

# BX-O2I4

## Output/input module for SecuriLine eXtended

Beginning with edition number 20-2100014-01-01

The BX-O2I4 has two relay outputs and four monitored inputs for polling potential-free contacts.

It meets the SecuiLine eXtended specification for operation on the addressable loop of the SecuriFire fire detection system.



Fig. 1 BX-O2I4

### Description

The BX-O2I4 can be connected to the SecuriLine eXtended addressable loop of the SecuriFire fire detection system.

The individual I/O functions can be configured differently and combined so that this module can be used, for example, for the integration of fire protection flaps with feedback.

Input 1 can be programmed as feedback input of output 1 (via potential-free contact).

Input 2 can be programmed as feedback input of output 2 (via potential-free contact).

An "Active in failsafe position" can be programmed for each output in the event of loop voltage failure.

The relay outputs are suitable for outputting pulses.

Addressing and parameter assignment for the BX-O2I4 is performed with PC software via the fire alarm control panel.

The module includes a short-circuit isolator. In the event of wire breakage or a short-circuit, this functionality ensures that the fault is localised and at the same time maintains the full operability of the addressable loop.

#### BX-O2I4 features

- Power supply via the X-LINE
- Addressing and parameter assignment with PC software via X-LINE
- Up to 32 modules per loop can be actuated at the same time
- 2 outputs with feedback inputs
- 4 primary inputs
- Failsafe position of the relay outputs if there is a voltage supply failure
- Integrated short circuit isolator
- Robust plastic housing

### Interfaces

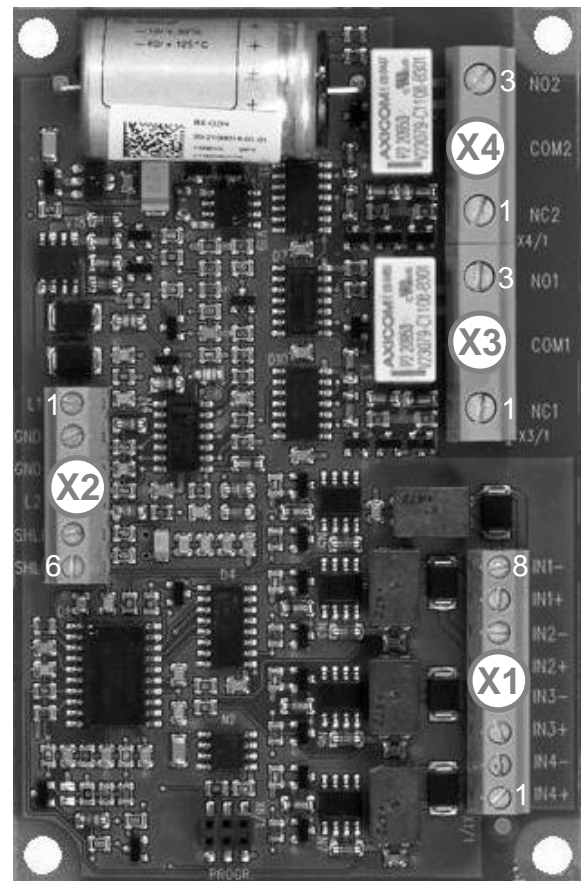


Fig. 2 BX-O2I4 interfaces

# Data Sheet

## Inputs (X1)

| Terminal | Designation | Description |
|----------|-------------|-------------|
| 8        | IN1-        | Input 1-    |
| 7        | IN1+        | Input 1+    |
| 6        | IN2-        | Input 2-    |
| 5        | IN2+        | Input 2+    |
| 4        | IN3-        | Input 3-    |
| 3        | IN3+        | Input 3+    |
| 2        | IN4-        | Input 4-    |
| 1        | IN4+        | Input 4+    |

## SecuriLine eXtended (X2)

| Terminal | Designation | Description          |
|----------|-------------|----------------------|
| 1        | L1          | Data A               |
| 2        | GND         | GND A                |
| 3        | GND         | GND B                |
| 4        | L2          | Data B               |
| 5        | SHLD        | Screen support point |
| 6        | SHLD        | Screen support point |

## Relay 1 (X3)

| Terminal | Designation | Description     |
|----------|-------------|-----------------|
| 3        | NO 1        | Normally open   |
| 2        | COM 1       | Common          |
| 1        | NC 1        | Normally closed |

## Relay 2 (X4)

| Terminal | Designation | Description     |
|----------|-------------|-----------------|
| 3        | NO 2        | Normally open   |
| 2        | COM 2       | Common          |
| 1        | NC 2        | Normally closed |

## Power requirement

When both detectors and modules are operated on an addressable loop, note that the BX-O2I4 has a higher power consumption than a detector. For security reasons a maximum of 32 BX-O2I4s are permitted per addressable loop.

A tool is available for calculating the maximum possible loop length and the maximum number of participants.

## Planning



### Notice

In accordance with EN 54, the rating plate supplied with the module must be attached to the outside on the cover of the installation box!



### Notice

The line length of inputs 1-4 of the BX-O2I4 is max. 30 m.

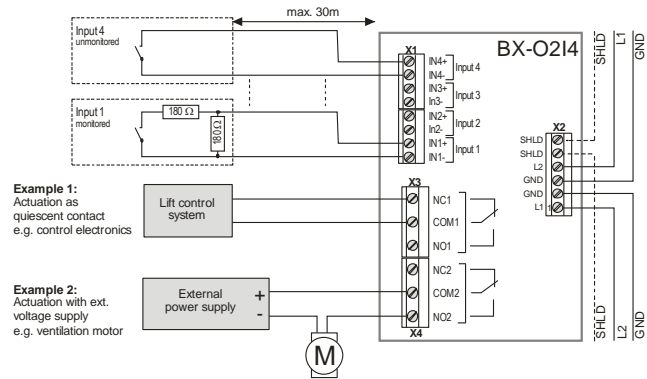
## Connection examples



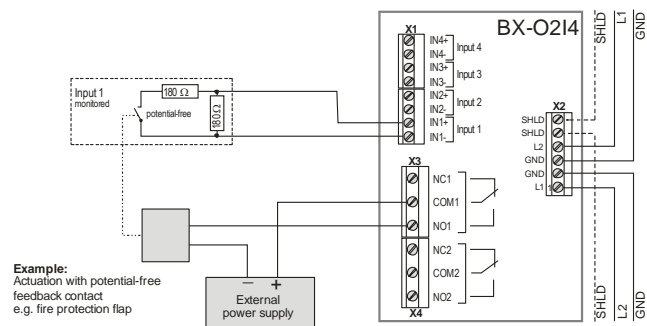
### Notice

When laying a 230 V power cable, make sure that it is not conveyed directly over the electronics of the module.

### Use as I/O module



### Use as control system with feedback



## Article numbers / spare parts

| Short designation         | Swiss art. number | Art. number      |
|---------------------------|-------------------|------------------|
| Input/output module       | 115.248 932       | 20-2100014-01-04 |
| Map case IP66 for BX-O2I4 | 115.239 925       | FG020235         |
| M20 step nipple           | 428.242 578       | MM000181         |

## Technical data

|   |   |                 |
|---|---|-----------------|
| Function  | Input/output module   |                 |
| Operating voltage                                   | 12 to 30  | VDC             |
| Power consumption (module's power consumption only) | 0.63  | mA              |
| Signal transmission                                 | Serial data transmission, 2-line technology   |                 |
| Protection type                                     | 66 with map case  | IP              |
| Ambient temperature                                 | -20 to +60  | -°C             |
| Connection  | Screw terminals max. 1.5  | mm <sup>2</sup> |
| VdS approval  | G211050   |                 |
| EU certificate of conformity (EN 54-17/18)          | 0786-CPD-21066  |                 |
| Dimensions (H x W x D)                              | 100 x 67 x 20   | mm              |
| Dimensions with map case (H x W x D)                | 130 x 94 x 57   | mm              |
| <b>Relay outputs</b>                                | <b>2</b>  |                 |
| Relay   | Bistable, one coil  |                 |
| Type of contact                                     | Change-over contact   |                 |
| Switching voltage                                   | 230   | V               |
| Switching current                                   | 0.1 – 2000  | mA              |
| Breaking capacity                                   | 60 (0.25 A @ 230 V)   | W               |
| Switching frequency                                 | max. 3.125  | Hz              |
|   | (a relay can change its state every 160 ms per loop, provided no other command has to be performed)           |                 |
| Connection  | Screw terminals max. 2.5  | mm <sup>2</sup> |
| <b>Monitored inputs</b>                             | <b>4</b>  |                 |
| Connection  | Potential-free contacts   |                 |
| Polling current                                     | 10  | mA              |
| Polling voltage                                     | 3 - 6   | V               |
| Termination resistance                              | 180   | Ω               |
| Alarm resistance                                    | 180   | Ω               |
| Line resistance                                     | Max. 30   | Ω               |
| Polling impulse                                     | 165   | μs              |
| Polling cycle                                       | 100   | ms              |
| Input filter  | 10  | μs              |
| Periodic duration                                   | > 8   | s               |
|   | (Switching states which last longer than 5000 ms and whose repetition time is greater than 8 s are recorded.) |                 |
| Line length   | Max. 30   | m               |
| Connection  | Screw terminals max. 1.5  | mm <sup>2</sup> |