

Product data sheet

Specifications



Photoelectric sensors XU, XU5, diffuse, luminescence, Sn 80 mm, 12...24 VDC, M12

XU5M18U1D

Main

| | |
|-------------------------------|--|
| Range of product | Telemecanique Photoelectric sensors XU |
| Series name | Application packaging |
| Electronic sensor type | Photo-electric sensor |
| Product specific application | Luminescence |
| Sensor name | XU5 |
| Sensor design | M18 |
| Detection system | Diffuse |
| [Sn] nominal sensing distance | 0 ... 80 mm in diffuse mode 20 mm spot Ø 3 x 1 mm for colour mark reading |
| Material | Metal |
| Type of output signal | Discrete |
| Supply circuit type | DC |
| Wiring technique | 3-wire |
| Discrete output type | PNP |
| Discrete output function | 1 NO |
| Electrical connection | 1 male connector M12, 4 pins |
| Emission | Ultra-violet (transmission frequency = 370 nm) |

Complementary

| | |
|----------------------------|---|
| Enclosure material | Nickel plated brass |
| Lens material | PMMA |
| Output type | Solid state |
| Output function governance | Light |
| Add on output | Without |
| Status LED | Output state: 1 LED (green) |
| [Us] rated supply voltage | 12...24 V DC with reverse polarity protection |
| Supply voltage limits | 10...30 V DC |
| Switching capacity in mA | <= 100 mA (reverse polarity, overload and short-circuit protection) |
| Switching frequency | <= 1000 Hz |

| | |
|------------------------|---|
| Maximum voltage drop | <1.5 V (closed state), PNP |
| Current consumption | <= 20 mA no-load |
| Time delay range | 20 ms off-delay activation/deactivation by cabling method delay |
| Maximum delay first up | 100 ms |
| Maximum delay response | 0.5 ms |
| Maximum delay recovery | 0.5 ms |
| Setting-up | Sensitivity adjustment with potentiometer |
| Diameter | 18 mm |
| Length | 95 mm |
| Product weight | 0.075 kg |

Environment

| | |
|---------------------------------------|---|
| Product certifications | CE UL CSA |
| Ambient air temperature for operation | -25...55 °C |
| Ambient air temperature for storage | -40...70 °C |
| Vibration resistance | 7 gn, amplitude = +/- 0.6 mm (f = 10...55 Hz) conforming to IEC 60068-2-6 |
| Shock resistance | 30 gn (duration = 11 ms) conforming to IEC 60068-2-27 |
| IP degree of protection | IP67 conforming to IEC 60529 |

Packing Units

| | |
|------------------------------|----------|
| Unit Type of Package 1 | PCE |
| Number of Units in Package 1 | 1 |
| Package 1 Height | 7.1 cm |
| Package 1 Width | 9.6 cm |
| Package 1 Length | 4.3 cm |
| Package 1 Weight | 88.0 g |
| Unit Type of Package 2 | S01 |
| Number of Units in Package 2 | 11 |
| Package 2 Height | 15.0 cm |
| Package 2 Width | 15.0 cm |
| Package 2 Length | 40.0 cm |
| Package 2 Weight | 1.193 kg |

Offer Sustainability

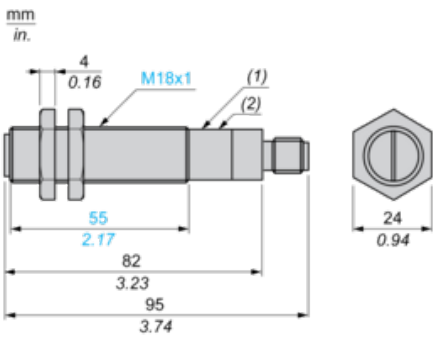
| | |
|----------------------------|---|
| Sustainable offer status | Green Premium product |
| REACH Regulation | REACH Declaration |
| EU RoHS Directive | Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration |
| Mercury free | Yes |
| RoHS exemption information | Yes |
| Environmental Disclosure | Product Environmental Profile |
| Circularity Profile | End of Life Information |

| | |
|---------------------------|---|
| California proposition 65 | WARNING: This product can expose you to chemicals including: Diisononyl phthalate (DINP), which is known to the State of California to cause cancer, and Di-isodecyl phthalate (DIDP), which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov |
|---------------------------|---|

Contractual warranty

| | |
|----------|-----------|
| Warranty | 18 months |
|----------|-----------|

Dimensions



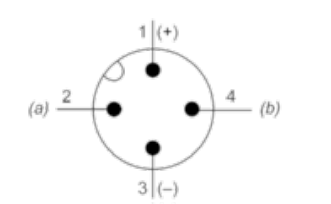
- (1) Potentiometer
- (2) Green LED

Mounting and Clearance

Fixing nut tightening torque: < 15 N.m

Wiring Schemes

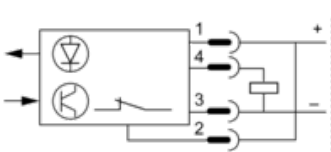
Connector Scheme



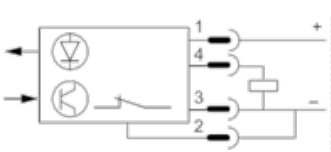
(a) Time delay: "OFF delay" of output signal: - no time delay: connect contact 2 to (+), - 20 ms time delay: connect contact 2 to (-)
(b) Output

PNP Output (3-wire Discontinue Current)

Without output signal time delay

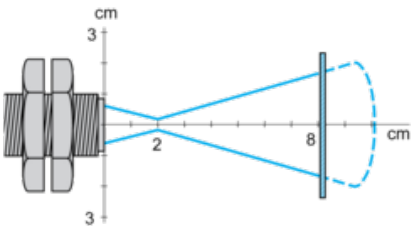


With output signal time delay (20 ms)



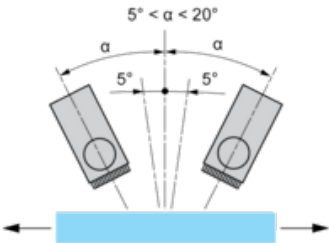
Curves

Detection Curves



Object 5 x 5 cm, white 90 %
Object 5 x 5 cm, white 90 %

Vertical Inclination



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

Recommended replacement(s)