

## GuardLogix® Integrated Safety System Overview



## Integrated Safety



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

Now, with the Allen-Bradley® GuardLogix® Integrated Safety system, you get safety control partnering with the ControlLogix® processor for true integrated control that offers SIL 3 safety capability.

### Benefits

- Save design and development time with RSLogix™ 5000 software, the common programming software for all Logix PAC™ controllers:
  - Safety Task automatically created with safety-specific functionality
  - Safety Task isolates all safety functions
  - Single controller view (standard and safety) simplifies setup and configuration
- Reduce costs. Now one controller can meet all of your control needs. GuardLogix controllers can simultaneously perform Sequential, Motion, Process, Drive and Safety control.
- Reduce system startup time for safety and standard programming
  - Restricted set of features and functions for safety
  - TÜV-certified safety application instructions provide ease of use and simplify safety application development
- Security (controller-enforced, project-based, computer-based, or centrally administered)
- Reduce hardware costs by leveraging standard ControlLogix hardware: chassis, power supplies, communications

A GuardLogix controller isn't just a safety controller, it's a standard ControlLogix processor plus safety features that provide SIL 3 safety control. With its two-processor architecture (1oo2), it utilizes a safety primary and a safety partner processor. A benefit of this system is that it's still a single project. The safety partner is a part of the system, is automatically configured, and requires no setup.

You can reap the advantages of using RSLogix™ 5000 programming software, the standard development environment for all Allen-Bradley Logix controllers, with a GuardLogix controller. The flexible tag-based system is one of the easiest to use on the market today. Plus, RSLogix 5000 software helps manage safety. The separation of standard and safety memory is automatic.

With a much easier development and debug environment, multiple users can edit a project. During development, safety and standard have the same rules, online editing and forcing are all allowed. Once the project is tested and ready for final validation, you set the Safety Task to a SIL 3 integrity level, which is then enforced by the GuardLogix controller. When safety memory is locked and protected, the safety logic can't be modified. Once safety is locked to a SIL 3 state, the standard side of the GuardLogix controller operates like a regular Logix controller. Thus online editing, forcing, and other activities are all allowed.

Since safety is integrated, safety memory can be read by standard logic and external devices like HMIs or other controllers. This saves time, eliminating the need to condition safety memory for use elsewhere. The result is easy system-wide integration and the ability to display safety status on displays or marquees. Use Guard I/O for field device connectivity, and over Ethernet or ControlNet™ networks for safety interlocking between GuardLogix controllers. Multiple GuardLogix controllers can share safety data for safe interlocking, or a single GuardLogix controller can use remote distributed safety I/O between different cells/areas.

## GuardLogix Controllers

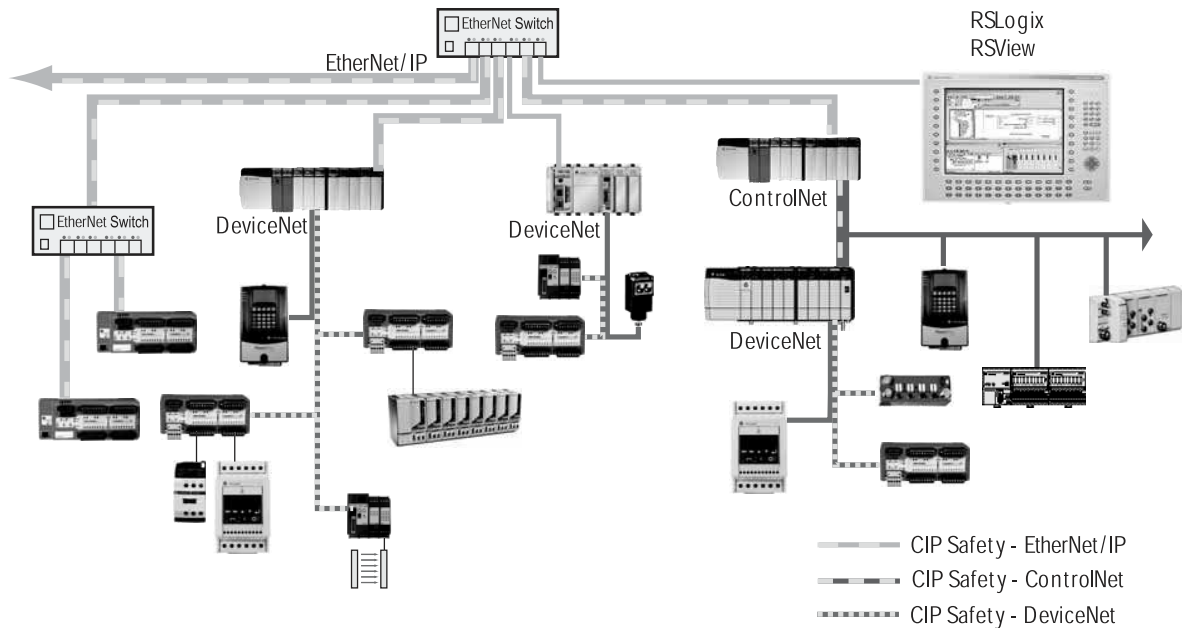
Cat. No.	Memory		Power Dissipation, Max.	Thermal Dissipation, Max.	Backplane Current (mA) at 5V	Backplane Current (mA) at 24V
	Available User Memory	I/O Memory				
1756-LSP*	1 MB (safety)	—	3.5 W	11.9 BTU/hr	1200 mA	14 mA
1756-L61S	2 MB (standard) 1 MB (safety)	478 KB	3.5 W	11.9 BTU/hr	1200 mA	14 mA
1756-L62S	4 MB (standard) 1 MB (safety)	478 KB	3.5 W	11.9 BTU/hr	1200 mA	14 mA

\* The GuardLogix system is a dual processor solution, you MUST use the 1756-LSP with a 1756-L6xS processor.

5-Programmable Safety Solutions

# Logic GuardLogix® Integrated Safety System

## Safety Interlocking and Control via CIP Safety



### Specifications

Replacement Battery	1756-BA2 (0.50 g lithium)	
Shock, Operating	30 g peak acceleration for 11 ms duration	
Shock, Non-Operating	50 g peak acceleration for 11 ms duration	
Vibration	10... 500 Hz 2.0 g maximum peak acceleration	
Operating Temperature	0... 60 °C (32... 140 °F)	
Non-Operating Temperature	-40... 85 °C (-40... 185 °F)	
Relative Humidity	5... 95% (without condensation)	
Weight	1756-L62S	0.32 kg (0.70 lb)
	1756-L61S	0.32 kg (0.70 lb)
	1756-LSP	0.32 kg (0.70 lb)
Programming Cable	1756-CP3 1747-CP3	
Certifications*	UL, CE, C-Tick, CSA Class I Div 2 Hazardous, ATEX, FM, TÜV-certified for Functional Safety up to SIL 3 and Cat. 4	

\* When product is marked. See the Product Certification link at <http://www.ab.com/certification> for Declarations of Conformity, Certificates, and other certification details.