

Safety Controllers



Safety Controller Highlights

- Intuitive icon-based drag-and-drop configuration via free PC software
- 10 input, 26 input, and expandable models available
- Communicates over industrial ethernet
 - 80 virtual non-safe inputs
 - 256 virtual non-safe status outputs



Safety Relays and Controllers

Industrial safety controllers and relays provide an interface between safety devices and the machines and processes those devices monitor for a complete and easy-to-use safety control solution.



Expandable Safety Controller

Expandable for Complex Safety applications where 3 or more safety relays are typically used

- PC Configurable: Flexible and easy-to-use
- Safety Inputs: 26 (base unit) up to 154
- Independently controlled Safety Outputs: up to 68, 0.5A to 6A each
- Convertible Safety Inputs: 8 (Base Unit) up to 40
- LCD Display for easy troubleshooting
- Industrial Ethernet



Hybrid Safety Controller plus 2 Safety Relays

Flexible and cost effective solution for machines typically using 2 Safety Relays

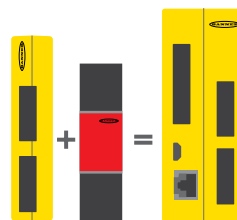
- PC Configurable: Flexible and easy-to-use
- Safety Inputs: up to 10; up to 14 using Automatic Terminal Optimization (ATO)
- Independently controlled Safety Outputs: 2, 6A each
- Convertible Safety Inputs: 4
- Terminal LEDs for easy troubleshooting
- Industrial Ethernet



Safety Relays

Cost effective for simple safety circuits

- Pre-set Functionality: Configuration not required
- Safety Inputs: 1
- Independently controlled Safety Outputs: 1, 4 to 7A



Configurable Safety Controllers

Pre-configured Safety Relay Modules



XS26 SC26 SC10 SR IM ES UM GM SM AT Two-Hand MMD

Series		XS26	SC26	SC10	SR	IM	ES	UM	GM	SM	AT Two-Hand	MMD
# of Input Terminals		up to 154*	up to 26	10*	1	1	1	1	1	1	2 STB	2
Independently Controlled Safe Outputs		up to 68*	2	2	1	1	1	1	1	1	1	1
Max.Safety Output Rating		0.5A, 6A* ea.	0.5A ea.	6A ea.	6A	6A	7A	7A	6A	6A	6A	6A
In-Series Diagnostics (ISD)				✓								
E-Stop		✓	✓	✓			✓	✓				✓
Rope Pull		✓	✓	✓			✓	✓				✓
Light Curtain/Scanner		✓	✓	✓				✓				✓
Light Curtain/Scanner with EDM		✓	✓	✓	✓	✓		✓				✓
Gate Switch (Complimentary Outputs ie. NC/NO)		✓	✓	✓					✓			
Gate Switch (Similar Outputs ie. NC/NC)		✓	✓	✓			✓	✓				✓
Safety Mat		✓	✓	✓						✓		
Two-Hand Control		✓	✓	✓							✓	
Muting		✓	✓	✓								✓
ON/OFF Delay		✓	✓	✓								

NOTE: Up to Cat. 4 PL e. per EN ISO 13849-1; SIL 3 per IEC 61508 and IEC 62061. See www.bannerengineering.com for additional information.

* Expandable input and output modules available

Build System and Select Equipment

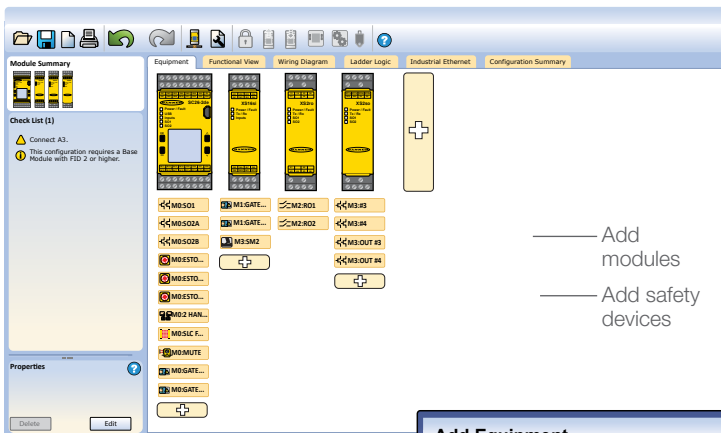
Start using the free software today. Go to bannerengineering.com/safetycontroller

The feature-rich SC10 and SC/XS26 safety controller software provides a seamless user interface for setting up and managing safety systems. The software features an intuitive icon-based, drag-and-drop user interface to reduce the learning curve and speed up commissioning.

- Complex configurations made easy
- Simulate configurations before implementation
- Auto configure industrial ethernet for remote monitoring and diagnostics

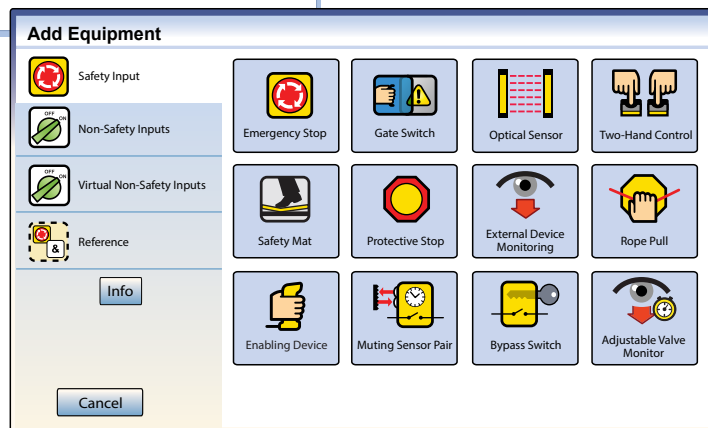


1. Choose Controller

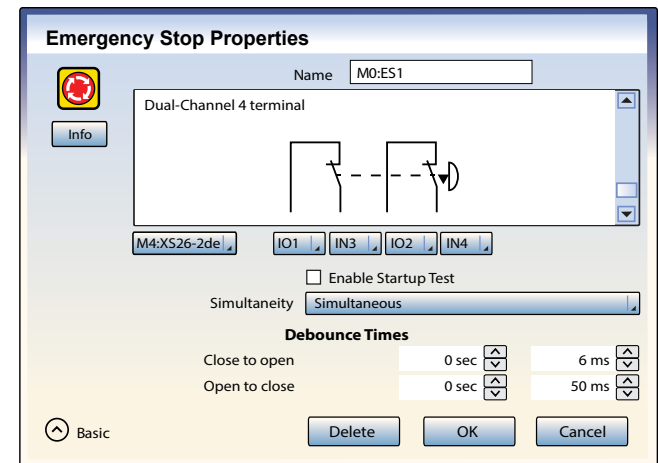


2. Equipment View

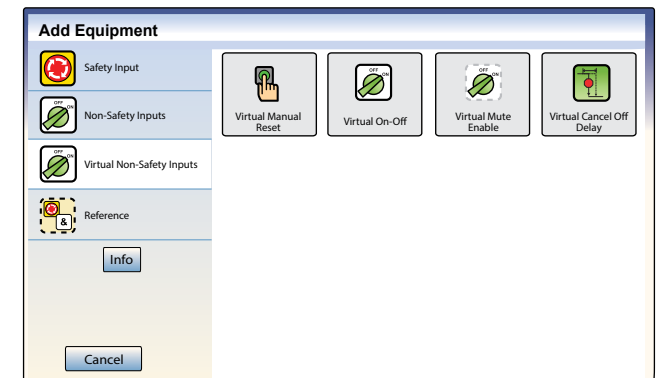
3. Add safety devices



4. Select safety device properties



5. Add virtual non-safety inputs



6. Configure Your System in Minutes

Simulation View

Assorted View Menus

Module Summary and Configuration Checklist

Function Block Logic Block

Inputs

Split Output

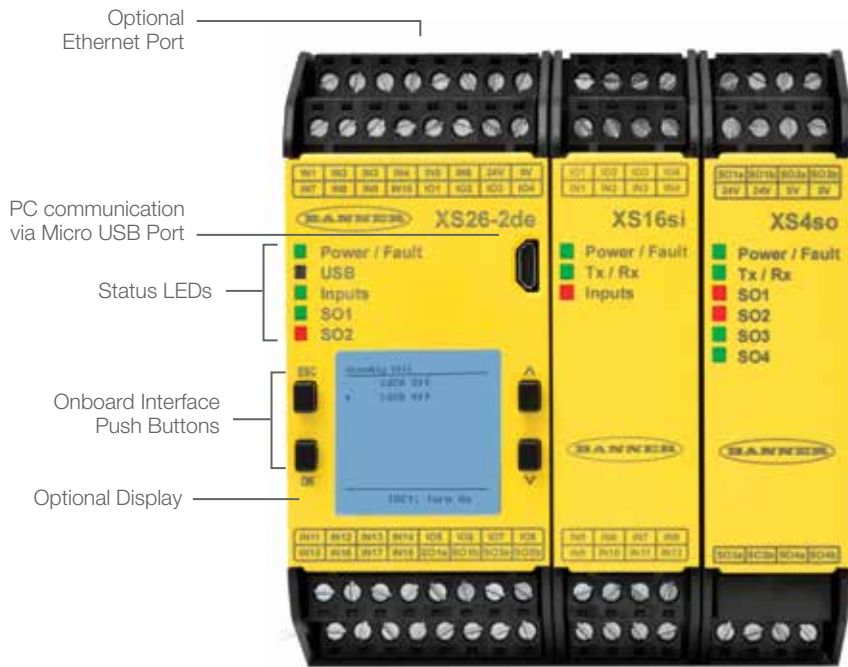
Simple Drag-and-Drop Connections

Name	Value
Name	SLC FRONT
Module	M0
Circuit Type	Dual-Channel PNP
Terminals	M0

Wiring Diagram in Live Mode

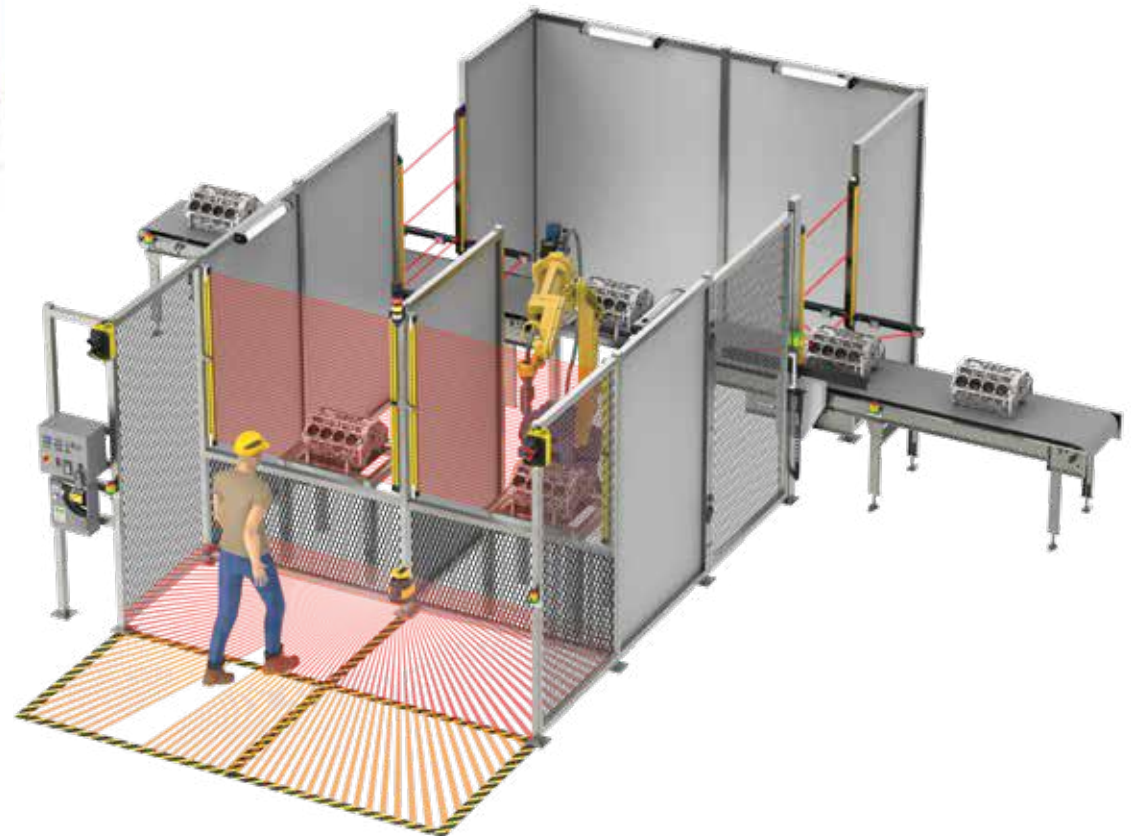
Ladder Logic

XS26 Expandable Safety Controller



Base Controller (shown with LCD and ethernet)

- Optional display screen allows local diagnostics for efficient troubleshooting
- Up to eight expansion I/O modules can be added as automation requirements grow or change
- Choose from six expansion module models with a variety of safety inputs, solid-state safety outputs and safety relay outputs
- Controller and input modules allow safety inputs to be converted to status outputs for efficient terminal use
- Fast programming and swapout using the SC-XM3 memory card (see next page)



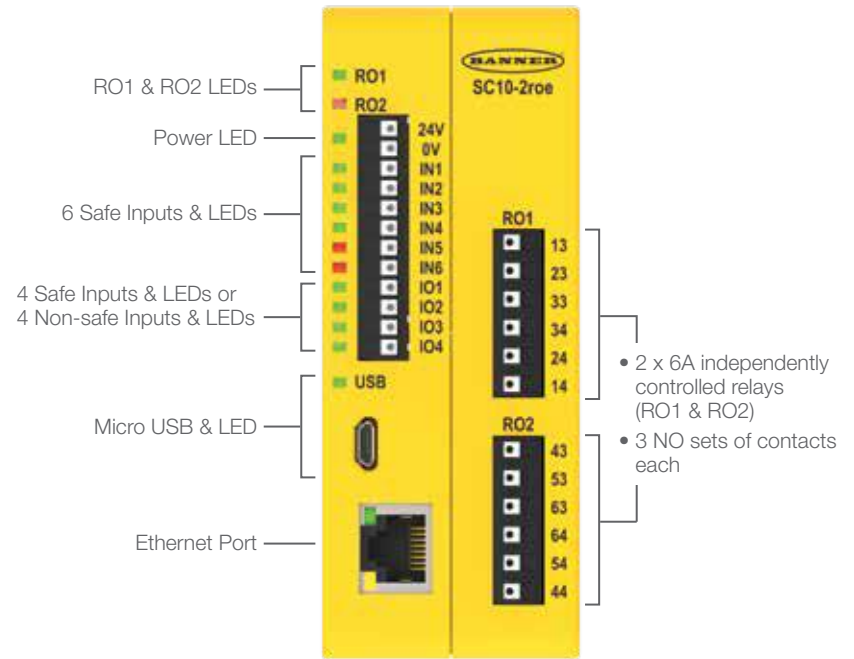
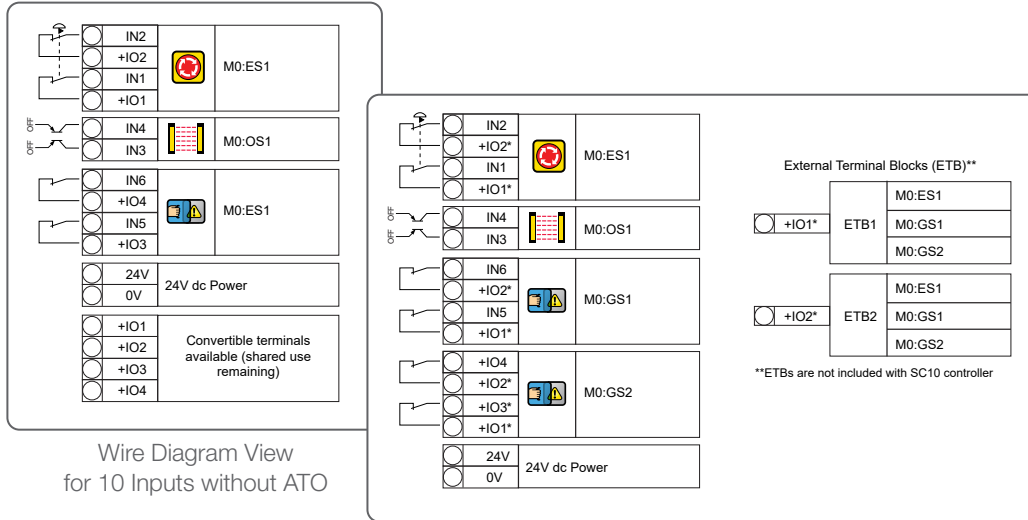
SC26 Safety Controller

- Base Controller allows eight of the 26 inputs to be configured as outputs for efficient terminal use
- Two independent pairs of safe outputs at 0.5A each
- Models available with optional ethernet and display

SC10 Safety Controller

Automatic Terminal Optimization (ATO)

Allows for an increase from 10 to 14 inputs



SC-XM3

Fast Programming and Swapout

- Backup copy of configuration, password, network settings
- Download configuration without a PC; Save time during panel build
- Fast swapout to minimize downtime at swapout



In-Series Diagnostics (ISD) makes it easy to access diagnostic data from devices in a safety system without special equipment or designated cabling. Users can troubleshoot machine safety systems, prevent system faults, and reduce equipment downtime.

This innovative, next generation technology is exclusive to safety devices from Banner Engineering. For more information go to www.bannerengineering.com/isd



Model*	Description	Inputs/ Convertible	Independently Controlled Safe Outputs	Max.Safety Output Rating
XS26-2d XS26-2de	Base Controller with LCD	26/8	2	0.5A PNP @24 V dc
XS26-2 XS26-2e	Base Controller	26/8	2	0.5A PNP @24 V dc
XS8si	Safety Input Module	8/2	NA	NA
XS16si	Safety Input Module	16/4	NA	NA
XS2so	Safety Output Module	NA	1	0.75A PNP @24 V dc
XS4so	Safety Output Module	NA	2	0.5A PNP @24 V dc
XS1ro	Safety Relay Output Module	NA	1	6A; 2 NO, 1 NC aux
XS2ro	Safety Relay Output Module	NA	2	6A; 2 NO, 1 NC aux

* Models operate at 24 V dc +/- 20%

Model*	Description	Inputs/ Convertible	Independently Controlled Safe Outputs	Max.Safety Output Rating
SC26-2d SC26-2de	Base Controller with LCD	26/8	2	0.5A PNP @24 V dc
SC26-2 SC26-2e	Base Controller	26/8	2	0.5A PNP @24 V dc
SC10-2roe	Base Controller	10/4	2	6A; 3 NO



Accessories



SC-USB2
USB Cable



SC-XM3
Memory Card



SC-XMP2
SC-XM2/3 Configuration Tool

Additional accessories are available at bannerengineering.com

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