Who else but Banner could take the complexity out of safety control.
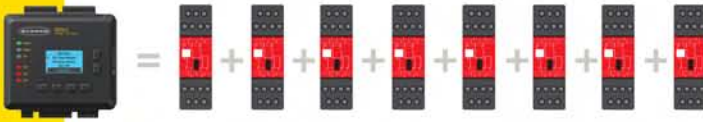
Replace multiple safety modules with a single controller.

The SC22-3 Safety Controller is a totally configurable and flexible safety module. Because it incorporates numerous input devices and manages multiple safety-related functions, it can easily replace several traditional safety modules to integrate light screens, E-stops, interlocking switches, safety mats, two-hand controls, muting functions and many others. The cost savings in design, safety modules, wiring and installation are significant.

One Safety Controller... replaces multiple dedicated safety modules

Dramatically reduce the complexity of interfacing multiple safety functions and devices.

Banner's intuitive PC Interface application allows you to quickly create and document even complex safety logic configurations, incorporating multiple safety inputs and outputs, in minutes. There are 14 types of safety and non-safety input device categories from which to choose, and several Dual and Single Channel circuit types that can be used.

Safety Input Devices

E-Stops   Light Curtains   Two-Hand Controls   Interlock Switches

Non-Safety Input Devices
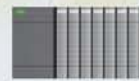
Manual Resets   ON/OFF Switches

Vastly reduce installation and troubleshooting time too.

Using either the PC Interface or the Controller's Onboard Interface, setup is simple. All that is required is to define each device and what combination of the three independent safety outputs each device will control. User-friendly icons, circuit symbols and multilingual support make the process easy. Faulty devices or wiring configuration errors are automatically detected and displayed along with built-in diagnostic information to help quickly locate and clear faults.

Status Outputs

Safety Outputs

Easy to learn. Easy to use.
Safety made simple.

Totally configurable. Remarkably easy.

The versatile input circuit for both safety and non-safety devices.

22 input terminals can monitor both contact-based and PNP solid-state input devices. Each input circuit is configurable with the ability to monitor an input signal or provide 24V dc sources when needed. Versatile input circuitry accommodates a wide range of input device types from a variety of manufacturers including:

- E-Stops
- Interlock Switches
- Safety Light Screens
- Two-Hand Controls
- Safety Mats and Edges
- Rope Pulls
- Muting Sensors
- Enabling Devices
- Bypass Switches

Three redundant PNP safety outputs.

The SC22-3 is designed to meet stringent standards, including Safety Integrity Level (SIL) 3 per IEC 62061 and IEC 61508, and Category 4 Performance Level (PL e) per ISO 13849-1. Outputs can also be used with selectable one- or two-channel external device monitoring.

Combine safety and muting functions in one controller.

The SC22-3 allows you to perform multiple safety monitoring functions, including muting and bypass functions. The flexible functions greatly simplify setup and troubleshooting, while minimizing concerns about the level of safety achieved.

Green: Power ON

OFF: RUN Mode
Red flashing: I/O Fault

OFF: RUN Mode
Green flashing: Data transfer with PC

Green: Safety Output ON
Green flashing: Waiting for Reset
Red: Safety Output OFF

BANNER

SC22-3
Safety Controller

Power
Status
Tx / Rx
SO1
SO2
SO3

```
        NEW FILE
 ▶ S01: Reset Needed
   S02: Reset Needed
      S03: OFF
     Reset RS01
```

Cursor Up or Select

Cursor Down or Select

◁ ESC OK ▷

Cursor Left or Select   **Back or Escape**   **Enter, Store or Toggle**   **Cursor Right or Select**

Built-in front panel display keeps you in the loop.

The front panel LCD screen and LEDs offer easy setup and provide exceptional diagnostics. The SC22-3 can be configured with its built-in LCD display and push buttons, or using a PC interface. The LCD display and LED status indicators keep you informed of power, faults, output status and communication status with your PC.

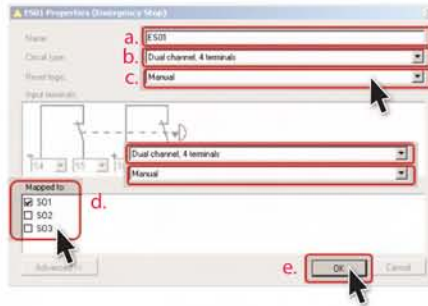# Set up multiple safety functions in minutes, not hours.

With your Windows XP or 2000 PC you can configure all safety and non-safety functions for the SC22-3 right on your computer using the USB port and the SC22-3 PC Interface, or the XM card and programming tool. This all-new, click-and-go system brings a new level of simplicity to configuring safeguarding functions.

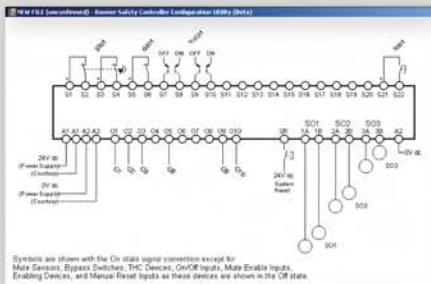**❶ Add safety input**

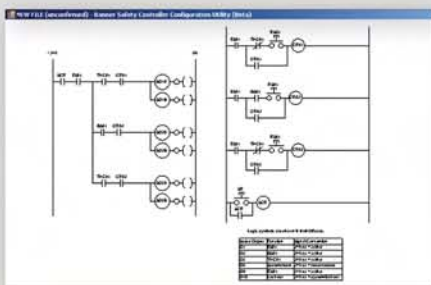**❷ Select a device**

❸ Modify device properties:

a. *Rename device*
b. *Select device circuit type*
c. *Select reset logic*
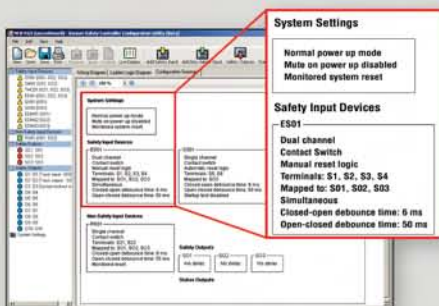d. *Map inputs to outputs*
e. *Click "OK"*

More information at your fingertips.

Wiring Diagram

Ladder Logic Diagram

Configuration Summary

Quickly configure Safety Output ON- and OFF-delay.
Set ON- and OFF-delay and time in seconds. Delay time values are automatically displayed in the ladder logic diagram.

Confirm proper configuration and test.
Once created, you can review and confirm the validity of the configuration and parameters in seconds. Once complete, the configuration can be stored for future use with no additional confirmation.

Easily establish status of input, output and system properties.
Ten non-safety status outputs are capable of 0.5A output individually (up to 1.0A in total for all used). With simple menu selections, you can monitor a variety of output status functions including:

- Track Input
- Track Output
- System Lockout Status
- I/O Fault Status
- System Waiting for Reset
- Output Waiting for Reset
- Muting Status

Advanced diagnostics and troubleshooting hints are available using either the front panel display or your PC.

Store system configurations on the optional XM card.
Using external, non-volatile memory, system configurations are easily stored on the optional SC-XM1 external memory (XM) card. This allows the downloading of preset configurations to multiple systems or rapid changeovers without reconfiguring the system—another significant time-saver. Store system configurations on a hard drive, or on a CD-ROM, or email them anywhere in the world for fast efficient upgrades.

Demonstration Software

See how simple it is to configure multiple devices and functions.

Discover right now how easy the SC22-3 really is.

The attached CD-ROM will give you a demonstration of the SC22-3 configuration procedure.

Call 1-888-373-6767 or visit www.bannerengineering.com/SC22 to download the free SC22-3 Safety Controller PC Interface and other information.

Demonstration Software
SC22-3

MORE INFO ONLINE *Software*

MORE INFO ONLINE *Download PDF*

ADDITIONAL INFORMATION	
Product Manual	133487
Quick Start Guide	133485
Controller/PC Interface Software	134534

MORE INFO ONLINE *Detailed Specifications*

SPECIFICATIONS	
Power	24V dc +/- 20% 400 mA max (no output loads) 5.9A (all outputs ON at maximum load)
Housing	35 mm DIN Mount IEC IP20 rating Plug-in Terminals
Inputs	22 (Safety or Non-Safety inputs) Configurable for solid state or contact based input devices
Safety Outputs	3 Independent , Dual Channel, PNP (6 terminals) 750 mA each @ 24V dc (per output)
Status Outputs	10 Single Channel PNP outputs (Non-Safety) 0.5A max each @ 24V dc 1.0A max @ 24V dc (total for all 10 outputs)
Performance Standards	SIL 3 per IEC 62061 and IEC 61508 Category 4 (PL e) per ISO 13849-1
Approvals	UL, CSA and CE (pending)

SAFETY CONTROLLER MODEL NO.	Terminal Type	USB Cable	XM Card	XM Programming Tool	Quick Start Guide
SC22-3-SU1	Screw	1.8 m	Yes	Yes	133485
SC22-3-CU1	Clamp	1.8 m	Yes	Yes	133485
SC22-3-S	Screw	—	Yes	—	133485
SC22-3-C	Clamp	—	Yes	—	133485

SC22-3 SAFETY CONTROLLER ACCESSORIES	
SC-XM1	External memory card (XM card)
SC-TS1	Screw terminal replacement set for SC22-3
SC-TC1	Clamp terminal replacement set for SC22-3
SC-USB1	USB A/B Cable, 1.8 m
SC-XMP	XM card USB programming tool
SC-IM9A	10A Interface module for 1 Safety Output (3 NO per output)
SC-IM9B	10A Interface module for 2 Safety Outputs (3 NO per output)
SC-IM9C	10A Interface module for 3 Safety Outputs (3 NO per output)
IM-T-9A	6A Interface module (3 NO)
IM-T-11A	6A Interface module (2 NO, 1 NC)

Choose from Banner's complete line of machine safety products.

MORE INFO ONLINE *Machine Safety*

Safety Light Screens

Perimeter & Area Optical Guards

Safety Modules

Emergency Stop Devices

Two-Hand Controls

Safety Interlock Switches

Fiber Optic Safety Devices

MORE INFO ONLINE More information online at **bannerengineering.com**