

Minotaur Safety Relays (MSR) Family to Guardmaster Safety Relays (GSR) Family

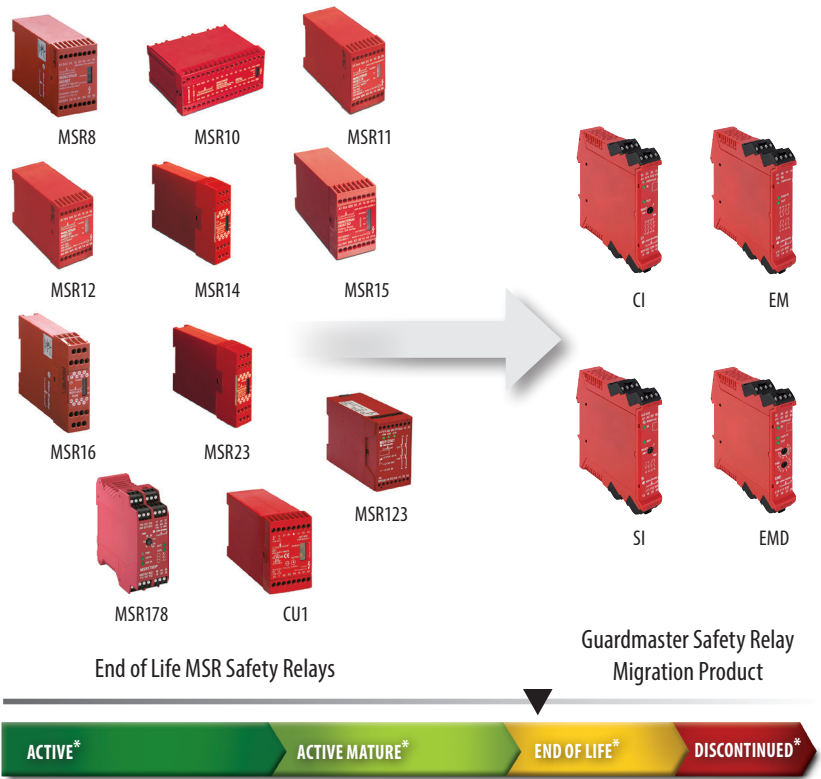
Why Upgrade or Migrate?

Over the years, new functional safety requirements and directives have changed machine designs. To meet these requirements and prepare for future ones, several of the Minotaur™ Safety Relays (MSR) will no longer be available for sale after March 30, 2016.

Equipped with the newest technology, the Guardmaster® Safety Relay (GSR) family will replace the features and functionality of the MSR Safety Relays being discontinued. With their compact, narrow housing (22.5 mm), the flexible GSR units are equipped with configurable safety functions and can consolidate various functions of the MSR line resulting in fewer part numbers, less panel space and lower costs for your operation.

Guardmaster Safety Relays Features and Benefits

- GSR relays have all of the functionality of the legacy MSR family with fewer part numbers, simplifying purchasing and parts management
- GSR Relays meet the latest safety standards including ISO 13849-1 and IEC 62061
- New functions such as Single Wire Safety help simplify system installation and expansion
- MSR to GSR Migration Manual provides detailed technical information and wiring diagrams for seamless migration



Identify, Mitigate and Eliminate the Risks of Automation Obsolescence

The Allen-Bradley® Guardmaster Safety Relays from Rockwell Automation include four products capable of monitoring a broad range of devices in a variety of applications. These safety relays help simplify purchasing and parts management making them an excellent migration product for the MSR product line.

The GSR safety relays offer configurable safety functions and are able to cover the range of functions offered by legacy MSR relays, but with fewer catalog numbers. The GSR relay family also provides this functionality in a more compact, cost-effective solution that optimizes panel space. Plus, GSR relays meet the latest functional safety standards such as ISO 13849-1 and IEC 62061 while offering key functions to help simplify installation and reduce system complexity.

The MSR to GSR Conversion Manual includes detailed specifications, wiring schematics, bills of material and other considerations to help you seamlessly convert from a legacy MSR solution to a smarter, more cost-effective machine design featuring GSR relays. Download the conversion manual by selecting this link ([Publication 440R-UM011A-EN-P](#)) from www.ab.com.

*ACTIVE: Most current offering within a product category.
 ACTIVE MATURE: Product is fully supported, but a newer product or family exists. Gain value by migrating.
 END OF LIFE: Discontinued date announced – actively execute migrations and last time buys. Product generally orderable until the discontinued date.¹
 DISCONTINUED: New product no longer manufactured or procured.² Repair/exchange services may be available.
 1 - Outages on specific items may occur prior to the Discontinued date. 2 - Limited stock may be available in run-out mode, regionally.



MSR Safety Relay Family Compared to GSR Safety Relay Family

The MSR catalog numbers being discontinued are listed in the table below with a cross reference to the recommended GSR catalog number(s).

To support your transition, please refer to the MSR to GSR Migration Manual, [Publication 440R-UM011A-EN-P](#), available on www.ab.com.

MSR Family	Part/Catalog Number	Preferred Migration to GSR#	Panel Space – DC Unit		Panel Space – AC Unit		Response Time	
			MSR Unit (DC) Panel Space (mm)	GSR Unit (DC) Panel Space (mm)	MSR Unit (AC) Panel Space (mm)	GSR Unit (add 1606-XLP15E) Panel Space (mm)	MSR Unit Response Time (ms)	GSR Unit Response Time (ms)
MSR8T	440R-E23030 (24V AC/DC)	440R-S13R2 (GSR CI)	45	22.5	45	45	90	35
	440R-C23031, 110V/230V AC	440R-S13R2 (GSR CI) 1606-XLP15E (power supply)						
MSR10RD	440R-G23029 440R-G23067 440R-23068	1 - 440R-S13R2 (GSR CI) 2 - 440R-EM4R2 (GSR EM) 1 - 440R-EM4R2D (GSR EMD)	152	90	152	112.5	50	CI is 35 ms but total is 175 ms
MSR11R	440R-J23044	440R-S13R2 (GSR CI)	45	22.5	Obsoleted	–	50	35
MSR12T	440R-K23041 (24V)	440R-S13R2 (GSR CI)	45	22.5	45	45	50	35
	440R-K23042 (110V AC)	440R-S13R2 (GSR CI) 1606-XLP15E (power supply)						
MSR14T	440R-L23047 (24V DC)	440R-S13R2 (GSR CI)	45	22.5	–	–	90	35
MSR15DT	440R-M23048 440R-M23057	440R-S13R2 (GSR CI) 440R-EM4R2D (GSR EMD)	45	45	–	–	90	35
MSR16T	440R-N23059 (24V AC/DC)	440R-S13R2 (GSR CI)	22.5	22.5	–	–	90	35
MSR23M	440R-P23073 (24V DC)	440R-S13R2 (GSR CI)	22.5	22.5	45	45	15	35
	440R-P23074 (110V AC)	440R-S13R2 (GSR CI) 1606-XLP15E (power supply)						
MSR123RT	440R-J23106 (24V)	440R-S12R2 (GSR SI)	45	22.5	45	45	15	35
	440R-J23104 (110V AC)	440R-S12R2 (GSR SI) 1606-XLP15E (power supply)						
	440R-J23103 (230V AC)	440R-S12R2 (GSR SI) 1606-XLP15E (power supply)						
MSR178 DP	440R-M23227	440R-S12R2 (GSR SI) 440R-EM4R2D (GSR EMD)	35	45	35	90	20	60
CU1	440R-T07114	440R-S12R2 (GSR SI) 440R-EM4R2D (GSR EMD)	45	45	45	67.5	Set by timer	Set by timer



For detailed specifications and other information go to www.ab.com or see the Guardmaster Safety Relays brochure, [Publication GLSAFE-BR003A-EN-P](#), available on www.ab.com.

DC Load Capability		AC Load Capability		Thermal (non-switching load)		Comment
MSR Unit – DC Load	GSR Unit – DC Load @ 24V	MSR Unit – AC Inductive Load	GSR Unit – AC Inductive Load	MSR Unit – Thermal Load	GSR Unit – Thermal Load	
3 A @ 24V	2 A	4 A	1.5 A	4 A	2 A	GSR SI/CI requires DC power supply in AC applications.
3 A @ 24V	2 A	4 A	1.5 A	4 A	2 A	
3 A @ 24V	2 A	4 A	1.5 A	4 A	2 A	AC version previously obsoleted. MSR11R has One dual channel and monitored manual reset.
3 A @ 30V	2 A	4 A	1.5 A	4 A	2 A	GSR SI/CI requires DC power supply in AC applications.
2 A @ 30V	2 A	4 A	1.5 A	4 A	2 A	MSR14T is available in DC with One dual channel and monitored manual reset.
2 A @ 30V	2 A	4 A	1.5 A	4 A	2 A	MSR15D is available in DC.
6 A @ 30V	2 A	6 A	1.5 A	4 A	2 A	MSR16T is available in DC.
2.5 A @ 24V	2 A	3 A	1.5 A	8 A/7 A	2 A	MSR23M has a faster response time than GSR CI, the safety distance must be checked. GSR SI/CI requires DC power supply in AC applications.
3 A @ 24V	2 A	6 A	1.5 A	10 A	2 A	MSR123RT has a faster response time than GSR SI, the safety distance must be checked. GSR SI/CI requires DC power supply in AC applications.
3 A @ 30V	2 A	6 A	1.5 A	4 A	6 A	MSR178 DP has a faster response time than GSR SI, the safety distance must be checked.
2 A @ 30V	2 A	4 A	1.5 A	4 A	2 A	

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