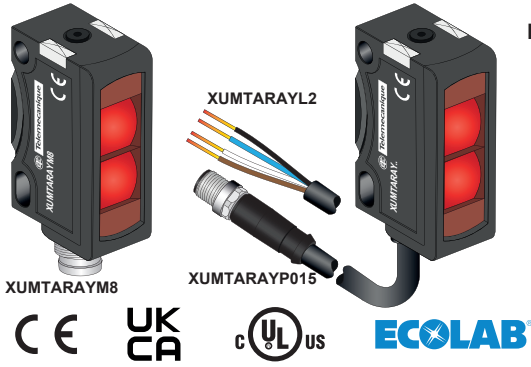# XUMTARAYM8 / XUMTARAYL2 / XUMTARAYP015 (34 x 12 x 20)
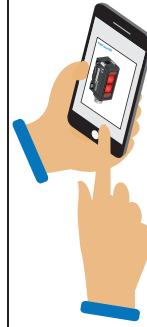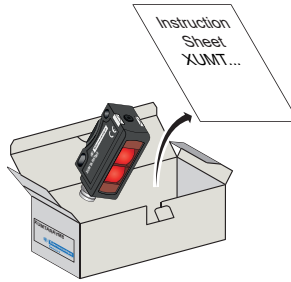
## Photo-electric sensors - Miniature design

XUMTARAYL2

XUMTARAYM8

XUMTARAYP015

Polarised reflex
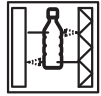
**Package Content**
*(Example)*

Instruction Sheet XUMT...

Scan the code to access this Instruction Sheet in different languages and all the product information or you can visit 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.

CE  UKCA  c UL us  ECOLAB

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### ⚠⚡ DANGER
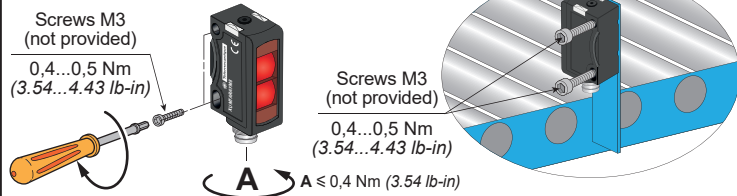
**HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH**
- Disconnect all power before servicing equipment.
- Do not connect this device to AC power.
- The power voltage must not exceed the rated range.

**Failure to follow these instructions will result in death or serious injury.**

### ⚠ WARNING
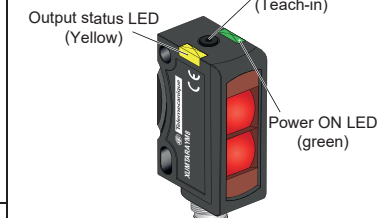
**IMPROPER SETUP OR INSTALLATION**
- This equipment must only be installed and serviced by qualified personnel.
- Read, understand, and follow the compliance below, before installing the XUM Photo-electric sensor.
- Do not tamper with or make alterations on the unit.
- Comply with the wiring and mounting instructions.
- Check the connections and fastening during maintenance operations.
- The proper functioning of the XU photoelectric sensor and its operating line must be checked regularly and according to the application (for example number of operations, level of environmental pollution, etc.).

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

---

### Mounting and tightening torques

Screws M3 (not provided)
0,4...0,5 Nm *(3.54...4.43 lb-in)*

Screws M3 (not provided)
0,4...0,5 Nm *(3.54...4.43 lb-in)*

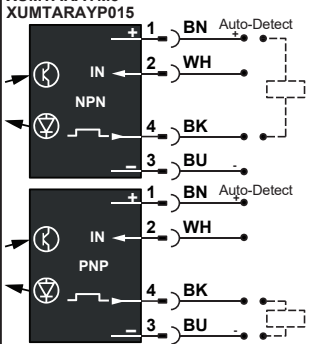**A** ≤ 0,4 Nm *(3.54 lb-in)*

### ⚠ CAUTION

**DEGREE OF PROTECTION DETERIORATION**
Do not apply excessive torque on the sensor during the installation process.

**Failure to follow these instructions can result in injury or equipment damage.**
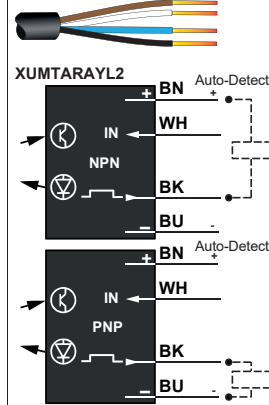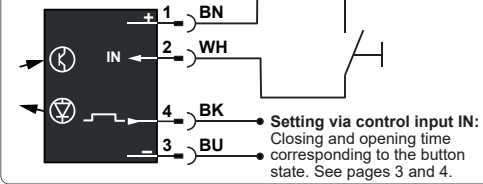
### LEDs and settings

Push button (Teach-in)
Output status LED (Yellow)
Power ON LED (green)

---

### Wiring diagrams

M8 Connector 4 pins

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

**XUMTARAYM8 XUMTARAYP015**

2 m Cable - 4 wires

**XUMTARAYL2**

1  BN  Auto-Detect  +
2  WH  IN
4  BK  NPN
3  BU  -

1  BN  Auto-Detect  +
2  WH  IN
4  BK  PNP
3  BU  -

**IO-Link**

1  BN  +
2  WH  IN
4  BK  PNP  SIO
3  BU  -  C/Q  IO-Link

**Remote teach-in**

1  BN  +
2  WH  IN
4  BK
3  BU

**Setting via control input IN:**
Closing and opening time corresponding to the button state. See pages 3 and 4.

### ⚠ CAUTION

**INOPERABLE EQUIPMENT DUE TO CYBER ATTACK ON IO-LINK**
- Apply external cybersecurity protection on IO-Link Master device.
- Download IO-Link Description files only from these web servers:
  https://tesensors.com/global/en/support/iolink or
  https://ioddfinder.io-link.com/#/

**Failure to follow these instructions can result in injury or equipment damage.**

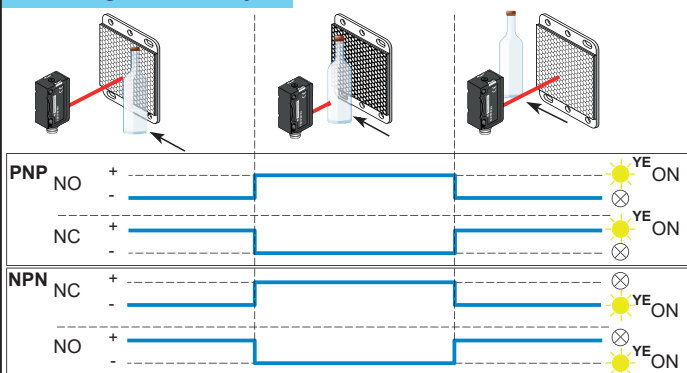| Pin | Wire | Signal | Definition |
|---|---|---|---|
| 1 | BN | + | + 24 Vdc |
| 2 | WH | IN | + = NO<br>- = NC<br>Open = NO |
| 3 | BU | - | 0 Vdc |
| 4 | BK | Q | Switching signal (SIO) |
|   |   | C | Communication IO-Link |

IO-Link data tables and IODD files are online: Scan the 2D code, above

### Mounting, wiring and maintenance precautions

mm / in.

≥100 mm ≥3.93 in

HV

100 / 3.93

HV
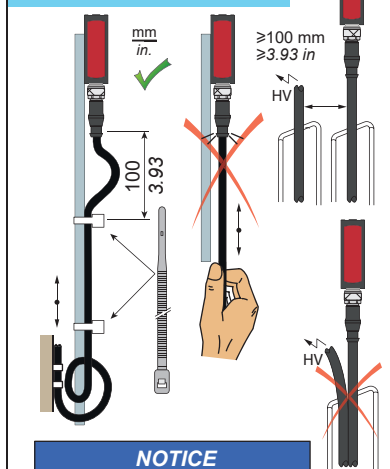
### NOTICE

**REDUCTION OF SERVICE LIFE**
Do not pull on the sensor cable.

**Failure to follow these instructions can result in equipment damage.**

---

### Switching mode for object
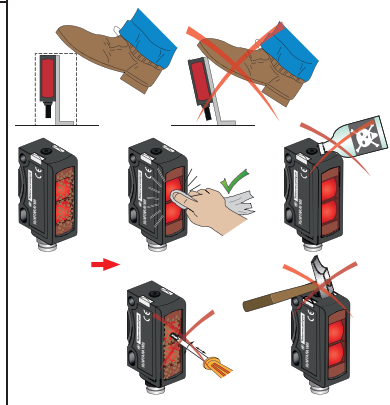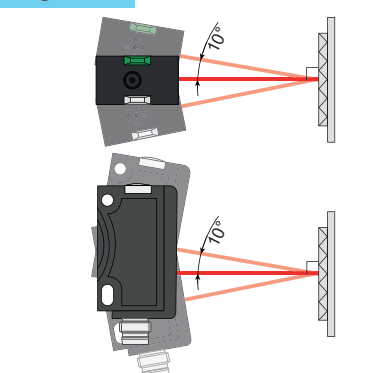
| PNP | NO | + / - | YE ON / ⊗ |
| | NC | + / - | YE ON / ⊗ |
| NPN | NC | + / - | ⊗ / YE ON |
| | NO | + / - | ⊗ / YE ON |

### Alignment

10°

10°

---

CE  UKCA

Digi Parts  *Ihr Schweizer Industriepartner*  info@digiparts.ch  www.digiparts.ch

**Telemecanique Sensors**

# XUMTARAYM8 / XUMTARAYL2 / XUMTARAYP015 (34 x 12 x 20)

## Dimensions

$\dfrac{mm}{in.}$

1 mm = *0.0397 in.*

12 / 0.47

34 / 1.34

6,6 / 0.26

M8x1

Ø 3,2 / Ø 0.13

20 / 0.79

2,6 / 0.1

30,4 / 1.20

2,5 / 0.1

5 / 0.2

Ø 3,2 / Ø 0.13

(a)

8,8 / 0.35

(b)

13,5 / 0.53

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

**XUMTARAYM8**

150 / 5.91

M12x1

**XUMTARAYP015**

2000 / 78.7

**XUMTARAYL2**

16,5 / 0.65

15,9 / 0.63

11,4 / 0.45

32 / 1.26

22,9 / 0.9

Ø 3,2 / Ø 0.13

16 / 0.63

12 / 0.47

M4

## Accessories

**Dovetail clamp mounting
for flexible adjustment**
(to order separately)

**XUZARM**

② → ← ②

③

①

±15°

## Reflector examples (to order separately)

**XUZC50**

ALAY

**XUZC60S11**

**XUZC39**

**XUZC24**

**XUZC100**

## Reflectors Dimensions

$\dfrac{mm}{in.}$

**XUZC50**

35 / 1.38

2xØ5,5 / 2xØ0.22

51 / 2.01

69 / 2.72

47 / 1.85

60 / 2.36

4 / 0.16

2xØ4,5 / 2xØ0.18

8,1 / 0.32

51 / 2.01

**XUZC60S11**

2xM3

34 / 1.34

60 / 2.36

52 / 2.05

4 / 0.16

7,5 / 0.3

40 / 1.57

**XUZC100**

96 / 3.78

100 / 3.94

96 / 3.78

9,5 / 0.37

100 / 3.94

**XUZC39**

3,5 / 0.14

Ø39 / Ø1.54

Ø37 / Ø1.46

6,5 / 0.26

**XUZC24**

9 / 0.35

45 / 1.77

4 / 0.16

7,5 / 0.3

29 / 1.14

Ø7,5 / Ø0.3

21 / 0.83

33 / 1.3

24 / 0.94

2xØ4 / 2xØ0.16

=    =

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Telemecanique
Sensors

# XUMTARAYM8 / XUMTARAYL2 / XUMTARAYP015 (34 x 12 x 20)

## Pre-wired connectors (examples)

PVC cable for general use
PUR cable for severe industrial environments

**Jumper**
**M8 - 4 pins plug**
**M8 - 4 pins socket**

XZCPB1141L2 2m PUR
XZCPB1141L5 5m PUR

**Jumper**
**M12 - 4 pins plug**
**M8 - 4 pins socket**

XZCR2711037T1 1m PUR
XZCR2711037T2 2m PUR

**M8 - 4 pins socket**
**4 wires**

XZCR2705037R1 1m PUR
XZCR2705037R2 2m PUR

For other cables (angled or length) visit our website: Tesensors.com

## Curves

**Light spot diameter**

horizontal = vertical

Ø

Size (mm) vs Distance (m)

Reference material: **XUZC50** reflector
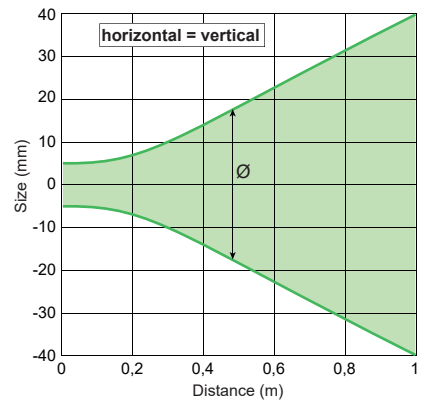
## Setting
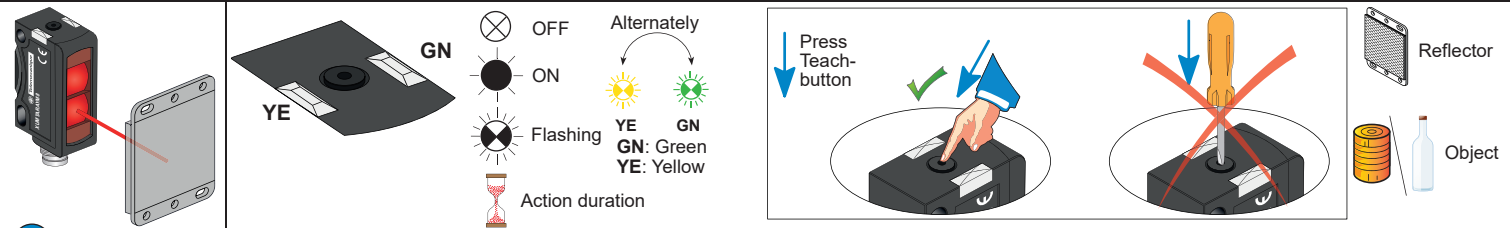
The sensor has 2 different Teach-in modes:
**A-Reflector - Reflector Teach-in (RTI):** is suited for the detection of transparent objects. The setting is made 2x to the reflector (see illustration A). Switching threshold control active.
**B-Dynamic Teach-in (DTI):** is suited for nearly all applications. The setting is performed during the running process (see illustration B). The reflector must be completely exposed to the beam route at least once. Switching threshold control active.
**C-Reflector-Object Teach-in (ROTI):** is suitable for the detection of non-transparent objects. The setting is made to the reflector and the object (see illustration C). Switching threshold control inactive.
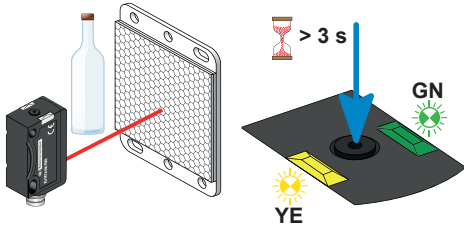
The sensor has 3 different **Switching NO/NC** settings:
1: NO/NC via teach-in in series
2: Sensor always NC
3: Sensor always NO

⊗ OFF
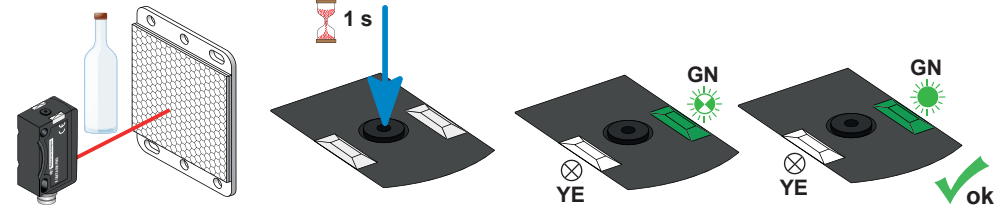● ON
⊗ Flashing
⌛ Action duration

Alternately
YE ↔ GN
**GN:** Green
**YE:** Yellow

Press Teach-button

Reflector

Object

## A — Reflector - reflector teach-in (RTI)

**Step 1: Teach-in reflector**

⌛ > 3 s

GN
YE

**Press teach button > 3 s**
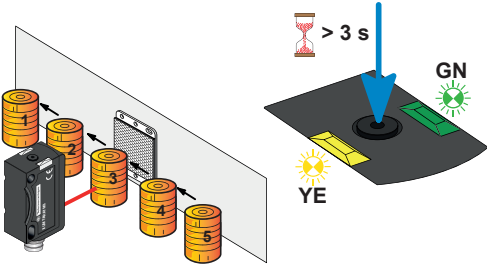until green and yellow LED flash at the same time.

**Step 2: Teach-in reflector**

⌛ 1 s

GN ⊗ YE
GN ⊗ YE ✓ ok

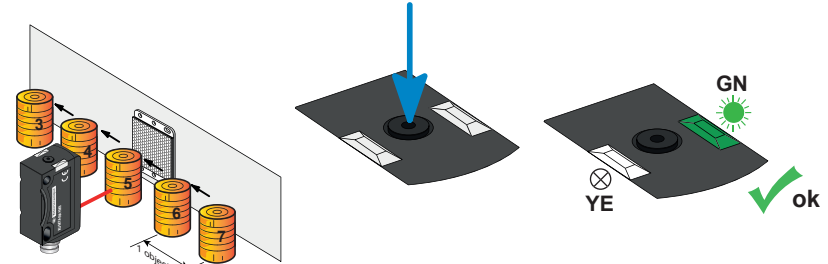**Press teach button 1 s**
The green LED flashes

## B — Dynamic Teach-in (DTI)

**Step 1: During running process**

⌛ > 3 s

GN
YE

**Press teach button > 3 s**
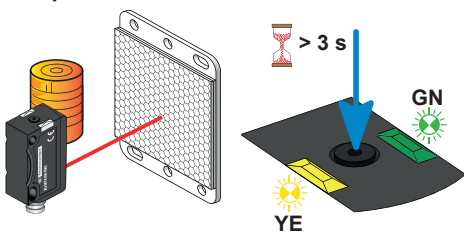until green and yellow LED flash at the same time.

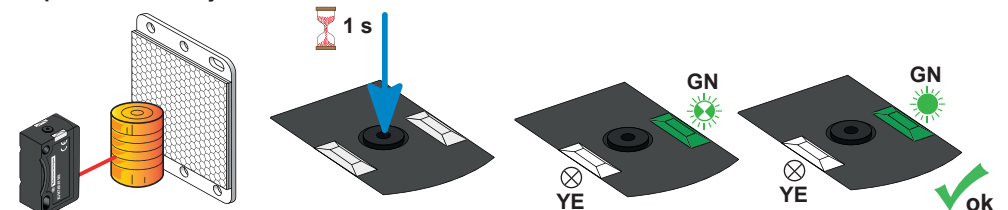**Step 2: Teach-in object during running process**

1 object

GN ⊗ YE ✓ ok

**Press teach button > 1 Object**

## C — Reflector - Object teach-in (ROTI)

**Step 1: Teach-in reflector**

⌛ > 3 s

GN
YE

**Press teach button > 3 s**
until green and yellow LED flash at the same time.

**Step 2: Teach-in Object**

⌛ 1 s

GN ⊗ YE
GN ⊗ YE ✓ ok

**Press teach button 1 s**
The green LED flashes

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# XUMTARAYM8 / XUMTARAYL2 / XUMTARAYP015 (34 x 12 x 20)

## D  Switching NO/NC
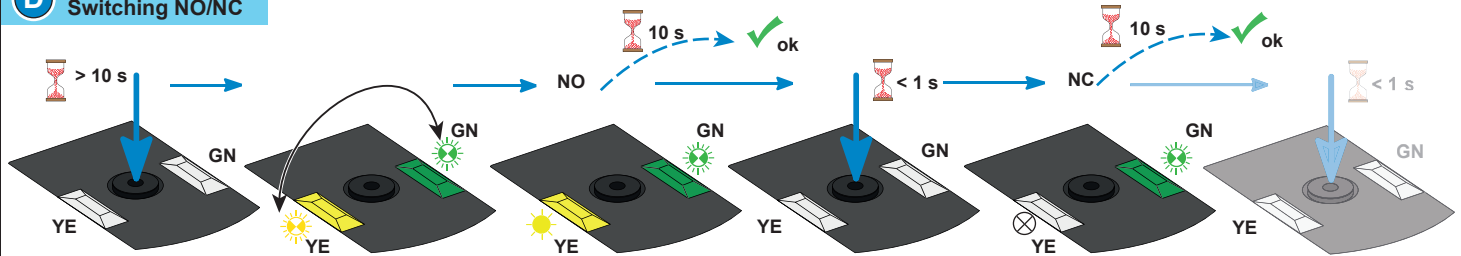


## E  SWITCHING AUTO-DETECT / NPN / PNP
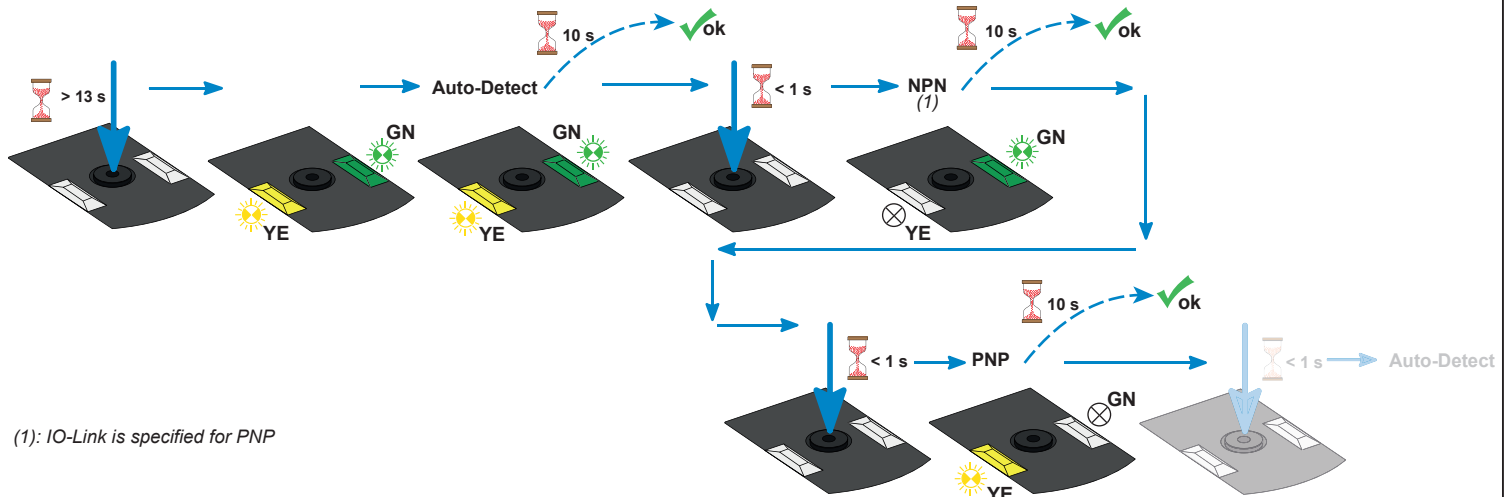


(1): IO-Link is specified for PNP

## F  Factory Setting

Max. scanning distance and NO



Green & yellow LEDs flash slowly at the same time

Keep any button pressed and Power ON > 10 s until yellow LEDs flash 3x at the same time
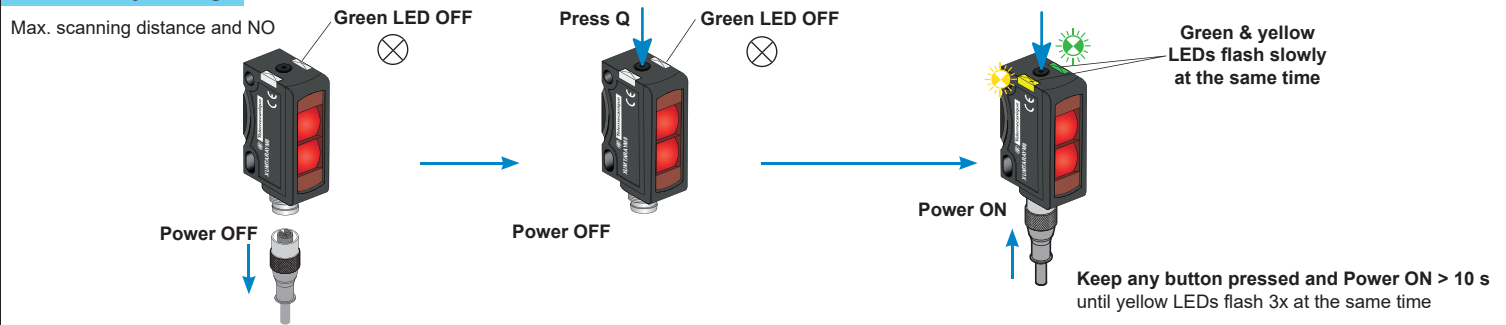
## Characteristics

| | |
|---|---|
| Certification | CE - UKCA - cULus - Ecolab |
| Sensing distance | 0...2 m / 0...6.56 ft. (Reference material: **XUZC50** reflector) |
| Setting | Teach button |
| Color of detection light beam | LED Red, 632 nm |
| Light spot size | See spot diameter curve |
| Switching output Q | Auto-Detect - PNP/NPN (NO or NC) - IO-LINK |
| Control input IN (switching function Q): | **(+)** = Teach-in<br>**(-)** = 🔒 button locked<br>Open = normal function |
| Current consumption | ≤ 30 mA |
| Switching capacity | ≤ 100 mA |
| Switching frequency | ≤ 1000 Hz |
| First-up delay | < 300 ms |
| Response time | 500 µs |
| Recovery time | < 300 ms |
| Ambient Temperature | Operating : - 20...+60 °C (-4...+140 °F) - UL : - 20...+50 °C (-4...+122 °F)<br>Storage : - 20...+80 °C (-4...+176 °F) |
| Power Voltage | Rated operational voltage: 24 Vdc Ripple p-p 10% maximum<br>Operating range: 10...30 Vdc (including ripple) |
| Product protection | Power supply : Reverse polarity protection<br>Output: Short circuit protection |
| Protection against electric shocks | ☐ Protection class II |
| Degree of protection | IP67 conforming to **IEC 60529**, IP69K conforming to **DIN 40050-9** |
| Vibration resistance | Conforming to **EN 60947-5-2** |
| Shock resistance | Conforming to **EN 60947-5-2** |
| Material | Housing: ABS, Front and Lens: PMMA |

Telemecanique Sensors