

FEATURES

- **RFID Coded Actuator:** Offers high security and tamper resistance for machine safety applications
- **Rectangular Body Style:** Compact design for easy integration into various systems
- **Built-in Safety Relay:** Enhances safety by providing reliable switching
- **Pre-Wired Connection:** Simplifies installation and reduces setup time
- **IP67 and IP69K Rated:** Ensures durability and protection against dust and water ingress
- **ABS and Resin Housing:** Provides robust protection in harsh environments
- **Safety Category 4:** Meets high safety standards for critical applications
- **2 NO and 1 NC Safety Contacts** Offers versatile switching options for different safety requirements
- **Switching Distance of 8 to 20 mm:** Allows flexibility in installation and operation

RS PRO RFID Coded Non-Contact Safety Switch, Rectangular Body

RS Stock No: 656-634



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

The RS PRO RFID Coded Non-Contact Safety Switch is designed to enhance safety in industrial environments by ensuring reliable machine guarding. Its non-contact operation with RFID technology provides a high level of security and tamper resistance, making it ideal for safeguarding machinery without physical contact.

General Specifications

Actuator Included	Yes
Actuator Type	RFID Coded
Body Style	Rectangular
Built-in Safety Relay	Yes
Connection Type	Pre-Wired
Housing Colour	Yellow
Number of Auxiliary Contacts	3
Product Type	Non-Contact Safety Switch
Sensor Principle	RFID
Terminal Type	Wire

Electrical Specifications

Supply voltage	24Vdc (+/- 15%)
Operation	Individually Coded RFID (Yellow) or Magnetically Coded (Black)
Safety Contact Type	PNP type OSSD
No. of OSSD Inputs (Max)	2
No. of OSSD Outputs	2
Safety contact N/O ON and OFF between	8mm - 20mm
Auxiliary contact N/C OFF and on between	8mm - 20mm
Safety Contact Rating	DC : 24Vdc / 2A
Auxiliary Contact Rating	DC : 24Vdc / 2A
External Contact Fuse	1.8Amps Fast Acting (Quick Blow)
Switch Power Consumption (Max)	50mA
Overvoltage Category	III
OSSD Pulse Width	400 μ s
Short Circuit Protection	Yes
Over Current Protection	Yes
IP Rating	IP67 / IP69K
Connection	Pre-Wired or M12 LQD
Operating Temperature	-10°C to +60°C

Mounting	Target to target
Construction	Black & Yellow ABS Resin Filled
Indication	Dual Colour LED

Mechanical Specifications

Depth	20 mm
Housing Material	ABS, Resin
Length	88 mm
Width	25 mm

Mounting

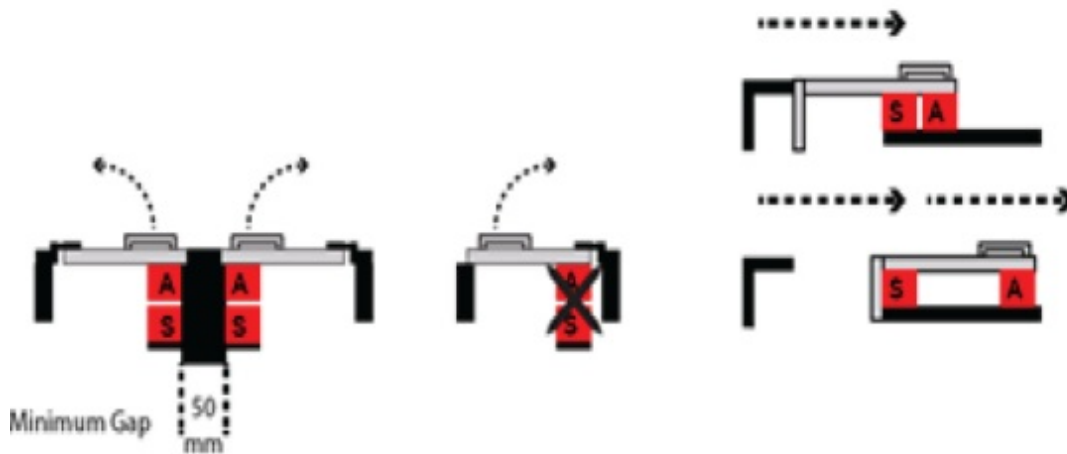
Do not use safety switches as a stop.

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.)

NOTES:

- Minimum separation 50mm between adjacent switches
- **DO NOT mount on hinged side of the guard.**
- Leave a minimum gap of 2mm between the switch and actuator.



Operating Faces

Designed to operate on ALL guard positions. The RPONK and RPOSG are extremely versatile.

The RPONK and RPOSG will operate on two faces.

Whereas the RPOH1 will only operate on the front face.

All O-Series switches have a +/- 4mm misalignment



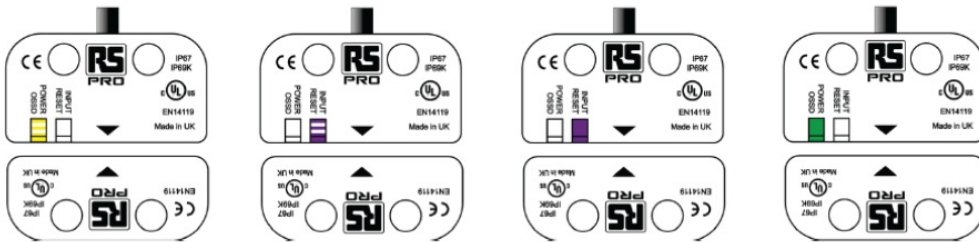
RPONK operates on two faces



RPOSG operates on two faces

Misalignment Indication

The RPOH1 has a feature that will show the user if the switch is not aligned correctly. All O-Series switches have a +/- 4mm misalignment.



Teach Mode (RPONK / RPOSG Only)

If during installation you lose or break the accompanying actuator, it is possible to re-teach a new part by following these steps:

1. **Step 1** — Power/OSSD LED Flashing yellow indicates a incorrect coded actuator has been detected.
2. **Step 2** — Drop the supply to 0v then bring back up to 17v. Input/Reset LED will begin to flash purple meaning it is ready to accept a new code.
3. **Step 3** — Bring the new actuator within operating distance of the switch. Input/Reset LED will stop flashing and turn solid purple. This means the new code has been accepted.
4. **Step 4** — Increase the supply to 24Vdc. Input/Reset LED will switch OFF or turn blue (If connected in monitored reset.) and Power/OSSD LED will change to green.

RPONK / RPOSG LED Configuration

Power/OSSD LED	Input/Reset LED	Description
(off)	(off)	No Power supplied to switch
Red solid	(off)	Power Supplied to switch, no actuator present
Red flashing	(off)	Output fault (turn power off and on to reset)
Red flashing	Yellow flash	OSSD input fault (turn power off and on to reset)
Green solid	(off)	OSSD outputs are present and operating correctly
Green flash	(off)	Actuator present, OSSD inputs not detected
Green flash	Blue solid	Actuator present, OSSD inputs present, external circuit needs resetting (EDM only)
Yellow solid	(off)	No input, wrong actuator
(off)	Purple solid	Actuator has been taught
(off)	Purple flash	No actuator present, voltage is at 17v ready to be taught

RPOH1 LED Configuration

Power/OSSD LED	Input/Reset LED	Description
(off)	(off)	No Power supplied to switch
Red solid	(off)	Power Supplied to switch, no actuator present
Red flashing	(off)	Output fault (turn power off and on to reset)
Red flashing	Yellow flash	OSSD input fault (turn power off and on to reset)
Green solid	(off)	OSSD outputs are present and operating correctly
Green flash	(off)	Actuator present, OSSD inputs not detected
Green flash	Blue solid	Actuator present, OSSD inputs present, external circuit needs resetting (EDM only)
Yellow solid	(off)	Actuator Misaligned to switch

LED Indication Notes

Solid Yellow (Input/Reset LED) Check previous connected safety switch is closed (operating) or check if inputs are connected correctly.

Flashing Yellow (Input/Reset LED) OSSD Input faults are due to different signals, one channel going high and the other low.

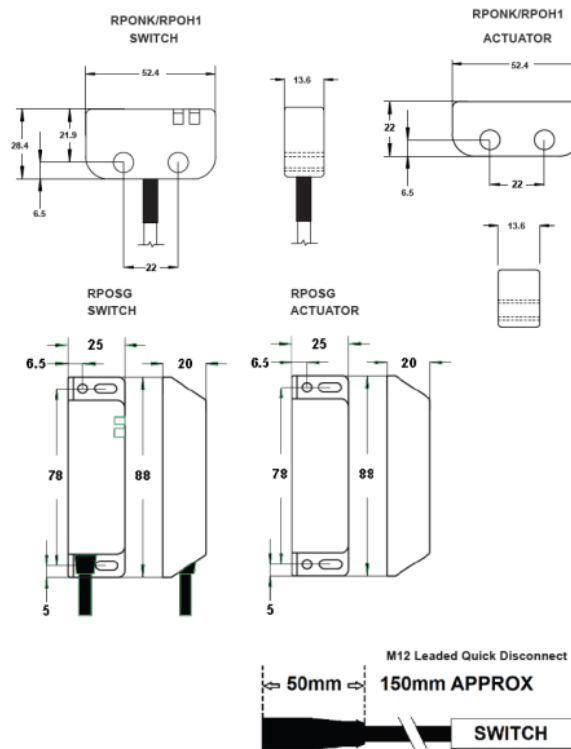


Standard Connection Type (M12, 8 pins, Male)

PIN	Function	Wire Colour
1	Auxiliary	White
2	+24VDC	Brown
3	NOT USED	Green
4	OSSD 2 Input	Yellow
5	OSSD 1 Output	Grey
6	OSSD 2 Output	Pink
7	0V	Blue
8	OSSD 1 Input	Red

Pre-Wired Connections

Function	Standard	Advanced
+24VDC	Brown	Brown
0V	Blue	Blue
OSSD 1 Output	Grey	Grey
OSSD 2 Output	Pink	Pink
Auxiliary	White	White
OSSD 1 Input	Red	Red
OSSD 2 Input	Yellow	Yellow
A/M Select	Orange (not used)	Orange (see note 1)
Reset / EDM	Green (not used)	Green (see note 1)



Maintenance and Notes

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.

Similar Products

Stock No.	Brand	Product Name	Attribute 1	Attribute 2	Attribute 3
404.000	RS PRO	RPOH1-21-DC-06M	24V dc	2NO+1NC	Plastic
404.001	RS PRO	RPOH1-21-DC-EDM-06M	24V dc	2NO+1NC	Plastic
404.002	RS PRO	RPOH1-21-5-LQD	24V dc	2NO+1NC	Plastic
404.003	RS PRO	RPOH1-21-8-LQD	24V dc	2NO+1NC	Plastic
404.004	RS PRO	RPOSG-21-DC-06M	24V dc	2NO+1NC	Plastic
404.005	RS PRO	RPOSG-21-DC-03M	24V dc	2NO+1NC	Plastic
404.006	RS PRO	RPOSG-21-DC-10M	24V dc	2NO+1NC	Plastic
404.007	RS PRO	RPOSG-21-5-LQD	24V dc	2NO+1NC	Plastic
404.008	RS PRO	RPOSG-21-8-LQD	24V dc	2NO+1NC	Plastic
404.009	RS PRO	RPONK-21-DC-06M	24V dc	2NO+1NC	Plastic
404.010	RS PRO	RPONK-21-DC-EDM-06M	24V dc	2NO+1NC	Plastic
404.011	RS PRO	RPONK-21-5-LQD	24V dc	2NO+1NC	Plastic
404.012	RS PRO	RPONK-21-8-LQD	24V dc	2NO+1NC	Plastic