

XS8si/XS16si Safety Input Modules

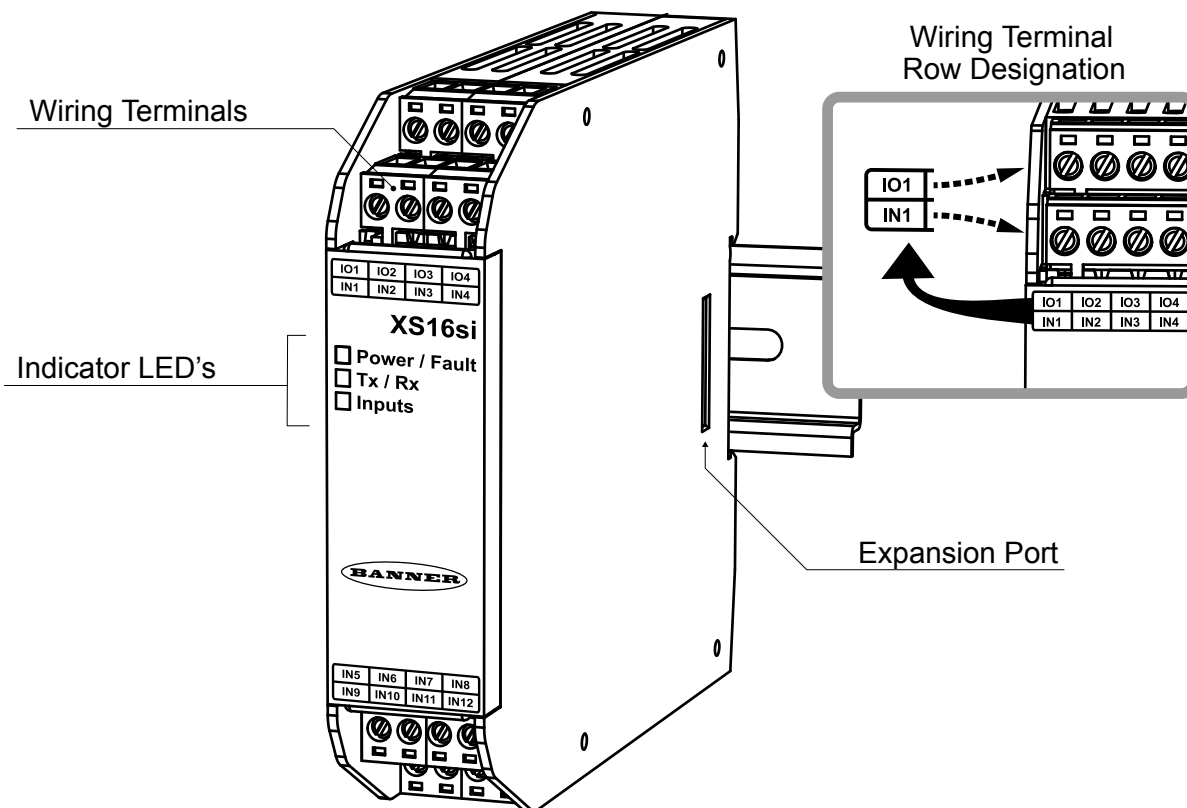


Datasheet

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

Safety Ratings

PFH [1/h]: 4×10^{-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 +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 mm²)
 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 mm²)
 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

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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