**WARNING**

- This equipment must only be installed and serviced by qualified personnel.
- Read, understand, and follow the compliance below and the complete XUSL2E/XUSL4E User Manual before installing the XUSL2E/XUSL4E Safety light curtains.
- 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.
- Disconnect all power before servicing equipments.
- The proper functioning of the XUSL2E/XUSL4E Safety light curtains and its operating line must be checked on a regular basis based on the level of security required by the application (e.g. number of operations, level of environmental pollution, etc.).

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

These devices have been designed to be in compliance with the standards currently in effect:

- XUSL2E: Type 2 (EN/IEC 61496-1), SIL 1 (EN/IEC 61508), SIL CL 1 (EN/IEC 62061), PLe–Cat.2 (EN/ISO 13849-1)
- XUSL4E: Type 4 (EN/IEC 61496-1), SIL 3 (EN/IEC 61508), SIL CL 3 I (EN/IEC 62061), PLe–Cat.4 (EN/ISO 13849-1)

**Package Content (Example)**

- Transmitter
- Receiver
- Fixing Bracket
- Transparent Tube
- Light Curtain
- Electric Cable
- LEDs

**EU Declaration of conformity**

- C = 2.8 Nm / 2.07 lb-in.

We welcome your comments about this document. You can reach us by e-mail at: customer-support@tesensors.com
The XUSL2E/XUSL4E light curtain system operates directly from a 24 Vdc ±20% power supply. The power supply must meet the requirements of EN/IEC 61496-1. Failure to follow these instructions can result in death, serious injury, or equipment damage.

**WARNING**

- The XUSL2E/XUSL4E light curtain system must be powered by a safety extra low voltage (SELV) or a protected extra low voltage (PELV) system.
- The XUSL2E/XUSL4E light curtain system is designed for use only on a 24 Vdc negative ground electrical system.
- Always connect the ground (here the Functional Earth FE) with the 0 Volt reference of the SELV or PELV power supply.
- Never connect the XUSL2E/XUSL4E light curtain system to a positive ground system.
- The XUSL2E/XUSL4E safety light curtains must be connected using both safety outputs.

**IMPROPER CONNECTION**

- The XUSL2E/XUSL4E light curtain system must be connected to a SELV or PELV system to ensure safe operation.
- Never connect the ground with the 0 Volt reference of the SELV or PELV power supply.
- Never connect the XUSL2E/XUSL4E light curtain system to a positive ground system.
- The XUSL2E/XUSL4E light curtain system must be powered by a SELV or PELV system to ensure safe operation.
- The XUSL2E/XUSL4E light curtain system is designed for use only on a 24 Vdc negative ground electrical system.

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

Note: The XUSL2E/XUSL4E light curtain system operates directly from a 24 Vdc ±20% power supply. The power supply must meet the requirements of EN/IEC 60204-1 and EN/IEC 61496-1. The SELV Schneider Electric part number ABLRPS24... is recommended.
UNINTENDED EQUIPMENT OPERATION
The external KM1 and KM2 contactors must have force-guided contacts.
Failure to follow these instructions can result in death, serious injury, or equipment damage.

**WARNING**

### Standalone Application

Connecting with a Safety Control Unit: XPSU-AF

Connecting with a Safety Controller: XPSMCM
Alignment procedure

1) The transmitter and receiver must be installed with the optical surfaces face to face, connectors oriented in the same way. Perfect alignment of the transmitter and the receiver corresponding beams is mandatory for an optimum functioning, meaning that the transmitter and receiver must have the same height and be parallel. A good positioning will be facilitated by using the provided mounting accessories.

2) If vibrations are to be expected in your applications, it is strongly recommended to use vibration dampers (Available as accessories).

The use of LED indicators helps in proper alignment as described below:

- For an easier alignment setting, configure the safety light curtain in Automatic mode. That will avoid to restart the system during the alignment adjustments.
- For all models align the transmitter until the green LED is lit on the receiver.
- For finger detection and long range models, the blue LED weak signal on the receiver will be useful as well. Firstly, find the zone where the blue LED is lit, indicating an approximate alignment, then fine-tune the setting until the blue LED turns OFF and the green LED is lit.
- Do not forget to reconfigure the safety light curtain in Manual start mode if this operating mode is required.

LEDs Status

- For all models align the transmitter until the green LED is lit on the receiver.
- For an easier alignment setting, configure the safety light curtain in Automatic mode. That will avoid to restart the system during the alignment adjustments.
- For finger detection and long range models, the blue LED weak signal on the receiver will be useful as well. Firstly, find the zone where the blue LED is lit, indicating an approximate alignment, then fine-tune the setting until the blue LED turns OFF and the green LED is lit.
- Do not forget to reconfigure the safety light curtain in Manual start mode if this operating mode is required.

Characteristics

Product certifications

<table>
<thead>
<tr>
<th>Operation</th>
<th>CE, cULus, TUV, EAC, RCM</th>
<th>Type 2 IP69K without heating system</th>
<th>Normal sensing range</th>
<th>-30°C...+55°C (-22 °F to 131 °F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>XUSL2E30H****WC</td>
<td>Type 2 IP69K with heating system</td>
<td>Normal sensing range</td>
<td>-30°C...+55°C (-22 °F to 131 °F)</td>
<td></td>
</tr>
<tr>
<td>XUSL2E14F****NWC</td>
<td>Type 4 IP69K without heating system</td>
<td>Normal sensing range</td>
<td>-20°C...+55°C (-4 °F to 131 °F)</td>
<td></td>
</tr>
<tr>
<td>XUSL4E4BB****LWC</td>
<td>Type 4 IP69K without heating system</td>
<td>Normal sensing range</td>
<td>-20°C...+55°C (-4 °F to 131 °F)</td>
<td></td>
</tr>
<tr>
<td>XUSL4E4BB****LWH</td>
<td>Type 4 IP69K with heating system</td>
<td>Normal sensing range</td>
<td>-20°C...+55°C (-4 °F to 131 °F)</td>
<td></td>
</tr>
</tbody>
</table>

Ambient air temperature

<table>
<thead>
<tr>
<th>Normal sensing range</th>
<th>Long sensing range</th>
<th>-30°C...+55°C (-22 °F to 131 °F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>-30°C...+55°C (-22 °F to 131 °F)</td>
<td>-20°C...+55°C (-4 °F to 131 °F)</td>
<td></td>
</tr>
<tr>
<td>-30°C...+55°C (-22 °F to 131 °F)</td>
<td>-20°C...+55°C (-4 °F to 131 °F)</td>
<td></td>
</tr>
</tbody>
</table>

Degree of protection

| Type 2 and 4 - Standard and Long Sensing Range - With and without heating system: -30...70 °C (-22 °F to 158 °F) |
| Type 2 IP69K without heating system | Normal sensing range | -30°C...+55°C (-22 °F to 131 °F) |
| Type 2 IP69K with heating system | Normal sensing range | -30°C...+55°C (-22 °F to 131 °F) |
| Type 4 IP69K without heating system | Normal sensing range | -20°C...+55°C (-4 °F to 131 °F) |
| Type 4 IP69K with heating system | Normal sensing range | -20°C...+55°C (-4 °F to 131 °F) |

Shock and Vibration resistance

| Conforming to ENIEC 60529: IP65, IP67 - DIN 40050: IP69K |
| Shock: 10 g |
| Impulse: 16 ms |
| Vibration: 10...55 Hz |
| Amplitude: 0.35 ± 0.05 mm (0.0014 ± 0.0002 inches) |

Light source

| Infrared X = 950 nm |

Resistance to light disturbance

| Conforming to ENIEC 61496-2 |

Power Supply

| 24 Vdc ± 20% - 2 A |
| The power supply must meet the requirements of ENIEC 60204-1 relative to SELV/PELV power supply |

Maximum current consumption (no load)

| Transmitter: 42 mA - Receiver: 83 mA |

Input power supply

| Transmitter: 42 mA - Receiver: 900 mA (including OSSD current) |

Resistance to interference

| Level depends if the product is Type 2 or Type 4 conforming to ENIEC 61496-1 |

Safety outputs (OSSD)

| Two PNP - 400 mA per output @ 24 Vdc, drop out voltage <0.5 Vdc (Integrated arc suppressors), leakage current (OFF state) < 2 mA. Load capacity 0.82μF under 24 Vdc |

Mission Time (TM)

| 20 years |

PFH:

| Depends on the models. Refer to the complete User Manual |

First-up time

| ≤ 2 s |

OSSSDs

| Pulse Duration: 2,5 ms (Type 4 models) and 500 ms (Type 2 models) |

Note: More characteristics in the User Manual