

1756 GuardLogix Integrated Safety Controller



Drive productivity through Integrated Safety

Benefits

Studio 5000® Environment

- Automatic Safety Task creation restricts user impact to safety functions
- Single controller view

Standard Control Tasks

- Same functionality as a ControlLogix controller

Safety Control - Safety Task

- Safety-specific instructions
- Security
- Addresses safety I/O

57 TÜV-certified Safety Instructions

- Reduce memory usage
- Improve logic creation
- Easy troubleshooting and maintenance

Leverages Standard

ControlLogix Hardware

- Racks, power supplies, communication

Conformal Coating

Select products are available with Conformal Coating to help protect components and extend product life in the following:

- ANSI/ISA-71.04.2013; Pollution class G3 Harsh Group A environments (tested equivalent to 10 years)
- High-humidity and caustic areas
- Salt-contaminated and saline-fog environments
- Aggressive chemical and vapor atmospheres
- Environmentally sensitive and abrasive areas
- Off-shore marine environments

Products that are not available as standard coated can be ordered as custom coated products.



Automation users and manufacturers continue to look for flexible solutions that can help address global safety standards and regulations. These regulations, which are combined with competitive pressures to reduce costs and improve productivity, demand a better integration of standard and safety control.

Now, with the Allen-Bradley® GuardLogix™ system, you get safety control, together with ControlLogix® standard and motion control for true integrated safety that offers SIL 3, PLe control.

This controller is the only true integrated safety controller on the market that offers safe and standard control in a single controller with a single software package.

Integrated Safety

The GuardLogix controller isn't just a safety controller, it's a standard ControlLogix processor plus safety features that helps ensure SIL 3, PLe safety control.

With its two-processor architecture (1oo2), the GuardLogix system consists of a safety primary and a safety partner processor. A system benefit is that it's still a single project. The safety partner is a part of the system and is automatically configured, with no setup, configuration or download to the safety partner required.

With the GuardLogix system, you can benefit by using Studio 5000 standard development environment for all Allen-Bradley Logix controllers. The flexible, tag-based system makes it easy to coordinate between safe and standard logic and to display diagnostics about the safety system. Studio 5000 also manages safety, so you don't manually have to manage the separation of standard and safety memory, or worry about partitioning logic to isolate safety – it's all done for you by Studio 5000 development environment.

During development, safety and standard systems have the same rules – multiple programmers, online editing and forcing are all allowed.

LISTEN.
THINK.
SOLVE.™



Once the project is tested and ready for final validation, you set the Safety Task to a SIL 3, PL_e integrity level, which is then enforced by the GuardLogix controller. When Safety Memory is locked and protected, the safety logic can't be modified and all safety functions operate with SIL 3, PL_e integrity. On the standard side of the GuardLogix controller, all functions operate like a standard Logix controller.

Another key time advantage is that since safety is integrated, Safety Memory can be read by standard logic and external devices like HMIs or other controllers. There is no need to spend time configuring or conditioning safety data from a dedicated safety device. The result is easy, system-wide integration and the ability to display safety status on displays or marquees.

The GuardLogix system uses CIP Safety for connectivity to distributed POINTGuard I/O™, IP20 CompactBlock™ Guard I/O™ or IP67 ArmorBlock® Guard I/O™. CIP Safety is also used for safety interlocking between GuardLogix processors over EtherNet/IP™ networks, as well as DeviceNet™ networks. This system provides users flexibility in how safety I/O can be distributed, or how safety data can be shared between multiple GuardLogix controllers for safe interlocking between different cells/areas.

The benefits of Integrated safety solutions allow you to:

- Reduce engineering and design times by 20-30%
- Reduce troubleshooting times by 25%
- Improve productivity by 3-5%

Additional Information

The most current list of Conformally Coated products can be found [here](#), or by contacting your local Allen-Bradley distributor or sales office.

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What is SIL 3, PL_e?

SIL (Safety Integrity Level) is a measure of the ability of a product to lower the risk of the occurrence of a dangerous failure. As defined in IEC 61508, "Functional Safety of Electrical/Electronic/Programmable Safety- Related Systems."

SIL defines the ability of a product to operate in safety-rated aspects of a control system. SIL 2, PL_d and SIL 3, PL_e are the most common levels for machinery and process safety applications. GuardLogix controllers can be used in applications that require the use of SIL 2, PL_d- or SIL 3, PL_e- compliant products.

Automation Controllers

1756-L73S	8 MB Standard memory 4 MB Safety memory
1756-L72S	4 MB Standard memory 2 MB Safety memory
1756-L71S	2 MB Standard memory 1 MB Safety memory
1756-L7SP	Safety Partner
Certifications	UL, ULH, cULus, c-ULH, CE, ATEX, RCM, KOREA, MARITIME, RUSSIAN, TÜV
Safety Certifications	IEC 61508 Parts 1-7:2010, EN 62061:2005, EN ISO 13849-1:2008+AC:2009, EN 61511-1:2004, EN 50156-1:2004, EN 746-1:1997+A1:209, EN 746-2:2010, IEC 61131-2:2007, EN 50178:1997, EN 60204-1:2006+A1:2009 (in extracts), NFPA 79:2012, NFPA 85:2011, NFPA 86:2011, ANSI B11, 19:2010, ANSI/RIA R15.06:199, EN 61326-3-1:2008

