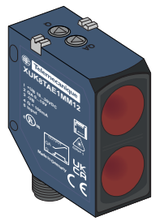
XUK8TAE●MM12 (50 x 23 x 50)

www.tesensors.com

XUK8TAE1MM12 / XUK8TAE2MM12 Diffuse distance sensor with background suppression



XUK8TAE1MM12: Qa → 0...10V
XUK8TAE2MM12: Qa → 4...20mA

IO-Link
ECOLAB
CE
UKCA
cULus

Background suppression (BGS)



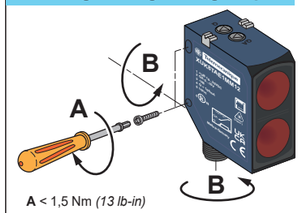


https://tesensors.com/global/en/document/EAV83773

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.

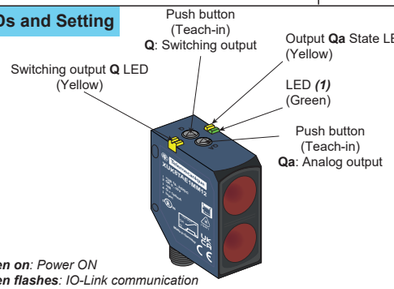
Mounting and Tightening torques



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

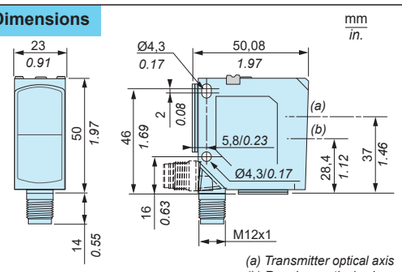
B < 1 Nm *(8.85 lb-in)*

LEDs and Setting



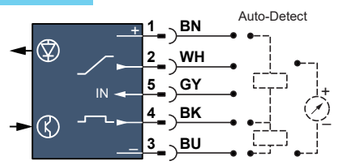
(1) :
***Green on**: Power ON*
***Green flashes**: IO-Link communication*

Dimensions



(a) Transmitter optical axis
(b) Receiver optical axis

Wiring diagrams



Extension cable reference: **XZCPV11V12L2 / L5 / L10**
In **IO**-Link mode, a 4-pin cable must be used

M12 Connector



5-pin

1: (+U_B)
2: Q_A
3: (-U_B)
4: Q/IO-Link
5: IN

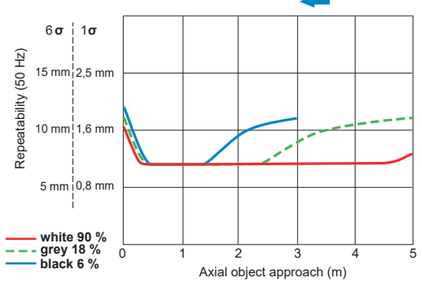
Output

BN: Brown
WH: White
GY: Grey
BK: Black
BU: Blue

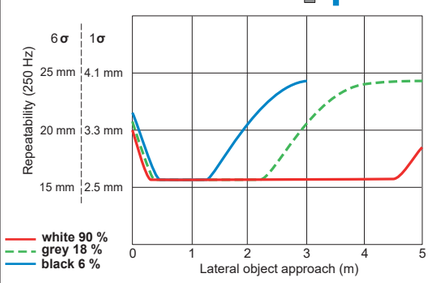
Wiring precautions
Use certified CYJV or R/C CYJV2 cable assemblies

Detection curves

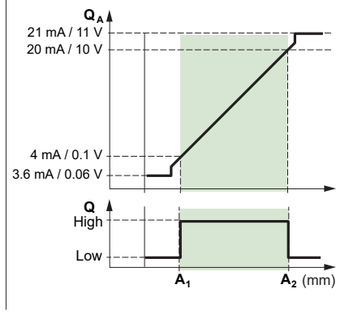
Reproducibility (50 Hz)



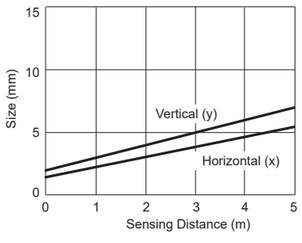
Reproducibility (250 Hz)



Output characteristic



Size of light spot



Manufacturer :
Schneider Electric Industries SAS
35 rue Joseph Monier
92500 Rueil Malmaison
France

UK Representative :
Schneider Electric Limited
Stafford Park 5
Telford, TF3 3BL
United Kingdom

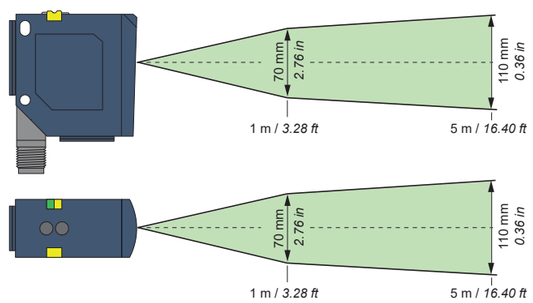
Уполномоченный поставщик в РФ :
АО «Шнейдер Электрик»
Адрес: 127018, Россия, г. Москва, ул. Двинцев, д.12, корп.1
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Мекен-жайы: Қазақстан Республикасы, Алматы қ., Достық даң.,
«Кен Дала» Бизнес Орталығы, 5-ші қабат.
Тел.: +7 (727) 357 23 57
Факс.: +7(727) 357 24 39

en Electrical equipment should be installed, operated, serviced, 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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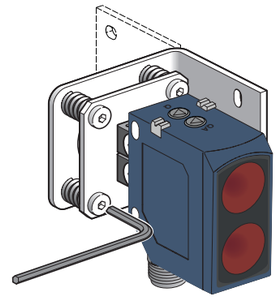
Prevention against other light beams in the colored area



Adjustment

Adjustment of light spot position with optional mounting angle bracket XUZASK004.

Align sensor to the target object.
Observe the preferential direction of proximity switches.



Characteristics

Certification		CE - UKCA - cULus - Ecolab
Sensing distance (Reference material)	White	0,1...5 m / *0.33…16.4 ft*
	Grey	0,1...5 m / *0.33…16.4 ft*
	Black	0,1...3 m / *0.33…9.84 ft*
Setting		Teach button
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 < 5 ns
Frequency		f = 62,5 kHz
Limit of radiant power pulse		Pp < 1,25 mW
Switching output Q		Auto-Detect PNP/NPN (N.O. or N.C.) - IOLINK
Control input IN (switching function Q): see illustration G		+U_B = Teach-in -U_B = 🔒 Open = normal function 🔒 = button locked
Current consumption		≤ 60 mA
Switching capacity		≤ 100 mA
Analog output **Q_A**		**XUK8TAE1MM12** 0…10 V | **XUK8TAE2MM12** 4…20 mA
Switching frequency		≤ 500 Hz
First-up delay		300 ms max.
Response time		1,2 ms max.
Recovery time		1,2 ms max.
Ambient Temperature		Operating : - 20...+60 °C *(-4...+140 °F)* Storage : - 20...+80 °C *(-4...+176 °F)*
Power Voltage		Rated operational voltage: 24 Vdc Ripple p-p 10% maximum Operating range: 18...30 Vdc (including ripple)
Product Protection		Power supply : Reverse polarity protection Output: Short circuit protection
Protection class		⧈
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: 10 gn Duration of the pulse: 11 ms
Permitted cable length		100 m / *328.1 ft*
Material		Housing: ABS/PC, Lens: PMMA

IO-Link Data sheet and IODD IO-Link on website: *https://tesensors.com/iolink*

⚠ 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.

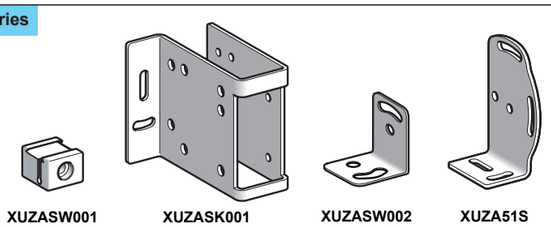
Failure to follow these instructions can result in death, serious injury or equipment damage.

⚠ 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.

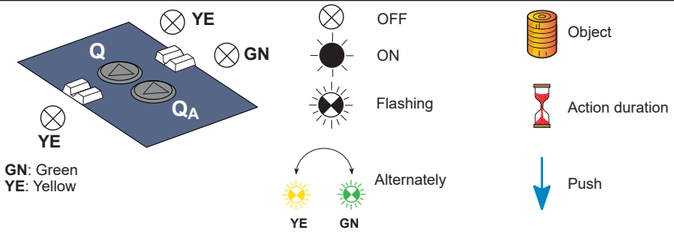
CLASS 1 LASER PRODUCT (IEC 60825-1: 2014)
Complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to laser Notice No. 56 dated May, 2019

Accessories



XUZASW001 **XUZASK001** **XUZASW002** **XUZA51S**

XUK8TAE●MM12 (50 x 23 x 50)



Setting

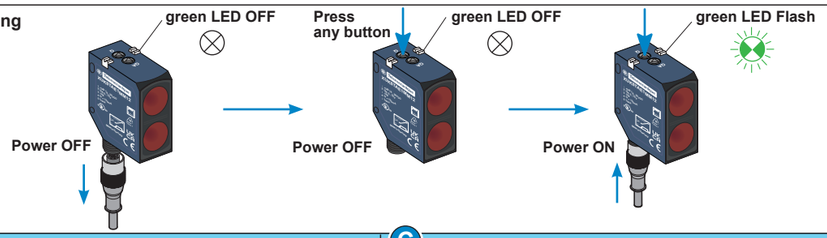
The sensor has an analogue and a switching output, which can be set independent of each other.
Analog output: The two teach points identify the beginning and end of the measuring area and scale the analog output (see Chapter B).
Teach 1: 4 mA / 0,1 V .
Teach 2: 20 mA / 10 V.
Switching output: The two teaching points identify the beginning and end of the switching window (see Chapter C).
Setting modes: The teach sequence and object distance determine the characteristics of the analog output Q_A and the window width of the switching output Q (see Chapter D).

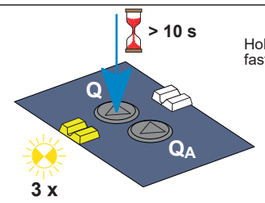
A Overview

Function	Action Step 1 (1)		See illustration
	Teach-button	External teach	
Analog characteristic	press Q_A > 3 s	connect IN > 3 s	B
Switching window	press Q > 3 s	connect IN > 6 s	C
N.O. / N.C.	press Q > 10 s	connect IN > 10 s	E
Auto-Detect / NPN / PNP	press Q > 13 s	connect IN > 13 s	F

(1) Step 2: press Q_A (or Q) / connect IN > 1 s

Factory setting



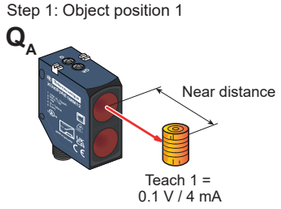


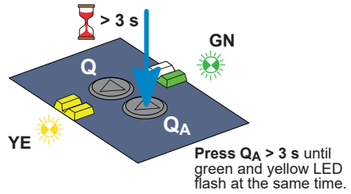
Hold any button down and power on for more than 10s until both yellow LEDs flash fast at the same time.

ok

B Analog Output

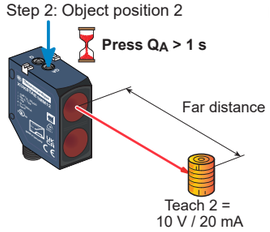
Step 1: Object position 1





Step 2: Object position 2

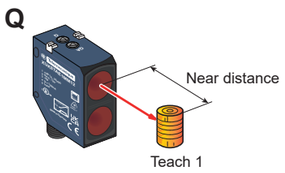
External Teach-in: G

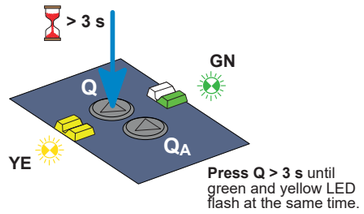


ok

C Switching Output

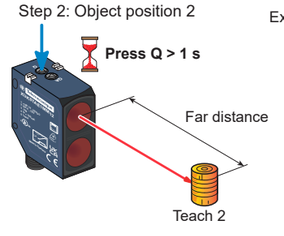
Step 1: Object position 1





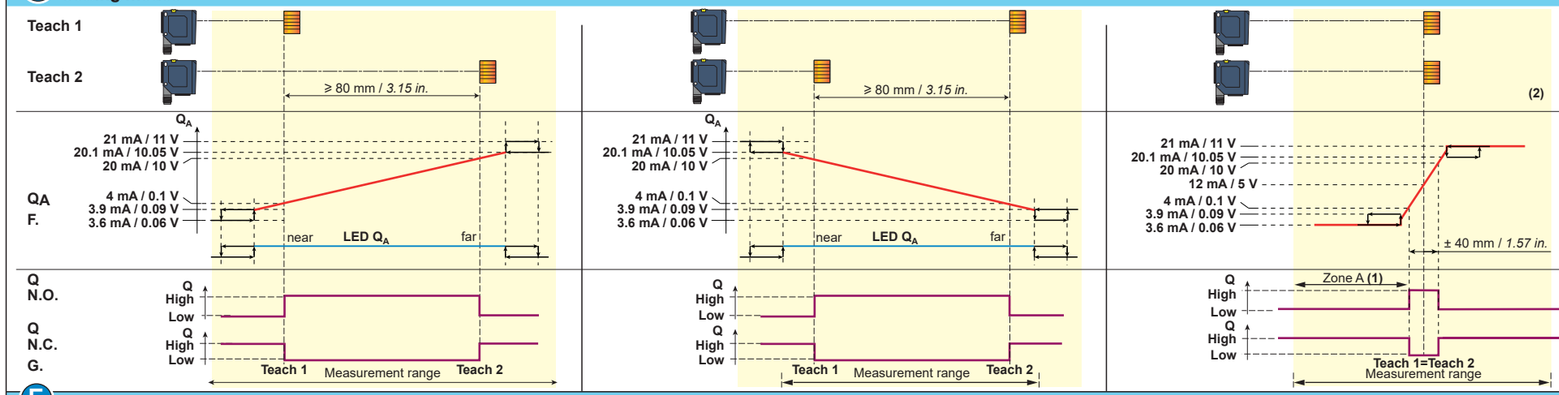
Step 2: Object position 2

External Teach-in: G



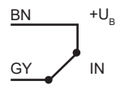
ok

D Setting modes



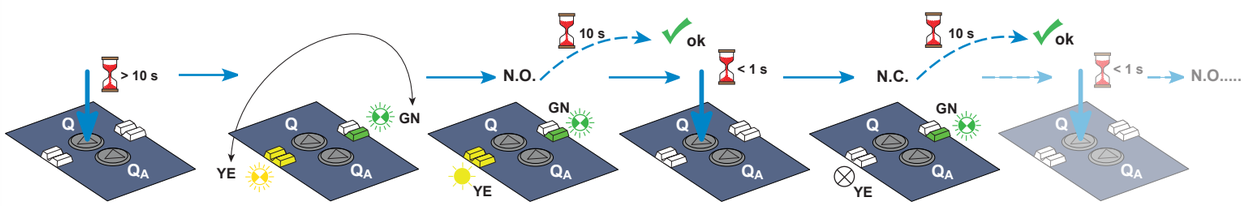
(1) Automatic reflector mode: All non-transparent objects in zone A are reliably detected.
(2) Min. switching window ± 80 mm (*3.15 in*)

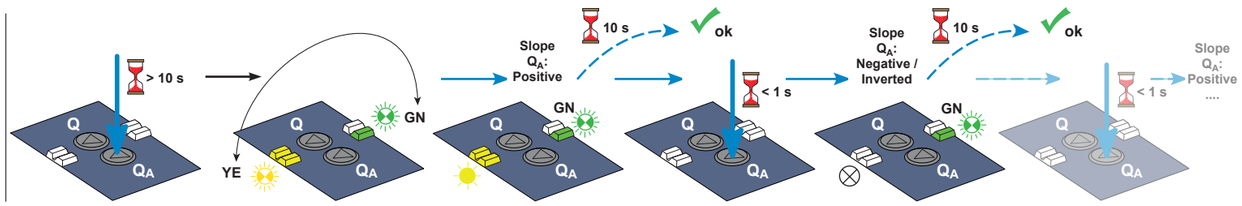
G External Teach-In



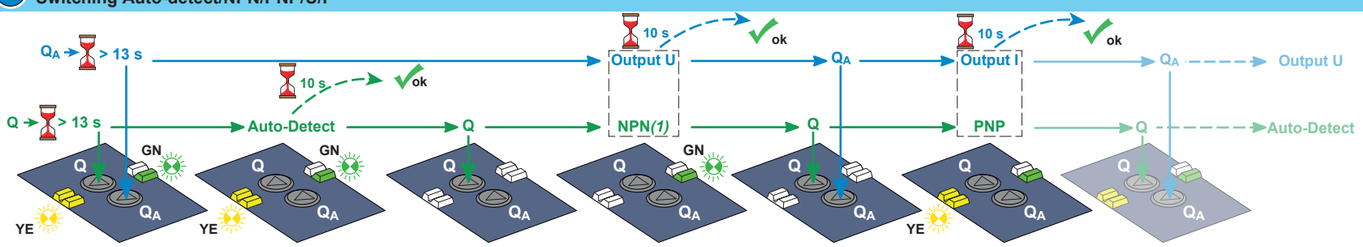
Setting via control input IN:
Closing and opening times according to the respective information stated in the overview **A.**

E Switching N.O./N.C./Slope





F Switching Auto-detect/NPN/PNP/U/I



(1):
IO-link is specified for PNP

Press Q > 13 s until green and yellow LED flash at the same time.