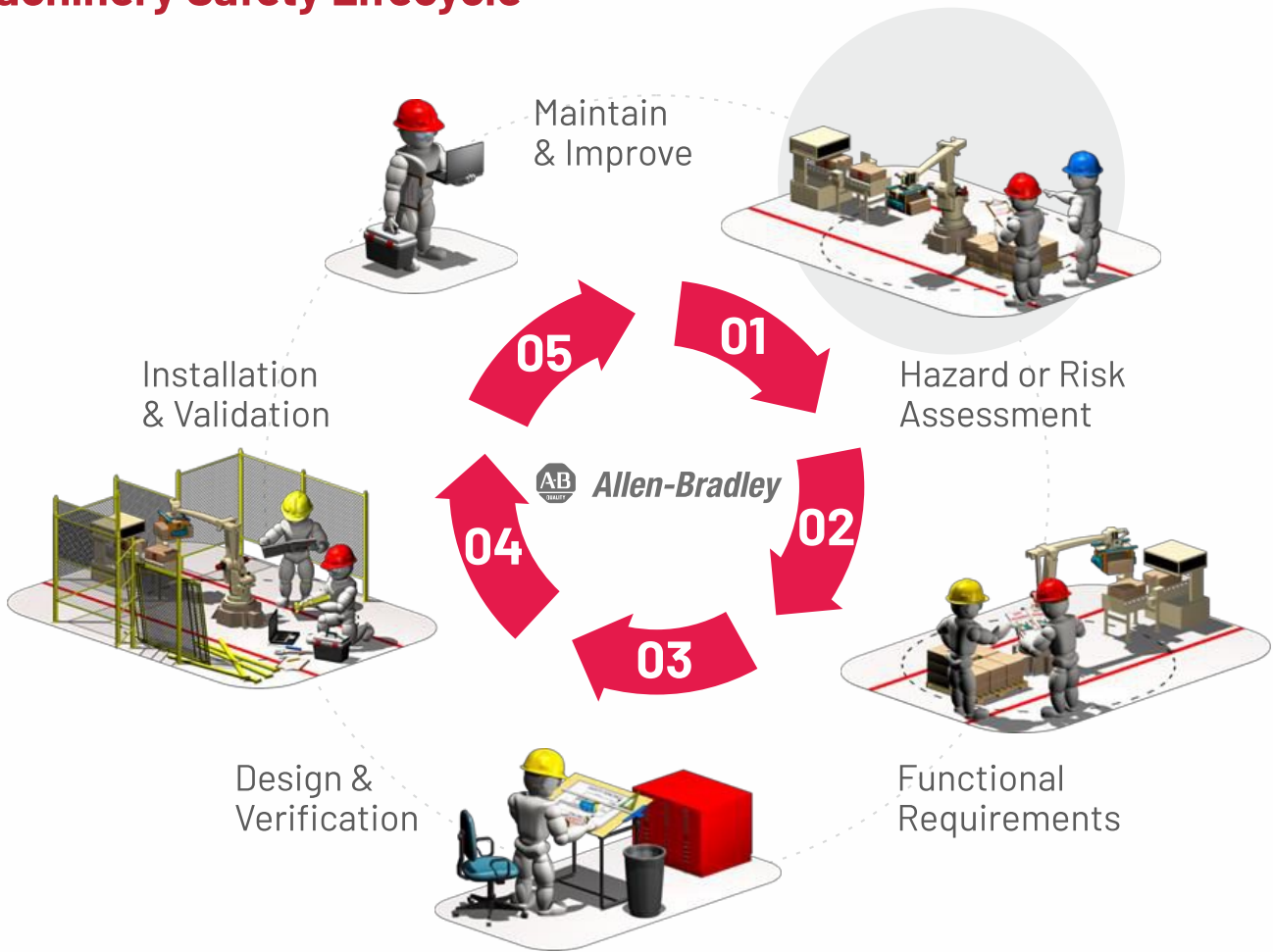


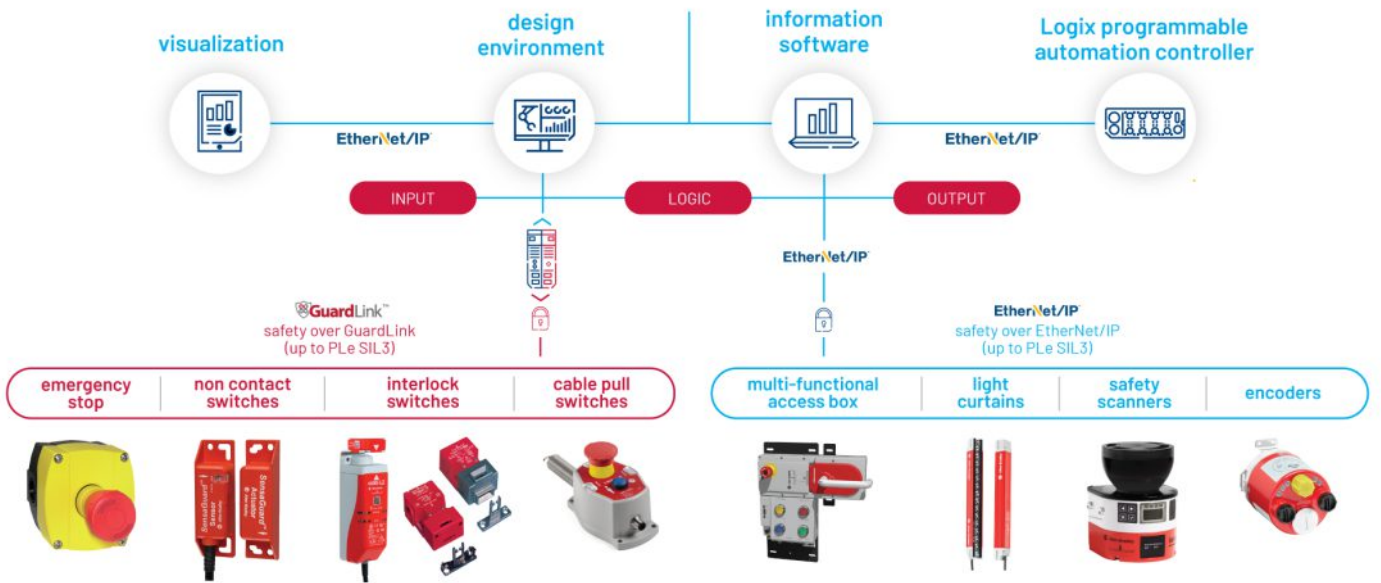


**SAFETY
COMPONENTS
PORTFOLIO**

Machinery Safety Lifecycle



THE CONNECTED ENTERPRISE/INDUSTRY 4.0



Cable reduction of up to 38%

Presence Sensing Safety Devices

450L-B GuardShield™ POC Type 4 Safety Light Curtain

- Point of Operation Control (POC) for finger or hand protection
- Innovative plug-in modules (available separately) for application flexibility and reduced inventory costs
- Protection heights 150...1950 mm (5.9...76.7 in.) in increments of 150 mm (0.5 ft)
- Compact design 30 mm x 30 mm (1.18 in. x 1.18 in.)
- TUV certified Ple, Type 4 IEC 61496-1/-2, SILcl3 per EN ISO 13849-1, IEC 62061



450L-E GuardShield™ POC Type 4 Safety Light Curtain

- Point of Operation Control (POC) for finger or hand protection
- Innovative plug-in modules (available separately) for application flexibility and reduced inventory costs
- Protection heights 150...1950 mm (5.9...76.7 in.) in increments of 150 mm (0.5 ft)
- Integrated laser alignment system helps provide quick and more reliable installation
- TUV certified Ple, Type 4 IEC 61496-1/-2, SILcl3 per EN ISO 13849-1, IEC 62061



450L Architecture

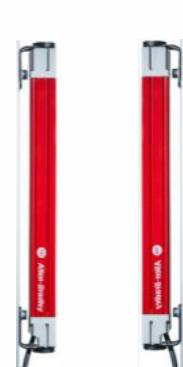
Unique Transceiver Design

- Traditional Safety Light Curtain Architecture
Two different sticks (a Transmitter [Tx] and a Receiver [Rx]) build one system
- Unique GuardShield 450L Architecture
Two identical sticks (two Transceiver T/Rx) build one system and the plugin defines functionality

1x Tx & 1x Rx



2x T/Rx



Identical stick design reduces inventory, efforts for logistics and maintenance
("Stock only one stick type instead of two types!")

442L SafeZone Safety Scanners

- Single-zone, multi-zone, and mini versions
- Selectable resolutions of 30, 40, 50, 70, and 150 mm
- Horizontal or vertical mounting
- Stationary or mobile applications
- Class 1 laser (eye safe)
- Rugged IP65 housings
- Easy-to-use configuration wizard
- Seven-segment diagnostic display, rotatable by 180°



440F Safety Mat Systems

- Pressure-sensitive protective device per ISO 13856 for machine safeguarding
- Hardened steel plate construction
- No dead spots
- Four-wire system to detect opens and shorts
- Withstands 4500 psi static pressure
- IP67 rated
- PLd per ISO 13849 when used with a suitable safety control



Safety Switches

Interlock Switches

440K Tongue Interlock Switches

- A full range of guard interlocking switches
- Holding forces up to 40 N
- Multiple actuator options
- Conduit or quick disconnect models
- Optional GD2 heavy duty stainless steel style heads for increased robustness
- Type 2 interlocking devices per ISO 14119 with low coded tongue-shaped actuators



Interlock Switches

440N SensaGuard Non-Contact Switches

- RFID unique (high) or standard (low) coded actuators
- PLe Cat 4 per ISO 13849-1
(Safety performance is maintained when connected in series)
- Standard, magnetic hold, and integrated latch versions
- IP69K washdown rating
- Type 4 interlocking device per ISO 14119 with low or high coded RFID actuators



440G-EZ Electromagnetic Safety Switch

Product Overview

Magnetic Locking Function

- Power to Lock (PTL)
- 500N Holding Force

Inputs/Outputs

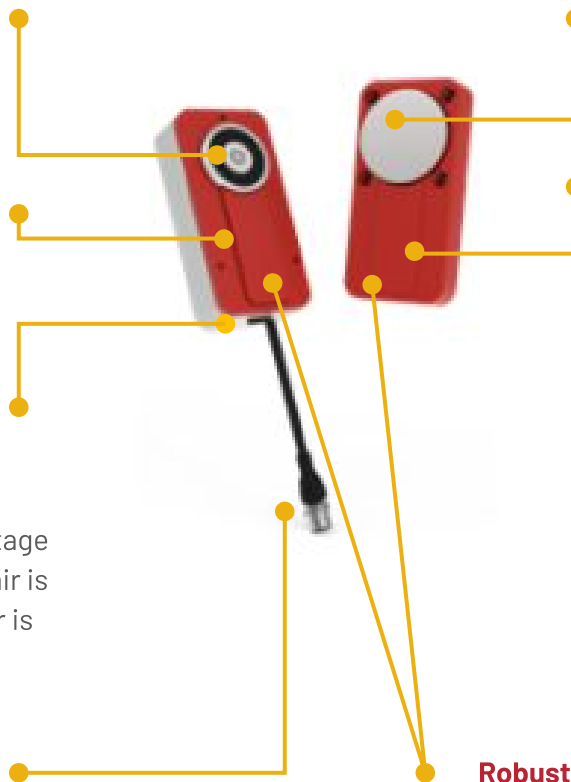
- 24V DC
- 2 PNP OSSD's

LEDs

- Status LEDs for:
 - Lock - Yellow - On/Off when magnetic is supplied with voltage
 - OSSD - Green - when OSSD pair is ON state, Red when OSSD pair is OFF state

Connection Options

- 5-Pin Micro M12 QD
- 8-Pin Micro M12 QD
- Auxiliary Pin for actuator in range



Ease of Alignment

High tolerance to door offset within 5 mm in all directions.

Replacement Actuator

Replacement actuator available as a separate part number

High Level of Safety

- Performance Level E (PLe)
- Safety Integrity Level 3 (SIL3)
- EN ISO 13849-1 for door position
- ISO 14119 3.29 - guard locking for protection of the process-application of a guard locking device to protect the working process from being interrupted

Robust Enclosure

- **Sensor:** Anodized Aluminum
- **Actuator:** Fiber-glass reinforced PVC
- IP67 rated, resistance against dusts and fluids, no moving parts

Safety Trip Devices

Access Control

442G Multifunctional Access Box

- High holding force (Fzh) 2000 N per ISO 14119
- Power-to-Release or Power-to-Lock modules
- Diagnostic outputs for door position, bolt position, and lock status are available to the control system
- Standard models can be operated as a standalone device or in series with other devices, maintaining a PLe Cat 4 safety rating
- Ethernet models enable easy integration in a networked automation control system using Studio 5000 Logix Designer



Interlock Switches

440T Trapped Key Switches

- Interlocking for pre-determined sequence of events
- All stainless interlocking and coded parts
- Weather cap as standard
- Standard red color-coded key and ID tags
- A complete range of isolators, gate (guard) interlocks, key exchange units and specialty devices
- Type 2 Interlocking Devices per ISO 14119 (Interlocking part of Trapped Key Systems)
- PLd, Cat 3 per ISO 13849



Emergency Stop Devices

440E Lifeline Cable Pull Switches

- Up to 125 m cable span
- Universal mounting and operation
- Lid mounted emergency stop button
- Switch latches when cable is pulled or cable is slack
- Cable status indicator on switch lid
- Lifeline Rope Tensioner System (LRTS) speeds installation



Safety Relays

Dual Input Dual Channel Devices

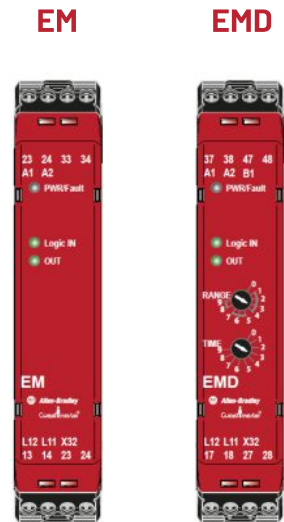
442G Multifunctional Access Box

- SI**
 - Single Input (redundant)
 - Configurable for Reset and logic
 - 24V DC supply voltage
 - Full single wire cascading capability
 - 2 N/O safety outputs, 1 PNP aux.
- DI**
 - Safety Relays with 2 dual channel safety inputs
 - Configurable for Reset and logic
 - 24V DC supply voltage
 - Full single wire cascading capability



Expansion Modules

- EM**
 - 24V DC supply voltage
 - Full single wire cascading capability
 - 4 N/O safety outputs, 1 PNP aux.
- EMD**
 - 24V DC supply voltage
 - Full single wire cascading capability
 - Timer functions (TM, EMD)
 - Selectable time delays
 - Time x Factor = 0...300s
 - 4 N/O delayed safety outputs, 1 PNP aux.



Safety Relays

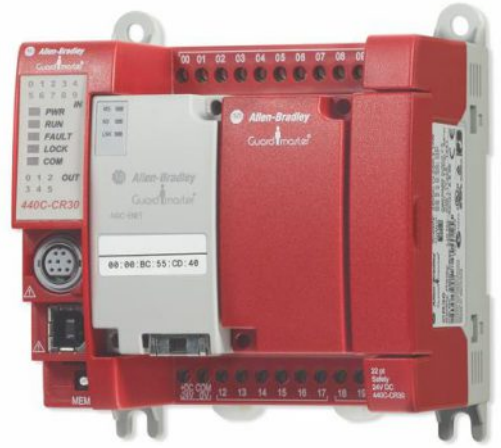
440R Guardmaster Safety Relays (GSR Family)

- A broad range of safety functions
- Simple logic, reset, and timing configurations
- Single-wire safety relay connection
- Universal inputs
- Compact 22.5 mm housings
- Optional EtherNet/IP network interface



440C Software-Configurable Relay

- Monitoring and Configuration from Studio 5000 Logix DesignerR or Connected Components Workbench software
- PLe Cat 4 per EN ISO 13849-1 & SIL cl3 per IEC 62061
- Predefined function blocks
- AND, OR, NAND, NOR, XOR Logic functions
- 22-point embedded safety I/O
- Expandable via two Micro800R Plug-in I/O Modules
- Expandable with EtherNet/IP plug-in
- Embedded communication via USB programming port and non-isolated RS-232 serial port
- Two single-wire safety input/output points



GuardLink®

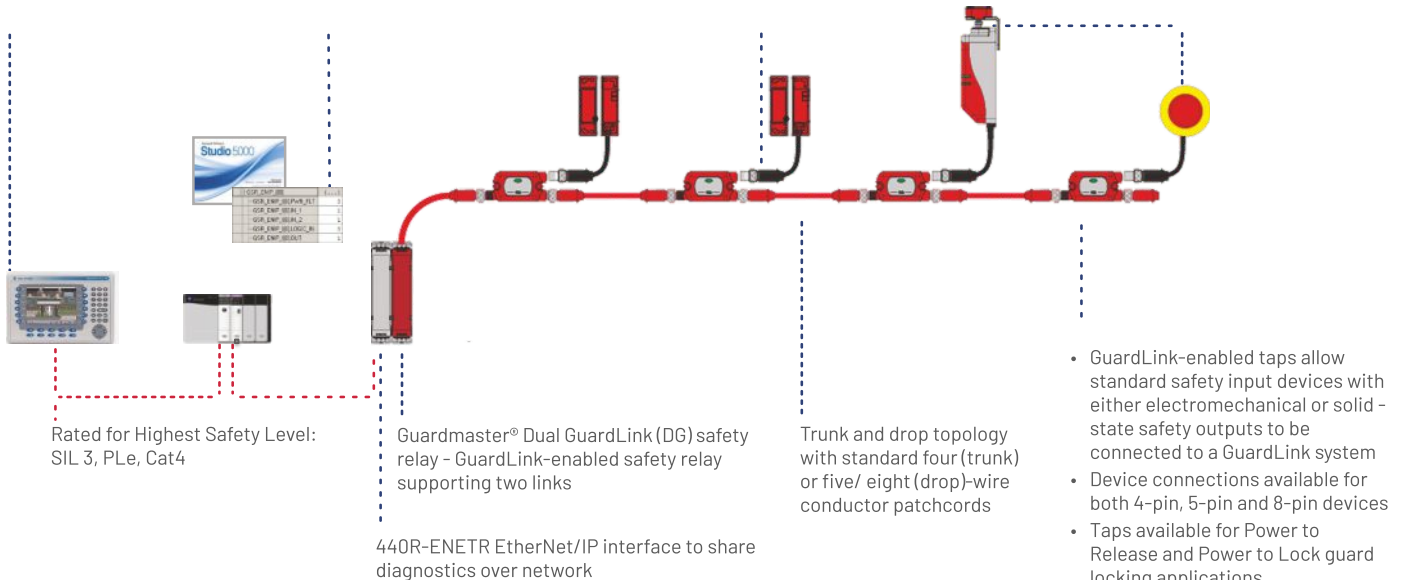
Series connection of safety input devices is common practice in safety-related control systems. However, when the system trips, fault finding can be difficult due to the lack of diagnostic information. Providing diagnostics historically meant connecting auxiliary contacts from each safety input device to the PLC increasing costs due to the need for additional input cards, and increased installation time to hard wire each auxiliary contact to the allocated input.

Provides status, diagnostics, remote reset, fault information and lock /unlock command over network

Add-on Profile in Studio 5000 Logix Designer® to seamlessly integrate with Logix 5000® controller platform

Connect up to 32 devices on each GuardLink channel/zone with 3130 m link distance, max 100 m between devices and 10 m from the tap to the device

Generic safety devices - electromechanical contacts (EMSS) and with solid-state output (OSSD)



Simple Installation

Smart Integration

Highest Safety Performance

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