

## Datasheet

### Models

Model	Description
XS1ro	1 Dual Channel Safety Relay Module (2 N.O./1 N. C.)
XS2ro	2 Dual Channel Safety Relay Module (2 N.O./1 N.C. each)

### Terminal Assignment

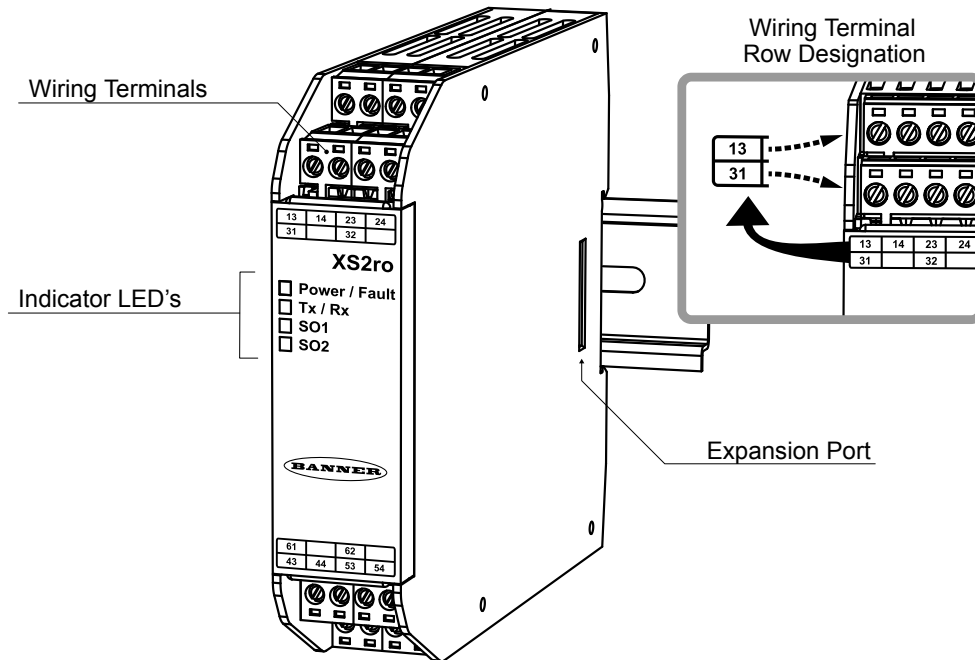
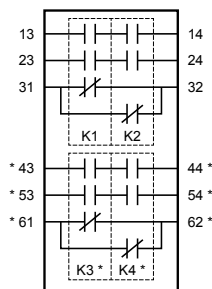


Figure 1. XS2ro



\*Only present in XS2ro.  
 If driving external relays, EDM should be configured to monitor the state of these external relays.

Figure 2. Contact Configuration



## Specifications

### Mechanical Stress

**Shock:** 15 g for 11 ms, half sine, 18 shocks total (per IEC 61131-2)  
**Vibration:** 3.5 mm occasional / 1.75 mm continuous at 5 Hz to 9 Hz, 1.0 g occasional and 0.5 g continuous at 9 Hz to 150 Hz: all at 10 sweep cycles per axis (per IEC 61131-2)

### Safety

Category 4, PL e (EN ISO 13849)  
 SIL CL 3 (IEC 62061, IEC 61508)

### Product Performance Standards

See Standards and Regulations section in the Instruction Manual for a list of industry applicable U.S. and international standards

### EMC

Meets or exceeds all EMC requirements in IEC 61131-2, IEC 62061 Annex E, Table E.1 (increased immunity levels), IEC 61326-1:2006, and IEC 61326-3-1:2008

### Bus Power

**XS1ro** 0.125 A (outputs On)  
**XS2ro:** 0.15 A (outputs On)

### Maximum Power

2000 VA, 240 W

### Electrical Life

50,000 cycles at full resistive load

### Overvoltage Category

III

### Pollution Degree

2

### Mechanical Life

40,000,000 cycles

**Note:** Transient suppression is recommended when switching inductive loads. Install suppressors across load. Never install suppressors across output contacts.

### Safety Ratings

**PFH [1/h]:**  $7.6 \times 10^{-10}$   
**Proof Test Interval:** 20 years

### Certifications



### Operating Conditions

**Temperature:** 0 °C to +55 °C (+32 °F to +131 °F)  
**Storage Temperature:** -30 °C to +65 °C (-22 °F to +149 °F)  
**Operating Altitude:** 2000 m maximum (6562 ft maximum)

### Environmental Rating

NEMA 1 (IEC IP20), for use inside NEMA 3 (IEC IP54) or better enclosure

### Removable Screw Terminals

**Wire size:** 24 to 12 AWG (0.2 to 3.31 mm<sup>2</sup>)  
**Wire strip length:** 7 to 8 mm (0.275 in to 0.315 in)  
**Tightening torque:** 0.565 N·m (5.0 in-lb)

### Removable Clamp Terminals

**Important:** Clamp terminals are designed for 1 wire only. If more than 1 wire is connected to a terminal, a wire could loosen or become completely disconnected from the terminal, causing a short.

**Wire size:** 24 to 16 AWG (0.20 to 1.31 mm<sup>2</sup>)  
**Wire strip length:** 8.00 mm (0.315 in)

### Contact Rating

#### UL/NEMA:

- N.O. Contacts:** 6 A 250 V ac/24 V dc resistive; B300/Q300 pilot duty
- N.C. Contacts:** 2.5 A 150 V ac/24 V dc resistive; Q300 pilot duty

#### IEC 60947-5-1:

- N.O. Contacts:** 6 A 250 V ac/dc continuous; AC 15: 3 A 250 V; DC13: 1 A 24 V/4 A 24 V 0.1 Hz
- N.C. Contacts:** 2.5 A 150 V ac/dc continuous; AC 15: 1 A 150 V; DC13: 1 A 24 V/4 A 24 V 0.1 Hz

### Contact Ratings to preserve 5 µm AgNi gold plating

	Minimum	Maximum
<b>Voltage</b>	100 mV ac/dc	60 V ac/dc
<b>Current</b>	1 mA	300 mA
<b>Power</b>	1 mW (1 mVA)	7 W (7 VA)

### Feature ID (FID) Compatibility

For Feature ID (FID) compatibility between a Base Module and the Expansion Modules, see XS26-2/SC26-2 Base Safety Controllers datasheet p/n 175119.



**Important:** The Safety Controller and all solid state output expansion modules should be connected only to a SELV (Safety Extra-Low Voltage), for circuits without earth ground or a PELV (Protected Extra-Low Voltage), for circuits with earth ground power supply.

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