



# FX3-XTDI80012

Flexi Soft

SAFETY CONTROLLERS

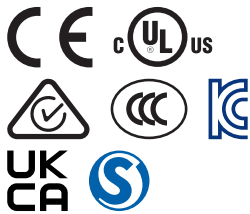
**SICK**  
Sensor Intelligence.



### Ordering information

| Type          | part no. |
|---------------|----------|
| FX3-XTDI80012 | 1050617  |

Other models and accessories → [www.sick.com/Flexi\\_Soft](http://www.sick.com/Flexi_Soft)



### Detailed technical data

#### Features

|                             |  |
|-----------------------------|--|
| <b>Module</b>               | I/O module   |
| <b>Configuration method</b> | Via software (Flexi Soft Designer)   |
| <b>Specialty</b>            | Protective coating for more challenging ambient conditions (e.g., resistance to sulfur). |

#### Safety-related parameters

|   |                                     |
|---|-------------------------------------|
| <b>Safety integrity level</b>   | SIL 3 (IEC 61508)                   |
| <b>Category</b>   | Category 4 (EN ISO 13849)           |
| <b>Performance level</b>  | PL e (EN ISO 13849)                 |
| <b>PFH<sub>D</sub> (mean probability of a dangerous failure per hour)</b> | $0.4 \times 10^{-9}$ (EN ISO 13849) |
| <b>T<sub>M</sub> (mission time)</b>                                       | 20 years (EN ISO 13849)             |

#### Functions

|                              |   |
|------------------------------|---|
| <b>Flexi Loop-compatible</b> | ✓ |
|------------------------------|---|

#### Interfaces

|                                |                          |
|--------------------------------|--------------------------|
| <b>Number of safety inputs</b> | 8                        |
| <b>Number of test outputs</b>  | 8                        |
| <b>Connection type</b>         | Plug-in spring terminals |

#### Electronics

|                                   |                         |
|-----------------------------------|-------------------------|
| <b>Protection class</b>           | III (EN 61140)          |
| <b>Voltage supply</b>             | Via FLEXBUS+            |
| <b>Internal power consumption</b> | $\leq 2 \text{ W}^{1)}$ |

<sup>1)</sup> Via FLEXBUS+, without streams at test outputs.

<sup>2)</sup> On each of the two test pulse generators. This makes max. 8 testable safe series connections possible per module, each with max. 30 mA.

|                     |                      |   |
|---------------------|----------------------|---|
| <b>Inputs</b>       | Input voltage HIGH   | 13 V DC ... 30 V DC                         |
|                     | Input voltage LOW    | -5 V DC ... 5 V DC                          |
|                     | Input current HIGH   | 2.4 mA ... 3.8 mA                           |
|                     | Input current LOW    | -2.5 mA ... 2.1 mA                          |
| <b>Test outputs</b> | Voltage supply       | Via FLEXBUS+                                |
|                     | Type of output       | PNP semiconductors, short-circuit protected |
|                     | Test pulse generator | 2   |
|                     | Output voltage HIGH  | 15 V DC ... 30 V DC                         |
|                     | Output current       | ≤ 120 mA <sup>2)</sup>                      |

<sup>1)</sup> Via FLEXBUS+, without streams at test outputs.

<sup>2)</sup> On each of the two test pulse generators. This makes max. 8 testable safe series connections possible per module, each with max. 30 mA.

## Mechanics

|                               |                              |
|-------------------------------|------------------------------|
| <b>Dimensions (W x H x D)</b> | 22.5 mm x 96.5 mm x 120.6 mm |
| <b>Weight</b>                 | 139 g (± 5 %)                |

## Ambient data

|   |   |
|---|---|
| <b>Enclosure rating</b>                       | IP20 (EN 60529)   |
| <b>Ambient operating temperature</b>          | -25 °C ... +55 °C   |
| <b>Storage temperature</b>                    | -25 °C ... +70 °C   |
| <b>Air humidity</b>                           | ≤ 95 %, Non-condensing  |
| <b>Single gas resistance (sulfur dioxide)</b> | 25 ppm, 21 days, 25 °C (IEC 60068-2-42 - Kc)  |
| <b>Mixed gas resistance</b>                   | 100 ppb - H <sub>2</sub> S<br>2000 ppb - NO <sub>2</sub><br>100 ppb - Cl <sub>2</sub><br>2,000 ppb - SO <sub>2</sub> , 21 days, 30 °C (IEC 60068-2-60 Ke) |

## Certificates

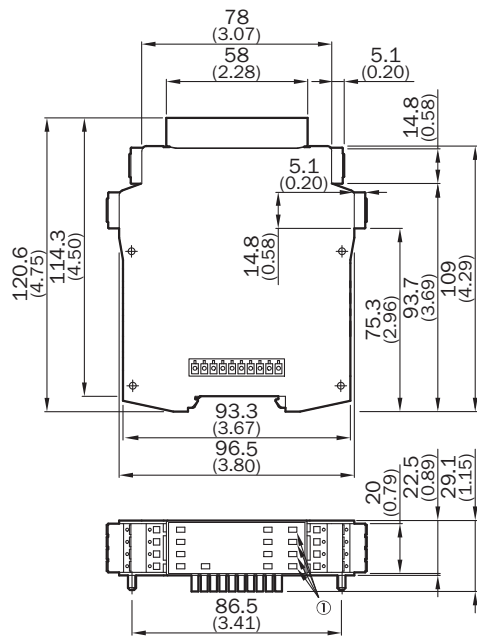
|  |   |
|--|---|
| <b>EU declaration of conformity</b>  | ✓ |
| <b>UK declaration of conformity</b>  | ✓ |
| <b>ACMA declaration of conformity</b>  | ✓ |
| <b>China RoHS</b>  | ✓ |
| <b>CCC certificate</b>   | ✓ |
| <b>UK-Type-Examination approval</b>  | ✓ |
| <b>cULus certificate</b>   | ✓ |
| <b>KC Mark certificate</b>   | ✓ |
| <b>cTUVus certificate</b>  | ✓ |
| <b>S Mark certificate</b>  | ✓ |
| <b>EC-Type-Examination approval</b>  | ✓ |
| <b>Information according to Art. 3 of Data Act (Regulation EU 2023/2854)</b> | ✓ |

## Classifications

|                   |          |
|-------------------|----------|
| <b>ECLASS 5.0</b> | 27243001 |
|-------------------|----------|

|                       |          |
|-----------------------|----------|
| <b>ECLASS 5.1.4</b>   | 27243101 |
| <b>ECLASS 6.0</b>     | 27243101 |
| <b>ECLASS 6.2</b>     | 27243101 |
| <b>ECLASS 7.0</b>     | 27243101 |
| <b>ECLASS 8.0</b>     | 27243101 |
| <b>ECLASS 8.1</b>     | 27243101 |
| <b>ECLASS 9.0</b>     | 27243101 |
| <b>ECLASS 10.0</b>    | 27243101 |
| <b>ECLASS 11.0</b>    | 27243101 |
| <b>ECLASS 12.0</b>    | 27243101 |
| <b>ETIM 5.0</b>       | EC001449 |
| <b>ETIM 6.0</b>       | EC001449 |
| <b>ETIM 7.0</b>       | EC001449 |
| <b>ETIM 8.0</b>       | EC001449 |
| <b>UNSPSC 16.0901</b> | 32151705 |



### Dimensional drawing FX3-XTIO, FX3-XTDI



Dimensions in mm (inch)  
 ① Only valid for FX3-XTIO

Recommended accessories

Other models and accessories → [www.sick.com/Flexi\\_Soft](http://www.sick.com/Flexi_Soft)

|   | Brief description  | Type         | part no. |
|---|--|--------------|----------|
| Safety relays   |  |              |          |
|  | <ul style="list-style-type: none"> <li>• <b>Applications:</b> Output expansion module for OSSDs</li> <li>• <b>Compatible sensor types:</b> Safety sensors with OSSDs</li> <li>• <b>Connection type:</b> Front connector with spring terminals</li> <li>• <b>Restart interlock:</b> no</li> <li>• <b>External device monitoring (EDM):</b> Via path</li> <li>• <b>Outputs:</b> 4 enabling current paths (safe), 1 feedback current path (for use as external device monitoring, not safe)</li> <li>• <b>Housing width:</b> 28 mm</li> </ul> | RLY3-OSSD400 | 1099971  |
|  | <ul style="list-style-type: none"> <li>• <b>Applications:</b> Output expansion module for OSSDs</li> <li>• <b>Compatible sensor types:</b> Safety sensors with OSSDs</li> <li>• <b>Connection type:</b> Front connector with spring terminals</li> <li>• <b>Restart interlock:</b> no</li> <li>• <b>External device monitoring (EDM):</b> Via path</li> <li>• <b>Outputs:</b> 2 enabling current paths (safe), 1 feedback current path (for use as external device monitoring, not safe)</li> <li>• <b>Housing width:</b> 18 mm</li> </ul> | RLY3-OSSD100 | 1085343  |

## SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

## WORLDWIDE PRESENCE:

Contacts and other locations –[www.sick.com](http://www.sick.com)