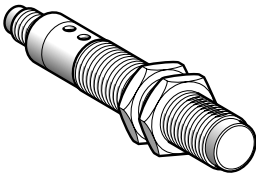


Design 18



System	Diffuse
Type of transmission	Ultraviolet (370 nm)
Nominal sensing distance (Sn)	20 mm for colour mark reading, 0...80 mm in diffuse mode
Sensitivity adjustment	By potentiometer

References		
3-wire, PNP	NO function (2)	XU5M18U1D
Weight (kg)		0.075

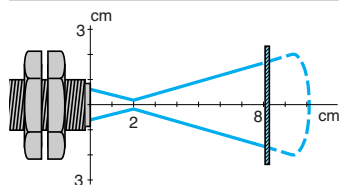
Characteristics		
Product certifications		C€, CSA, UL
Ambient air temperature	For operation	- 25...+ 55 °C
	For storage	- 40...+ 70 °C
Vibration resistance	Conforming to IEC 60068-2-6	7 gn, amplitude ± 0.6 mm (f = 10...55 Hz)
Shock resistance	Conforming to IEC 60068-2-27	30 gn, duration 11 ms
Degree of protection	Conforming to IEC 60529	IP 67
Connection		M12 connector (suitable female connectors, including pre-wired versions, see page 5/28)
Materials	Case	Nickel plated brass
	Lenses	PMMA
Spot diameter		At 20 mm: Ø 3 x 1 mm
Auxiliary functions		External synchronisation, locking
Indicator lights	Output state	Green LED
	Teach mode	–
Rated supply voltage		⎓ 12...24 V with protection against reverse polarity
Voltage limits		⎓ 10...30 V (including ripple)
Switching capacity (sealed)		≤ 100 mA with protection against reverse polarity, overload and short-circuit
Voltage drop, closed state		≤ 1.5 V (PNP)
Current consumption, no-load		≤ 20 mA
Maximum switching frequency		1 kHz
Delays	First-up	≤ 100 ms
	Response	≤ 500 µs
	Recovery	≤ 500 µs
Time delay		“OFF delay”: 20 ms, activated/deactivated by cabling method

(1) Applications: detection of invisible reference marks, markings, glues or varnishes containing bluing agents.
(2) Output activated when a blued mark on a non blued background is present.

Curves

XU5M18U1D

Detection curves

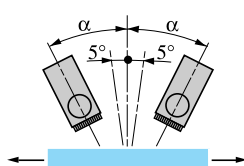


Object 5 x 5 cm, white 90%

Spot size at 20 mm: oval, \varnothing 3 x 1 mm

Vertical inclination

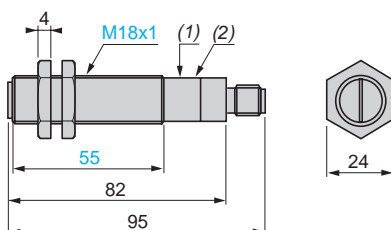
$5^\circ < \alpha < 20^\circ$



An angle of 5 to 10°
from vertical is recommended
for reflective or transparent
surfaces
Maximum vertical inclination: 20°

Dimensions

XU5M18U1D



(1) Potentiometer

(2) Green LED

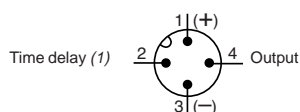
Fixing nut tightening torque: 15 N.m.

Wiring schemes

XU5M18U1D

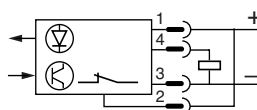
Connector scheme

(Sensor connector pin view)

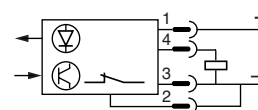


Wiring schemes (3-wire ---)

PNP output
Without output signal time delay



With output signal time delay (20 ms)



(1) "OFF delay" of output signal:

- no time delay: connect contact 2 to (+)
- 20 ms time delay: connect contact 2 to (-)