SSP HOLDX Magnetic Locking Safety Switches With RFID

HOLDX Series

The SSP HOLDX line of smart magnetic locking safety switches with RFID can protect systems, machinery, and personnel from unintentional openings. The integrated RFID safety sensor ensures the safety of the system, while the electromagnet keeps the door closed and thus protects automated processes.

The integrated RFID safety sensor meets the highest performance level PLe according to EN ISO 13849-1:2015.

If desired, users can take advantage of the integrated Bluetooth interface by utilizing the HOLDX Manager software available for Android, Apple or Windows. This software is downloadable from AutomationDirect.com.

HOLDX safety switches also come with extended LED diagnosis for smart operation and fast evaluation.

Features

- PLe according to EN 13849-1
- High Coded option according to EN 14119
- From little windows up to big safety doors
- Shortest commissioning time
- Pigtail connection reduces cabling effort
- Less downtime and setup time, due to maintenance monitoring
- High tolerance for door offsets
- IP67
- Pulsed status output sends diagnostic information to PLC

HOLDX Manager

Download on the App Store

GET IT ON Google Play

Download software for Windows on Automationdirect.com

HOLDX Magnetic Locking Safety Switch With RFID Selection Guide

Part Number	Price	RFID Coded Type	Holding Force	Safety Output	Status Output	Drawing
RL1-P8-S-B	$;;05,sf:	Master coded RFID	1200N	2 OSSD outputs	Single pulsed diagnosis output	PDF
RL1-P8-W-B	$;05,sg:	Reteachable coded RFID				PDF
RS1-P8-S-B	$;05,sd:	Master coded RFID	600N			PDF
RS1-P8-W-B	$;05,se:	Reteachable coded RFID				PDF

RL1-P8-S-B or RL1-P8-W-B

RS1-P8-S-B or RS1-P8-W-B

Master Coded vs. Reteachable Coded

The master coded switch will work with any HOLDX actuator of the same size profile out of the box.

RS1-P8-S-B with RS-A1 or RS-A2

However, if a higher level of safety is required then the reteachable switch should be used. The HOLDX manual provides easy step-by-step instructions to reteach the switch if the actuator needs to be changed. After a new actuator has been taught, then the reteachable HOLDX switch will "forget" the old actuator. This is useful when trying to deter personnel from bypassing the safety system.

RS1-P8-W-B with RS-A1 or RS-A2

Actuators

The actuator is typically fixed to a hinged or sliding door. All SSP HOLDX actuators work with all SSP HOLDX safety switches of the same size profile. SSP offers a version of each actuator with 50N of permanent latching force. This is useful for keeping doors shut even when they are unlocked. However, the switch can be configured using the HOLDX Manager software to apply up to 50N of supplemental electromagnetic force to hold the door closed if desired, regardless of whether the actuator includes a built-in permanent magnet.

RL-A1 or RL-A2

RS-A1 or RS-A2

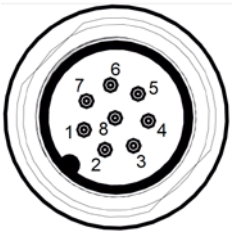
HOLDX Magnetic Locking Safety Switch With RFID Selection Guide

Part Number	Price	Fits	Permanent Magnet Holding Force	Drawing
RL-A1	$;-5,sj:	HOLDX RL safety switches	50N	PDF
RL-A2	$;5,sk:		None	PDF
RS-A1	$;5,sh:	HOLDX RS safety switches	50N	PDF
RS-A2	$;-5,si:		None	PDF

SSP HOLDX Magnetic Locking Safety Switches With RFID

Connection Diagram

Connection (M12 8-pin)		
Pin	***Color****	***Description***
1	White	+24VDC
2	Brown	Safety Input (OSSD1 IN) or +24VDC
3	Green	GND
4	Yellow	Safety Output (OSSD)
5	Gray	Diagnostic Output
6	Pink	Safety Input (OSSD2 IN) or +24VDC
7	Blue	Safety Output (OSSD)
8	Red	Magnet Engage (Power to Lock)

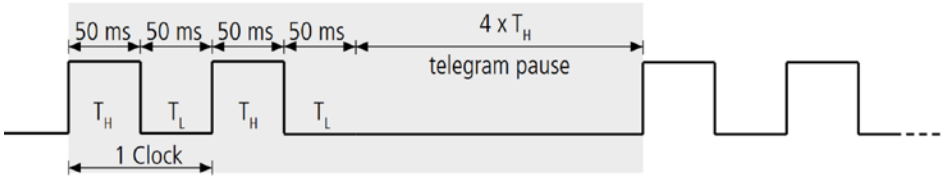


**** This connection chart is for 292 series 8-pin cables***

NOTE: If no Safety device will be wired to the Safety Inputs, then +24VDC must be wired to both Safety Inputs.

Diagnostic Output

The Diagnostic Output sends a pulsed output that can be read by a standard PLC input. This can allow operators and maintenance personnel to quickly troubleshoot a problem, reducing wasteful downtime.



1 diagnosis signal cycle

OSSD Input Pin 2 + Pin 6	***Magnet ON Pin 8***	***Door Position***	***Magnetic Flux Undercut***	***OSSD Output Pin 4 + Pin 7***	***Diagnosis Output Pin 5***
On	On	Closed		On	24V
On/Off	Off	Open		Off	Clock 1x
Off	Off	Closed		Off	Clock 2x
On	On/Off	Closed		On	Clock 3x
On	On	Open		Off	Clock 4x
Off	On	Closed		Off	Clock 5x
Off	On	Closed	✓	Off	Clock 6x
On	On	Closed	✓	On	Clock 7x

NOTE: The Diagnostic Pin can pulse up to 24 times. These additional error codes are detailed in the vendor manual.

SSP HOLDX Magnetic Locking Safety Switches With RFID

SSP Safety System Products

SSP Magnetic Locking Switches With RFID Specifications		
	RL Series	***RS Series***
Safety Data		
Performance Level (EN ISO 13849-1: 2015)	PL e	
Category (EN ISO 13849-1: 2015)	Cat. 4	
SIL (EN IEC 62061: + A2:2015)	SIL CL3	
SIL (EN IEC 61508: 2010)	SIL3	
Hardware Fault Tolerance	HFT 1	
PFH_D	2.24×10^{-9}	
Service Life (EN IEC 62061)	20 years	
Switching Distances		
Secured Switching Distance ON S_{ao}	6mm	
Secured Switching Distance OFF S_{ar}	18mm	
Typical Switching Distance S_n	11mm	
Safety Functions Times		
Switch-off Reaction Time Inputs → Outputs t_{off}	Max 3ms	
Switch-off Reaction Time Anchor Plate → Outputs t_{off}	Max 75ms	
Ambient Conditions		
Operating Temperature	-25° to +55°C [-13° to +131°F]	
Storage Temperature	-25° to +70°C [-13° to +158°F]	
Protection Class	IP67	
Electrical Data		
Supply Voltage Range	20.4 to 26.4 VDC	
Power Consumption (including OSSD Outputs)	7W	16W
Nominal Current at 24VDC	645mA	600mA
Number of Safety Inputs	1 x 2-channel	
Current Consumption Per Input Max	2.75 mA	
Current Consumption Input Magnet ON	1.2 mA	
Series Connection For Safe Inputs and Outputs	Max 30 process guards	
Mechanical Data		
Electromagnet Locking Force	1200 N•m [270 lb•ft]	600 N•m [135 lb•ft]
Process Guard Locking Weight	725g [1.59 lb]	375g [0.83 lb]
Anchor Plate Weight	475g [1.05 lb]	125g [0.28 lb]
Torque (Mounting Screw) Process Guard Locking	6 N•m, [4.43 lb•ft]	
Torque (Mounting Screw) Anchor Plate	6 N•m, [4.43 lb•ft]	
Guard Locking Housing Materials	PBT GF30, aluminum anodized black, AlMgSi, TPE, PC	
Anchor Plate Housing Materials	PBT GF30, aluminum anodized black, S235 nickel-plated, EPDM/CR	
Agency Approvals		
Agency Approvals	CE, cULus	

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SSP HOLDX Mounting Brackets

SSP HOLDX Mounting Bracket Selection Guide				
Part Number	***Price***	***Mounting***	***Fits***	***Drawing***
RL-Z-MF1	$;-5,sl:	Hinged door with handle	HOLDX RL safety switches	PDF
RL-Z-MF2	$;5,so:	Hinged door without handle		PDF
RL-Z-MS1	$;5,sn:	Sliding door		PDF
RS-Z-MF1	$;5,sp:	Hinged door with handle	HOLDX RS safety switches	PDF
RS-Z-MF2	$;5,ss:	Hinged door without handle		PDF
RS-Z-MS1	$;5,sq:	Sliding door		PDF

RL-Z-MF1

RL-Z-MF2

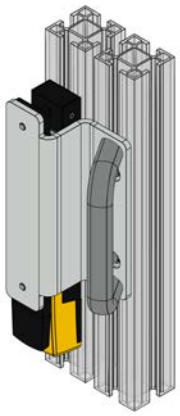
RL-Z-MS1

RS-Z-MF1

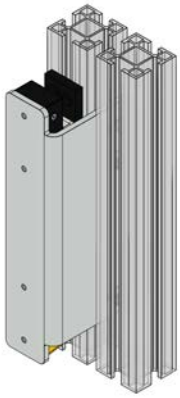
RS-Z-MF2

RS-Z-MS1

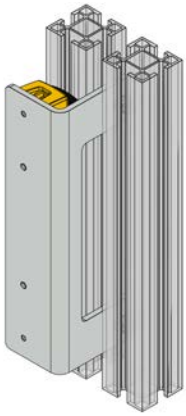
Illustration showing bracket and HOLDX system attached to T-Slot rail



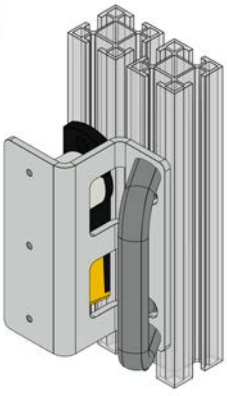
RL-Z-MF1



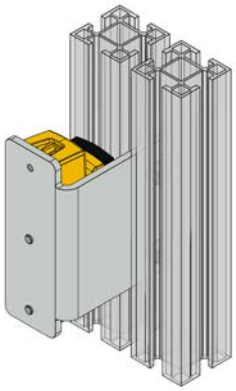
RL-Z-MF2



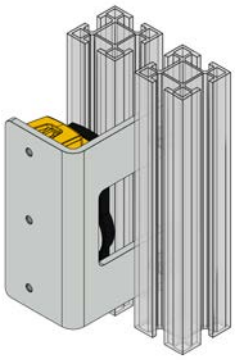
RL-Z-MS1



RS-Z-MF1



RS-Z-MF2



RS-Z-MS1

Safety Products

Warning: Safety products sold by AutomationDirect are Safety components only. The purchaser/installer is solely responsible for the application of these components and ensuring all necessary steps have been taken to assure each application and use meets all performance and applicable safety requirements and/or local, national and/or international safety codes as required by the application. AutomationDirect cannot certify that our products, used solely or in conjunction with other AutomationDirect or other vendors' products, will assure safety for any application. Any person using or applying any products sold by AutomationDirect is responsible for learning the safety requirements for their individual application and applying them, and therefore assumes all risks, and accepts full and complete responsibility, for the selection and suitability of the product for their respective application.

AutomationDirect does not provide design or consulting services, and cannot advise whether any specific application or use of our products would ensure compliance with the safety requirements for any application.