

SAFETY CONTROLLER



Applications

More flexible than safety, less complex than a safety PLC

Stamping Presses

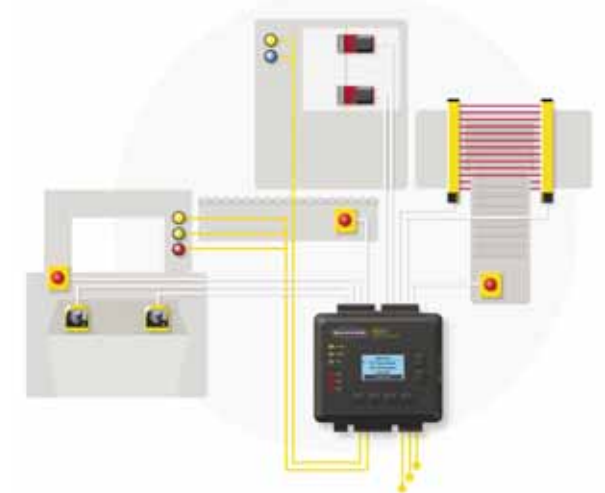
Potentially dangerous Stamping Presses in particular need to be safeguarded by such devices as; Safety Light Screen(s), Two-Hand Control(s), Emergency, Stop Button(s), Safety Mat(s) (in some cases) and Safety Switch(es). In addition to these safety devices, Stamping Presses also incorporate LED indication for the Operator. For example; EZ-LIGHT and push buttons used for validation. . .

The SC22-3 Safety Controller is the perfect solution for managing these devices while still maintaining a high degree of flexibility. In many cases, the SC22-3 Safety Controller can not only replace several dedicated safety modules but also the PLC for the non-safety devices. With the large number of inputs and outputs (safety or auxiliary) available in the SC22-3 Safety Controller, this versatile product is suitable for many different applications giving considerable cost reduction.

Palletizing Systems

Many factories and food processing plants are using palletizing systems for their end of line. Dedicated machines or robotic work cells are being utilised for this operation. Both of them require an integrated safety installation to avoid any safety risk. This particular application therefore requires multiple safety components and functions such as Muting with sensors, Safety Light Curtain(s), Emergency Stops and Safety Switch(es)...all of which can be managed by a single type SC22-3 Safety Controller.

Typical Application Diagram



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Who else but Banner could take the complexity out of safety control?

Replacing 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 safety 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

All in 3 steps

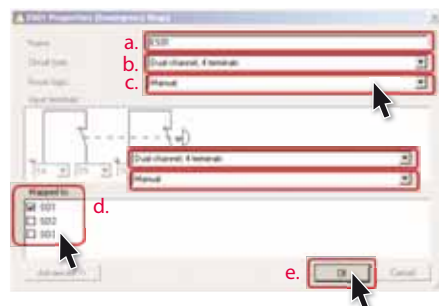
1 Add safety input



2 Select a device

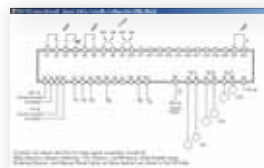


3 Modify device properties



- 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



Set up multiple safety functions in minutes, not hours.

Vastly reduce installation and troubleshooting time too.

Using either the PC Interface or the Controller's On board 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.

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.



Totally configurable. Remarkably easy.

22 Configurable Inputs

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

Up to 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 24 V dc sources when required. Versatile input circuitry accommodates a wide range of input device types not only from Banner but from a variety of manufacturers including:

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



Easily established status of input, output and system properties.

10 non-safety status outputs are capable of 0,5 A output individually (up to 1,0 A in total if all used). With simple menu selections, you can monitor a variety of output status functions including:

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

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

PC Interface and Memory Card

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.

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 e-mail them anywhere in the world for fast efficient upgrades.

Display and cursors

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

The front panel LCD 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 alternatively using a PC interface. The LCD display and LED status indicators keep you informed of power, faults, as well as status of output and communication with your PC.

3 Redundant Safety Outputs

The SC22-3 is designed to meet stringent safety standards, including Safety Integrity Level (SIL) 3 per IEC 62061, 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.

A complete Kit in one reference

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				
SC22-3-S	Screw	—	Yes	—	
SC22-3-C	Clamp	—	—	—	