

RS family of switches for use in machine guarding applications

Eaton's RS safety interlock switches have been specifically designed to monitor protective guards, such as doors, flaps and hoods. All switches in this family are safety-rated and use magnetically coded actuators to minimize defeat by simple magnets. With correct installation, the RS family complies with EN ISO 13849-1 and IEC 62061 guidelines.

Operation

The RS safety interlock family includes three series: RS2, RS2R and RS4. The assembly comprises a sensor component and a separate magnet actuator component. The sensor is typically mounted to a stationary portion of a structure and the magnet to a movable portion. When the sensor and the actuator are within operating range, the NC contacts will be closed and the NO contacts will be open.

Features

- Non-contact actuation
- Reversible mounting
- High misalignment tolerance
- SIL 3 and PLe ratings
- -10 °C to +55 °C temperature range
- IP67, IP69K

Benefits

- Reduce SKUs
- Reduce installation time
- Tested to latest IEC and ISO standards
- Long life with non-contact actuation
- Wide variety of output contact configuration
- Industry standard mounting



RS2 DC cable style



RS2R



RS2 DC connector style



RS4


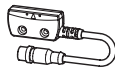


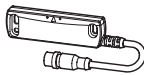
Specifications

Item	Specification
Safety classification	Up to SIL 3, up to PLe
Standards	IEC 61508, EN 13849-1
Certifications	cUL®, CE, TUV, RoHS
Outputs	NO and NC circuit combinations
Sensing range	ON: 8 mm (0.31 in); OFF: 19 mm (0.75 in)
Enclosure rating	IP67, IP69K
Output switching	300 mA at 24 Vdc DC-13
Temperature range	-10 °C to +55 °C (14 °F to 131 °F)
Shock	30 G, 11 ms, 1/2 sine wave
Vibration	1 mm, 0-2000 Hz
Radio frequency immunity	IEC 61000-4-3
Repeat accuracy	10%
Housing/actuator material	Polyamide
Color	Black/yellow
Connection types	Cable and micro connector (4-pin or 6-pin)
Wire size	22 AWG



Powering Business Worldwide

Available standard models ①②③④⑤

			22 AWG 2NC contacts	4-pin QD	22 AWG 1NO, 1NC	4-pin QD	22 AWG 1NO, 2NC	6-pin QD
RS2	3 m (9.85 ft)		RS2-02-C3	—	RS2-11-C3	—	RS2-12-C3	—
	150 mm (5.91 in)		—	RS2-02-Q4	—	RS2-11-Q4	—	RS2-12-Q6
RS2R	3 m (9.85 ft)		RS2R-02-C3	—	RS2R-11-C3	—	RS2R-12-C3	—
	150 mm (5.91 in)		—	RS2R-02-Q4	—	RS2R-11-Q4	—	RS2R-12-Q6
RS4	150 mm (5.91 in)		—	RS4-02-Q4	—	—	—	RS4-12-Q6

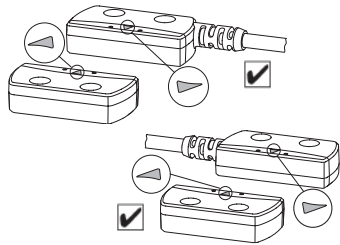
- ① Replace (C3) with (C10) for standard 10 m cable length.
- ② Comes as a kit with actuator and sensor.
- ③ Custom lengths available.
- ④ NC or NO contact position shown when actuator and sensor are in place.
- ⑤ Actuator included.

Accessories

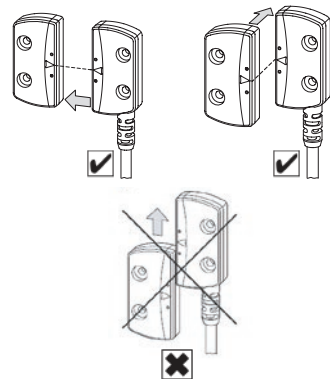
Description	Catalog number
RS2 spare actuator	RS2-A
RS4 spare actuator	RS4-A

Mounting

Reversible: The RS family has reversible mounting to adjust to field wiring needs.



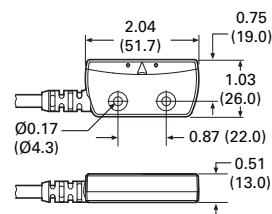
Alignment: Direction of approach is perpendicular to the plane of the sensing face.



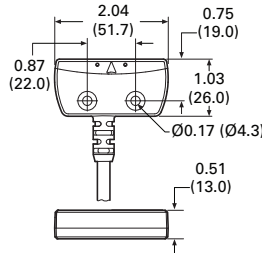
Dimensions

Approximate dimensions in inches (mm).

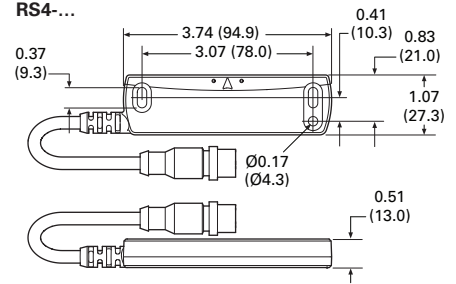
RS2-...



RS2R-...



RS4-...



Recommended logic interfaces

Safety inputs	Safety outputs (NO)	Power supply	Catalog number
ESR5 safety relays			
1	4	24 Vac/Vdc	ESR5-NO-41-24VAC-DC
2	2	24 Vac/Vdc	ESR5-NO-21-24VAC-DC
2	3	24 Vac/Vdc	ESR5-NO-31-24VAC-DC
2	3	240 Vac	ESR5-NO-31-230VAC
2	3	24–230 Vac/Vdc	ESR5-NO-31-AC-DC
easySafety			
14	1 (6 A relay), 4 (Transistor)	24 Vdc	ES4P-221-DMXD1
14	4 (6 A relay)	24 Vdc	ES4P-221-DRXD1

Connectors

Cordset	Catalog number
4-pin (2 m cable)	CSDS4A4CY2202 ①
6-pin (3 m cable)	CSAS6A6CY2203 ②

- ① Replace 02 suffix with 05 (5 m), 10 (10 m), 20 (20 m) for standard lengths.
- ② Replace 03 with 05 (5 m) and 10 (10 m) for standard lengths.

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