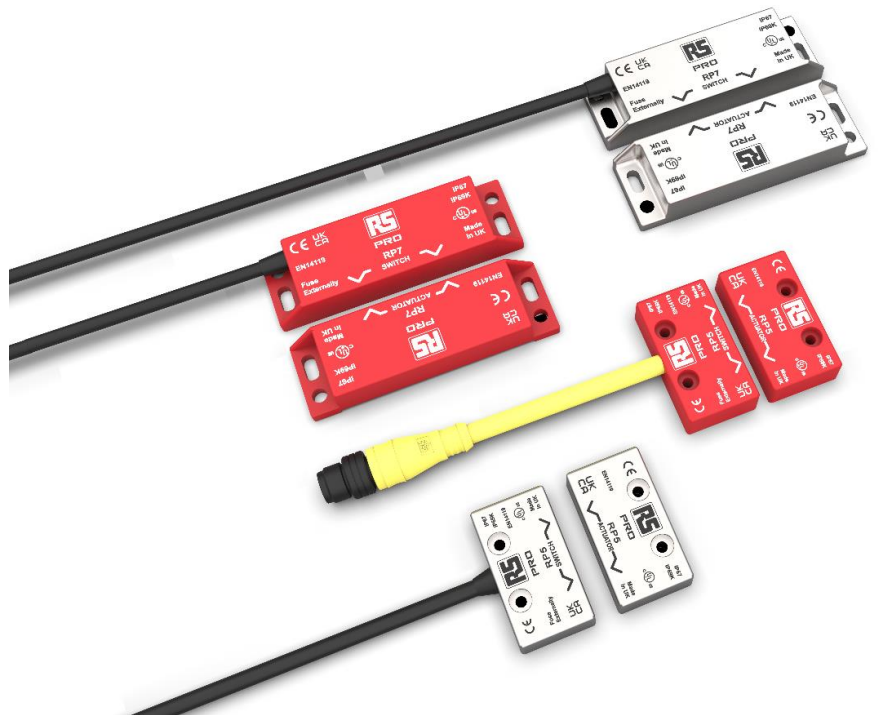


Features

- Magnetically Operated.
- Volt Free Contacts.
- Wide Range Of Housings.
- Tolerant to Misalignment.
- Sealed to IP67 / IP69K

Non Contact Safety Switches

RS Stock No.: 0656590



RS PRO is the own brand of RS. The RS PRO Seal of Approval is your assurance of professional quality, a guarantee that every part is rigorously tested, inspected, and audited against demanding standards. Making RS PRO the Smart Choice for our customers.

Product Description

RS PRO RP5 and RP7 safety switches are non-contact, magnetically operated switch and actuator. Designed to work with safety relays that have a low inrush current on the switch input, these switches provides an economical method of switching for the higher category, dual channel circuits.

These safety switches are available in a robust ABS, or 316 Grade Stainless Steel housing, and both switch and actuator are fully sealed to IP67 & IP69K making them suitable for use in wet or dusty environments. They are easy to install and tolerant to misalignment. With correct installation, these safety switches comply with the guidelines given in EN14119.

Electrical Specifications

Supply voltage	24Vac/dc (+/- 15%)
Operation	Magnet & Reed
Contact Arrangements	2 x N/O + 1 x N/C
Safety contact N/O ON and OFF between	7mm - 20mm
Auxiliary contact N/C OFF and ON between	7mm - 20mm
Safety Contact Rating	24Vdc / 300mA
Auxiliary Contact Rating	24Vdc / 300mA
External Contact Fuse	0.2Amps Fast Acting
IP Rating	IP67 / IP69K
Connection	Pre-wired or M12 Quick Disconnect
Operating Temperature	-25°C to +55°C
Storage Temperature	-25°C to +55°C
Mounting	Target to target
Vibration	10 - 50Hz IEC 68-2-6
Shock	10g, 11ms IEC 68-2-27
Construction	Red ABS Resin Filled or 316 grade stainless steel resin filled

Protection Category

PL in accordance with EN ISO 13849-1	PL-e, CAT 4
SIL CL in accordance with EN IEC 62061	SIL 3
PFHd in accordance with EN IEC 62061	4.3×10^{-08}
PFH	6.52×10^{-08}
B10d	2×10^6
MTTFd	>100 years (Based on usage rate of 360 days/year, 24 hours/day, 10 operations/hour)
Tm (mission time)	>20 years
DC	99%
SFF	98%

Approvals

CE	Complies with all relevant sections of the CE marking directive
UKCA	Complies with all relevant sections of the UKCA marking directive
TUV	CAT 4 SIL 3 PLe
EN ISO 13849-1	Safety of Machinery – Safety related parts of control systems
EN ISO 62061	Safety of Machinery – Functional safety of safety related electrical, electronic and programmable electronic control systems
EN 60204	Safety of Machinery – Electrical equipment for machines
EN 60947-5-1	Low voltage switchgear and control gear
EN 14119	Interlocking devices associated with guards
EN 60947-5-3	Safety of Machinery – Specification for low voltage switchgear and control gear

Similar Products

Stock No.	Brand	Product Name	Attribute 1	Attribute 2	Attribute 3
400.000	RS PRO	RP5-SS-21-DC-05M	Pre-Wired	2NO+1NC	Stainless Steel
400.001	RS PRO	RP5-SS-21-DC-LQD	M12 LQD	2NO+1NC	Stainless Steel
400.002	RS PRO	RP5-21-DC-05M	Pre-Wired	2NO+1NC	Plastic
400.003	RS PRO	RP5-21-DC-LQD	M12 LQD	2NO+1NC	Plastic
400.004	RS PRO	RP5-20-DC-LQD	M12 LQD	2NO	Plastic
400.005	RS PRO	RP5-21-DC-10M	Pre-Wired	2NO+1NC	Plastic
400.006	RS PRO	RP5-21-DC-03M	Pre-Wired	2NO+1NC	Plastic
400.037	RS PRO	RP7-SS-21-DC-05M	Pre-Wired	2NO+1NC	Stainless Steel
400.038	RS PRO	RP7-21-DC-06M	Pre-Wired	2NO+1NC	Plastic
400.039	RS PRO	RP7-21-DC-LQD	M12 LQD	2NO+1NC	Plastic

Mounting

Do not use safety switches as a stop. 1 mm separation when closed provides the best results.

Mount the switch on to the machine frame and the actuator on to the opening edge of the door.

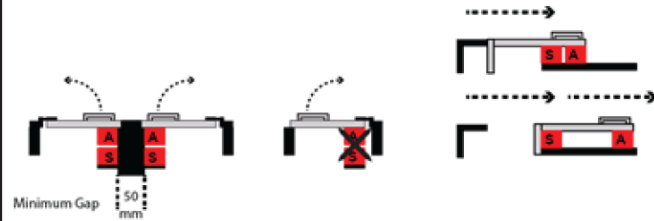
Always try to mount the switch on non-ferrous material. (Ferrous materials may reduce the switching distance.)

EN14119: Hide the actuator where possible.

NOTES:

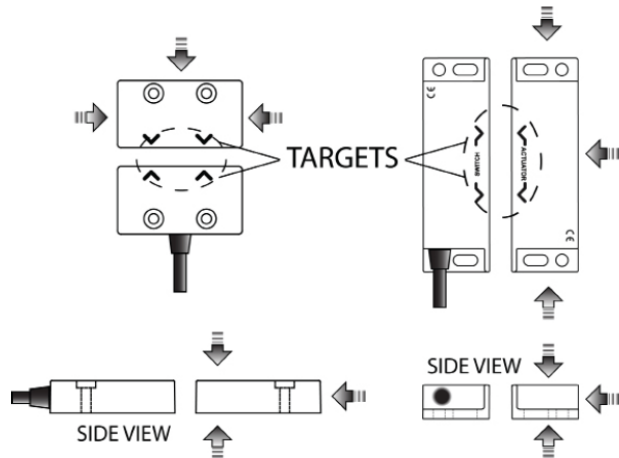
Minimum separation 50mm between adjacent switches

DO NOT mount on hinged side of the guard.



Operation

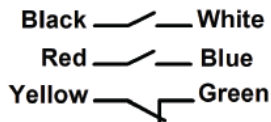
The RP5 & RP7 safety switches and actuators are designed to approach each other from most angles. When the guard is closed the targets on the printed face of the switch and actuator must be aligned.



Connections & Fuses

Pre-Wired

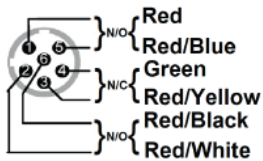
RP5-21 & RP5-SS-21
 RP7-21 & RP7-SS-21



Quick Disconnect

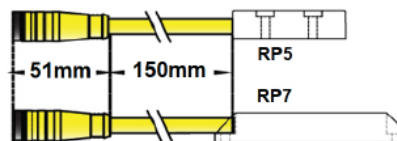
RP5-21-DC-LQD
 RP5-SS-21-DC-LQD
 RP7-21-DC-LQD
 RP7-SS-21-DC-LQD

Connector Contact Cable

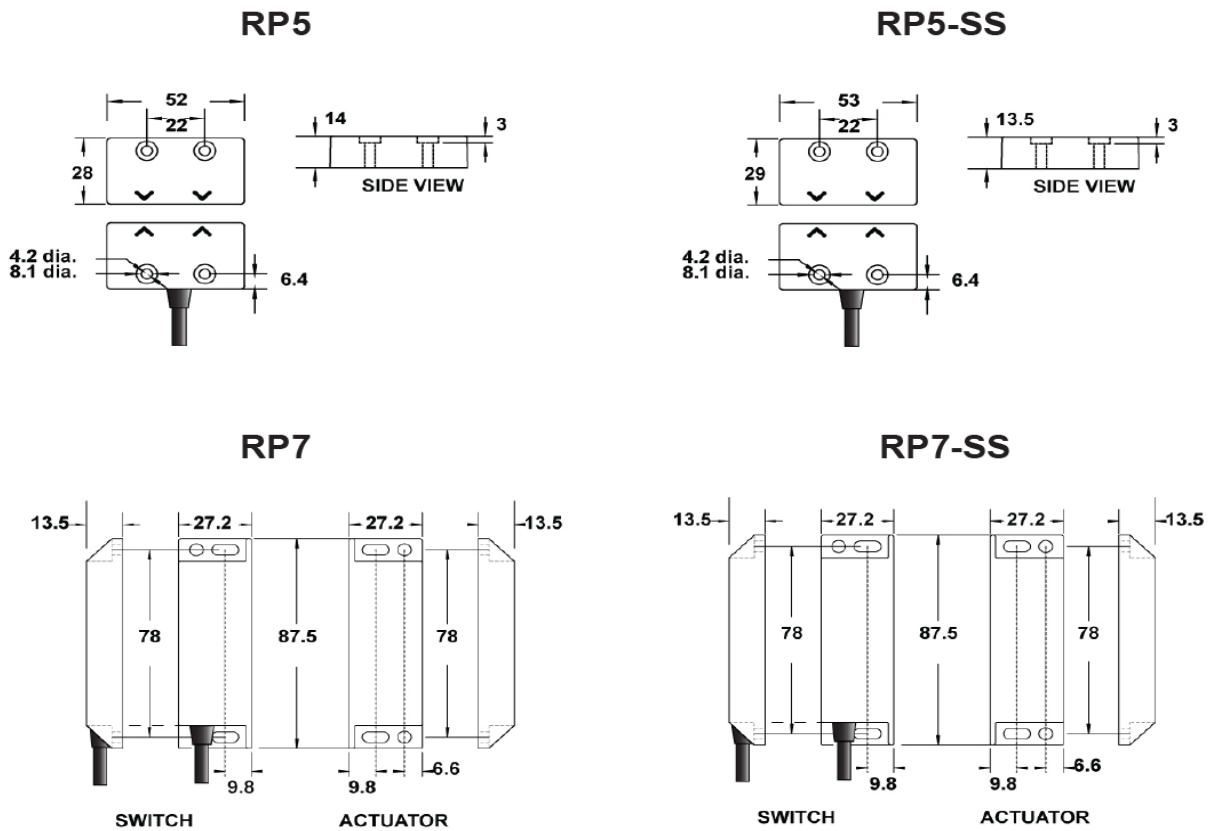


Connector
 M12 6 Pin Dual Key Way (Male)
 Micro AC 1/2" - 20

**Leaded Quick Disconnect Option
 LQD
 150mm Cable with M12 Connector**



Dimensions



Maintenance

It is recommended to check the safe operation of the switches and look for signs of damage or excessive wear on a weekly basis. Damaged units should be replaced or returned to the manufacturer for repair where practical.

Notes

In the interest of product development specifications are subject to change without notice.

It is the responsibility of the user to ensure compliance with any acts or by-laws in place.

All information regarding equipment is believed to be accurate at the time of printing. Responsibility cannot be accepted for errors or omissions.

All dimensions are approximate.