

Magnetic Sensor

Series EEx RC M20

STAHL



- > 1 magnetic reed contact
- > Nickel-plated brass enclosure
- > Cylindrical shape
- > Long life
- > Highly resistant to vibration
- > Available for actuation from front, from side only with bistable
- > Actuating distance up to 30 mm depending on actuating magnets
- > Pre-wired cable
- > IP67
- > Stainless steel type available

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05564E00



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Ex magnetic sensors are suitable for positioning and controlling lift cabins in the lift industry. They are generally used as an alternative to mechanically operated limit switches in cases where unfavourable operating conditions, such as high or low actuating speeds, large switching frequencies, extreme dirt or dust production, high humidity, chemical atmospheres, highly fluctuating actuating distances, etc., occur. Even in the presence of aggressive materials, safe switching is ensured through the encapsulation of the contacts.

The Ex magnetic sensors are actuated by an M range permanent magnet, entering their proximity without any physical contact. These devices are available with NO, NC, changeover, bistable or bistable changeover contacts. All magnetic sensors described in this section are supplied with pre-wired cables. When using Ex magnetic sensors, care must be taken that their mounting site is free of magnetic fields.

Zone	ATEX					
	0	1	2	20	21	22
For use in		x	x		x	x

WebCode RCA

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Selection Table

Version	Art.no.
Magnetic switches acc. to specification	109410

Order Number Supplement

Magnetic sensor	1 Change-over	EEx RC M20 1W 1m Cable
	1 Change-over	EEx RC M20 1W 1m Cable Niro
	1 Change-over bistable	EEx RC M20 1Wr 1m Cable
	1 NO	EEx RC M20 1S 1m Cable
	1 NO bistable	EEx RC M20 1Sr 1m Cable
Actuating magnets	enclosed	M 100
		M 200
		M 300
		M 700
	unenclosed	M 100 U
		M 200 U
		M 300 U
		M 700 U

Explosion Protection

Marking

Europe (ATEX)	
Gas explosion protection	⊕ II 2G Ex mb II T6
Dust explosion protection	⊕ II 2D Ex tD A21 IP67 T80°C

Certificates

Europe (ATEX)	DMT 01 ATEX E 058 X
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Technical Data

Version	Magnetic sensor
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Electrical data

Switching voltage	≤ 1NO, 1Change-over: 250 V AC
Switching current	≤ 1NO, 1Change-over: max. 1.5 A
Switching capacity	1Change-over: max. 50 VA/W 1NO: max. 100VA/W
Utilisation category	AC-15; DC-13
Contacts	NO or change-over contacts, NO or change-over contacts bistable
Switching system	sensors
Bounce capacity	0.3 ... 0.6 ms
Switching frequency	1NO: 140/s; 1Change-over: 85/s
Switching speed	
Close	3.5 ... 4.5 ms
Open	0.2 ... 2.5 ms

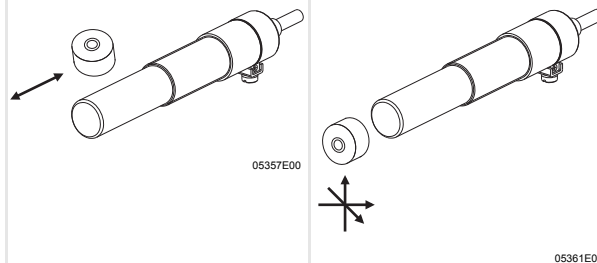
Magnetic Sensor

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Technical Data

Switching distance	Actuating magnets	Magnetic sensor	Switching distance (in mm)			
			actuation from side		actuation from front	
			on	off	on	off
M 100 M 100 U	EEx RC M20 1W EEx RC M20 1S EEx RC M20 1W		15	20	10	13
					22	12
					20	40
M 200 M 200 U	EEx RC M20 1W EEx RC M20 1S EEx RC M20 1W		20	25	13	16
					30	30
					25	50
M 300 M 300 U	EEx RC M20 1W EEx RC M20 1S EEx RC M20 1W		25	30	17	20
					37	23
					30	60
M 400 U	EEx RC M20 1W EEx RC M20 1S EEx RC M20 1W		30	35	33	37
					63	43
					50	90
M 700	EEx RC M20 1W EEx RC M20 1S EEx RC M20 1W		40	50	30	35
					60	40
					50	75



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Ambient conditions	
Ambient temperature	- 40 ... + 70 °C

Mechanical data	
Degree of protection	IP67 to IEC/EN 60529
Material	Nickel-plated brass
Enclosure	Nickel-plated brass
Actuators	M range magnets
Switching frequency	1NO: 140/s; 1Change-over: 85/s
Service life	> 1 million operations
Resistance to vibration	1NO: 50 ... 100 g; 1Change-over: 10 ... 50 g

Mounting / Installation	
Connection type	Cable, 1 m long; 1NO: H05VV-F 3 x 0.75 mm ² or MNZ 45 MC 3 x 0.75 mm ² ; 1NC, 1Change-over: H05VV-F 4 x 0.5 mm ² or MNZ 45 M 4 x 0.75 mm ²

Technical Data	
Version	Actuating magnets
	Actuating magnets

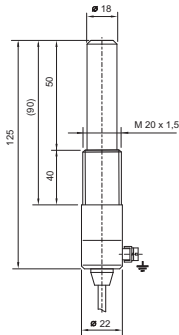
Ambient conditions	
Ambient temperature	- 20 ... + 80 °C
	- 20 ... + 80 °C

Mechanical data		
Version	unenclosed	enclosed
Types	M 100 U M 200 U M 300 U M 400 U	M 100 M 200 M 300 M 700
Material		
Enclosure material	Unenclosed	Thermoplastic, red
Actuators	Barium ferrite	Barium ferrite

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Dimensional Drawings (All Dimensions in mm) - Subject to Alterations



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We reserve the right to make alterations to the technical data, weights, dimensions, designs and products available without notice. The illustrations cannot be considered binding.