Allen-Bradley Guardmaster 440C-CR30 Software Configurable Safety Relay
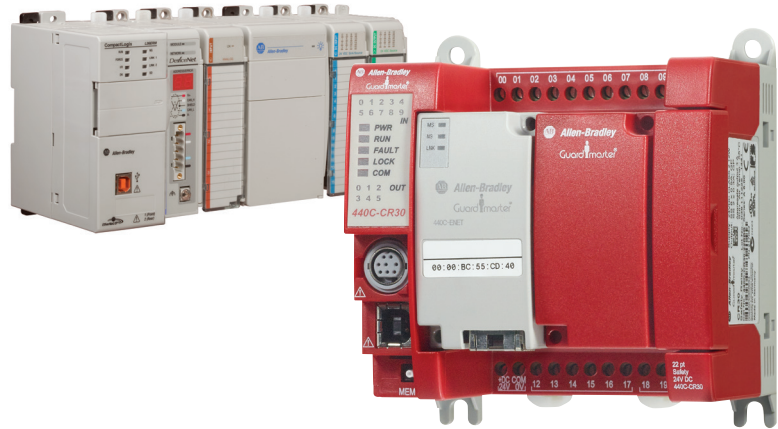
A Flexible, Cost-Effective and Easy-to-Use Safety Solution

Features

- PLe, SIL3 per EN ISO 13849-1, IEC 62061
- 22 embedded Safety I/O
- Embedded USB programming port
- Embedded Modbus RTU serial port
- Optional Ethernet plug-in module
- Two plug-in ports supporting Micro800® (2080) plug-ins

Benefits

- Quick and easy configuration via Studio 5000 Logix Designer™ or Connected Components Workbench™ – a single software environment for standard and safety control
- Pre-defined drag-and-drop safety function blocks simplify programming
- Advanced diagnostics enable increased productivity and enhanced safety
- Embedded Modbus communicates with Allen-Bradley® Connected Components for efficient monitoring and troubleshooting
- Compact design optimizes panel space
- Flexible, scalable solution thanks to standard Micro800 I/O plug-ins

Safety made simple and flexible

The new Allen-Bradley Guardmaster® 440C-CR30 Safety Relay is a flexible, cost-effective and easy-to-use configurable safety relay ideal for applications requiring four to 10 safety circuits and control of up to five zones. The Guardmaster 440C-CR30 Safety Relay is configured through a simple process of selecting certified safety function blocks to rapidly build your applications. The Guardmaster 440C-CR30 safety relay is completely integrated with Allen-Bradley Logix controllers and can be configured and programmed in the Rockwell Software® Studio 5000® environment. This means you can create, control and monitor a safety system in the same software environment as their standard control, resulting in increased productivity and reduced commissioning time.

Increase your uptime

An optional Ethernet plug-in module allows the Guardmaster 440C-CR30 to easily communicate diagnostic data to an Allen-Bradley CompactLogix™ or Micro800 controller. By leveraging the features of Connected Components Workbench software and the embedded communication capabilities of the Guardmaster 440C-CR30 Safety Relay, users can monitor, troubleshoot and modify their applications quickly and easily for increased uptime. Five status and 16 user configurable LEDs on the Guardmaster 440C-CR30 relay's faceplate provide local diagnostics to further aid in status reporting and troubleshooting.
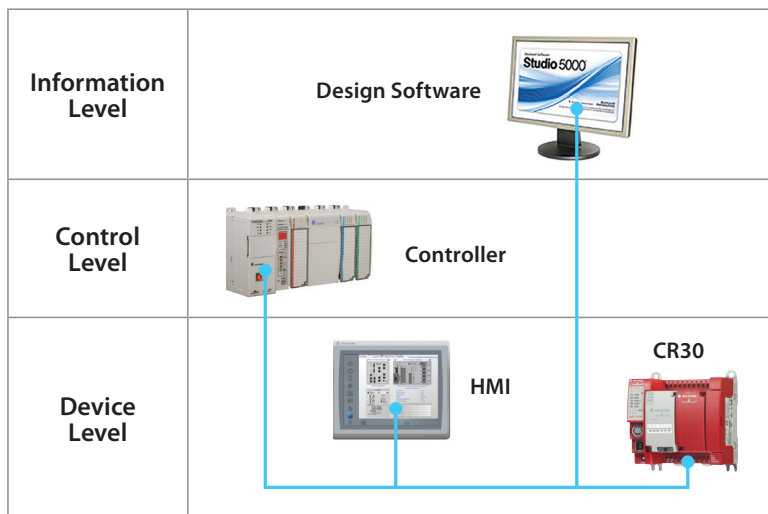
Optimize panel space

With 22 on-board safety I/O points, including six configurable I/O, the Guardmaster 440C-CR30 Safety Relay is a flexible solution for applications requiring multiple safety zones. Without increasing the footprint, the 440C-CR30 can also be expanded with two standard Micro800 plug-in modules to support 16 additional standard I/O points, saving valuable safety I/O points for your safety system.

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Rockwell Automation

Specifications	
Communications ports, embedded	• USB 2.0 (non-isolated) • RS232 non-isolated serial
Base Programming Port	USB 2.0 (non-isolated) Any standard USB printer cable will work
Base digital I/O points (see Types and Number of Inputs/Outputs)	22
Base number of plug-in modules	2
Maximum digital I/O[1]	38
Power supply	Embedded 24V DC power supply, optional external 120/240V AC power supply available
Software	Studio 5000 Logix Designer or Connected Components Workbench

Accessory/ Catalog No.	Description
440C-ENET	Ethernet Plug-in Module, Slot 1 only
2080-IQ4OB4	8-pt Combo: 4-pt Digital Input, 12/24VDC, Sink/Source, Type3, and 4-pt Digital Output, 12/24VDC, Source
2080-IQ4	4-pt Digital Input, 12/24VDC, Sink/Source, Type3
2080-OB4	4-pt Digital Output, 12/24VDC, Source
2080-OW4I	4-pt Relay Output, Individually Isolated, 2A
2080-MEMBAK-RTC	Project Backup and Restore module

[1] The number of maximum digital I/O assumes 8-point digital I/O plug-ins (for example, 2080-IQ4OB4) are used on all available plug-in slots. Standard digital inputs can only be used for non-safety rated diagnostics and control such as resets, muting sensors or external device monitoring feedback circuits.

Information Level	**Design Software**	
Control Level	**Controller**	
Device Level	**HMI**	**CR30**

I/O Type	Number
Input Only (24V DC Sink)	10
Input Multi-Purpose Terminal: • Input (24V DC Sink) • Single Wire Safety Input	2
Multi-Purpose Terminal: • Input (24V DC Sink) • Test Output • Output (24V DC Source)	6
Output Only (24V DC Source)	2
Output Multi-Purpose Terminal: • Output (24V DC Source) • Single-Wire Safety Output	2