

# XS8si/XS16si Safety Input Modules

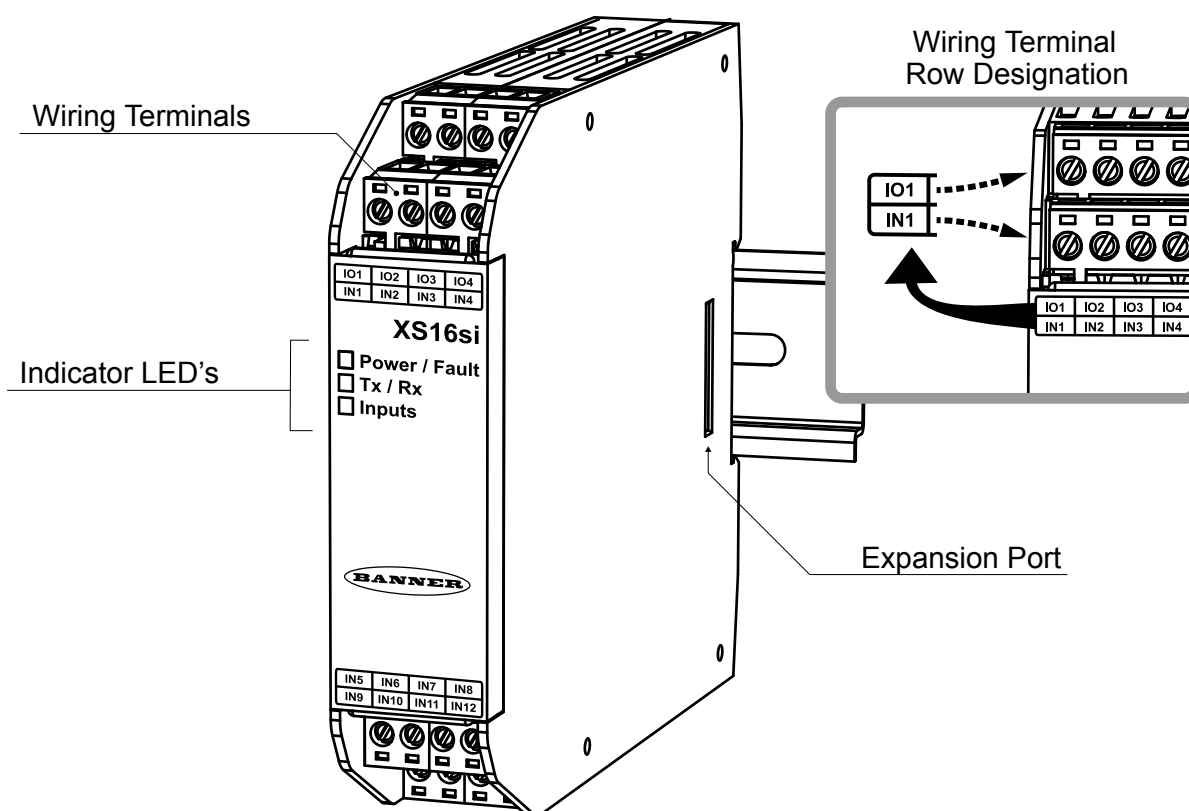


## Datasheet

### Models

Model	Description
XS8si	Safety Input Module - 8 inputs (2 convertible)
XS16si	Safety Input Module - 16 inputs (4 convertible)

### Terminal Assignment



## 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 IEC61326-3-1:2008

### Convertible I/O

Sourcing current: 80 mA maximum at 55 °C (131 °F) operating  
ambient temperature (overcurrent protected)

### Bus Power

XS8si: 0.07 A no load, 0.23 A max. load  
XS16si: 0.09 A no load, 0.41 A max. load

### Certifications



### Operating Conditions

Temperature: 0 °C to +55 °C (+32 °F to +131 °F)  
Storage Temperature: -30 °C to +80 °C (-34 °F to +176 °F)

### 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)

### Safety Inputs (and Convertible I/O when used as inputs)

Input On threshold: > 15 V dc (guaranteed on), 30 V dc max.  
Input Off threshold: < 5 V dc and < 2 mA, -3 V dc min.  
Input On current: 5 mA typical at 24 V dc, 50 mA peak contact  
cleaning current at 24 V dc  
Input lead resistance: 300 Ω max. (150 Ω per lead)  
Input requirements for a 4-wire Safety Mat:  
· Max. capacity between plates: 0.22 µF  
· Max. capacity between bottom plate and ground: 0.22 µF  
· Max. resistance between the 2 input terminals of one plate: 20 Ω

### Output Protection

The convertible inputs are protected from shorts to 0 V or +24 V,  
including overcurrent conditions

### Current Feature ID

Base Modules:	1	XS8si and XS16si:	1
XS2so and XS4so:	1	XS1ro and XS2ro:	1



**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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