

Features

- Uniquely Coded RFID
- 4 Billion possible codes
- Wide Range Of Housings
- LED Indication
- Tolerant to Shock and Vibration
- Sealed to IP67 / IP69K

Non Contact Safety Switches

RS Stock No.: 0656617



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

R-SERIES are uniquely coded RFID (Radio Frequency Identification) safety switches with volt free contact outputs. They offer protection against manipulation, interference and defeat making them ideal for use in high risk applications.

These tamper-proof safety switches feature agent resistant plastic or 316 stainless steel enclosures encapsulated with epoxy resin for a protection level of IP67/IP69K, ideal for use in wet, dusty and harsh environments

RS PRO's unique coding technology allows for 4 billion possible codes. Should either part be lost or damaged, the teach-in facility allows for unlimited re-teaching.

Electrical Specifications

Supply voltage	24Vac/dc (+/- 15%)
Operation	Uniquely Coded RFID
Contact Arrangements	2 x N/O + 1 x N/C
Safety contact N/O ON and OFF between	7mm - 22mm
Auxiliary contact N/C OFF and on between	7mm - 22mm
Safety Contact Rating	DC : 24Vdc / 500mA
Auxiliary Contact Rating	DC : 24Vdc / 500mA
External Contact Fuse	300mA Fast Acting (Quick Blow)
IP Rating	IP67 / IP69K
Connection	Pre-Wired or M12 LQD
Operating Temperature	-25°C to +55°C
Storage Temperature	-25°C to +60°C
Mounting	Target to target
Construction	Orange ABS Resin Filled or 316 grade stainless steel resin filled
Indication	Dual Colour LED

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)	>30 years
DC	99%
SFF	99%

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
403.002	RS PRO	RPNK-21-DC-06M	24V dc	2NO+1NC	Plastic
403.003	RS PRO	RPNK-21-DC-LQD	24V dc	2NO+1NC	Plastic
403.004	RS PRO	RPSG-21-DC-06M	24V dc	2NO+1NC	Plastic
403.005	RS PRO	RPSG-21-DC-LQD	24V dc	2NO+1NC	Plastic
403.006	RS PRO	RPSK-21-DC-06M	24V dc	2NO+1NC	Plastic
403.007	RS PRO	RPSK-21-DC-LQD	24V dc	2NO+1NC	Plastic
403.008	RS PRO	RPS0-21-DC-06M	24V dc	2NO+1NC	Plastic
403.009	RS PRO	RPS0-21-DC-LQD	24V dc	2NO+1NC	Plastic
403.010	RS PRO	RPSG-SS-21-DC-06M	24V dc	2NO+1NC	Stainless Steel
403.011	RS PRO	RPSG-SS-21-DC-LQD	24V dc	2NO+1NC	Stainless Steel

Mounting

RS PRO RFID safety switches can 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.

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

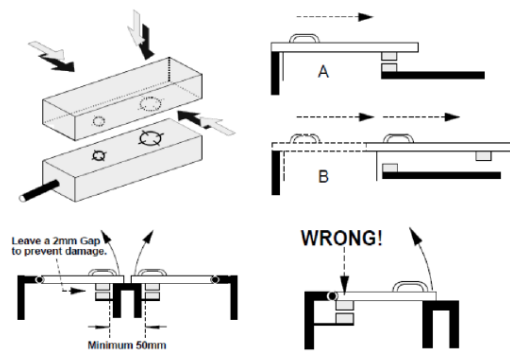
Use the tamper proof screws provided to make the installation more secure.

Do not use the safety switch as a door stop. Leave a minimum of 50 mm between any adjacent switches. **Leave 2mm gap between switch and actuator.**

EN ISO 14119

Provides some mounting suggestions, see example opposite.

Note: Mounting the switch and actuator on a metal frame may affect the switching distance in some applications, please use a minimum of 3mm spacers between the switch/actuator and the frame.



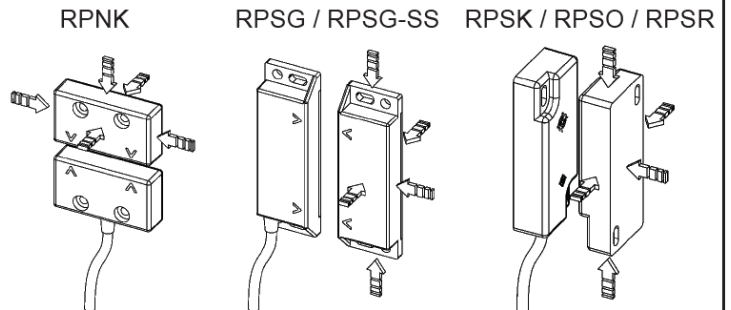
R SERIES OPERATION / RE-CODING

The N/O contacts on the R-SERIES switches are open when the actuator is away from the switch.

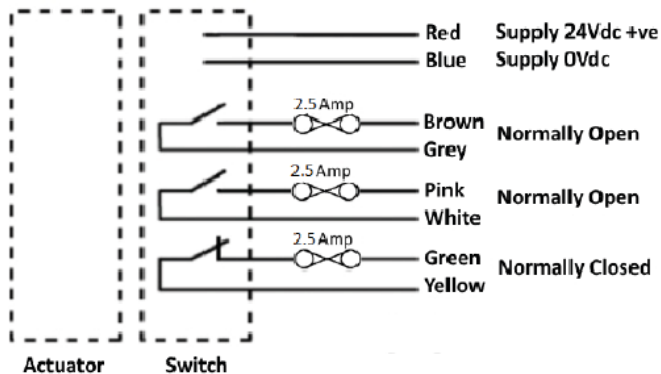
When the actuator is within the specified operating distance, the N/O contact will close and the N/C contact will open.

The R-SERIES 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.

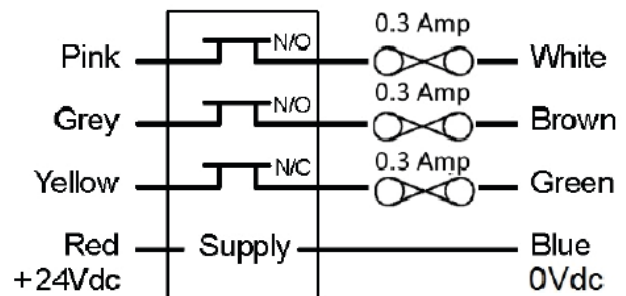
To teach a new actuator/switch the supply voltage for the switch needs to be dropped down to 17v then the new actuator is brought in. The switch LED will flash red for a couple of seconds then hold solid green when the new switch/actuator is coded. Now bring the supply back up to 24Vdc and the switch and actuator will work together.



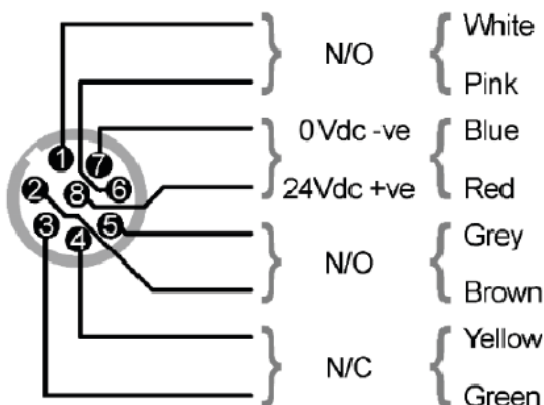
RPSR & RPSG Contacts 2NO + 1NC



RPSK, RPNK & RPSG-SS, RPSO Contacts 2NO + 1NC



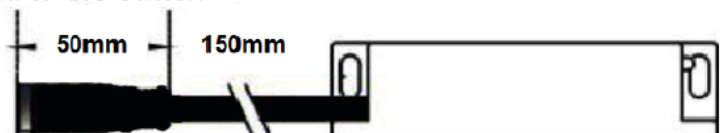
Connector Description Cable



Connector
150mm Lead, M12
8 Pole, Single Key Way

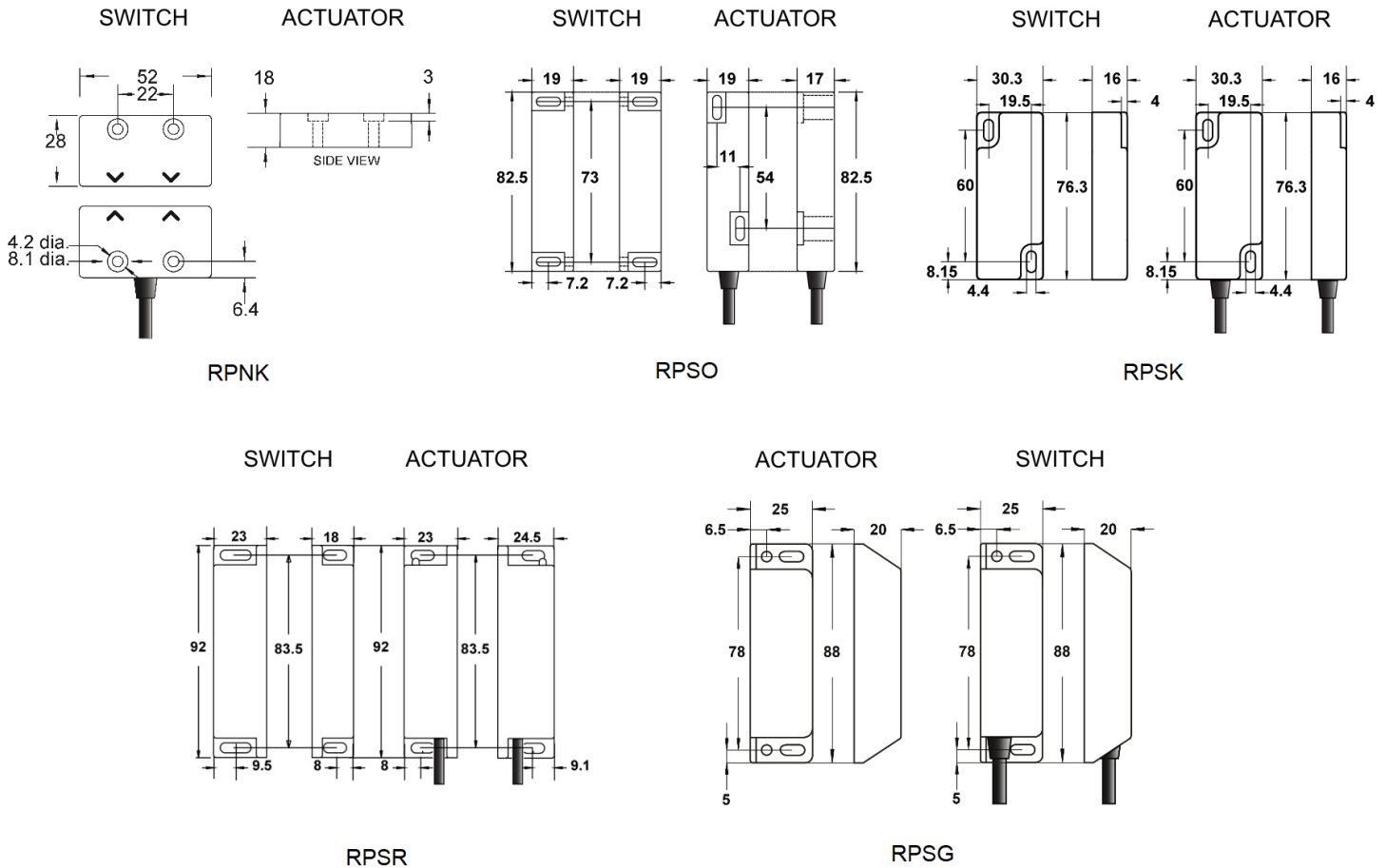
***All R-Series Safety Switches are available with M12 leaded quick disconnect**

M12 Leaded quick disconnect with 150mm connecting lead to the switch



The R-Series are available with an IP69K, 6" (150mm), 8 pole 'Pig Tail' connector. Connector specification: 8-pin, Micro Single Key-way, M12

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.