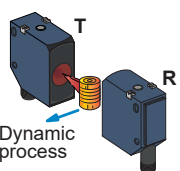
With free light path, align light spot XUK2LAKSMM12T to XUK2LAPSMM12R.
Pay attention to alignment indication (LED 3, red in front screen of XUK2LAPSMM12R).
If it is on, alignment is OK.

**B Adaption to application XUK2LAPSMM12R**

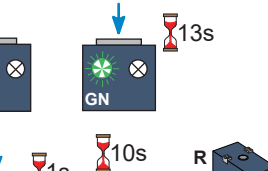
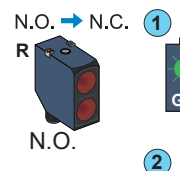
With free light path, push button on XUK2LAPSMM12R (approx. 3 s) until both LEDs flash synchronously.
Release button (LEDs flash asynchronously).

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

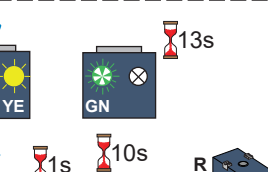
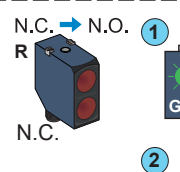
Place object in sensing range.
Push button briefly (1 s).
Release button.

**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).

**C Setting of N.O. / N.C****1** Without object, press the receiver learning button for (about) 13 s. The green LED flashes rapidly.**2** 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) on XUK2LAPSMM12R**

+U_B = Teach-in (as button)
- U_B = Button locked
not connected = Normal operation (free run).

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