

**Magnetic Sensor**  
 Series EEx RC M20



- > 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



E4

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**

# Magnetic Sensor

## Series EEx RC M20

### 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 |
|---------------|---------------------|

### Technical Data

|         |                 |
|---------|-----------------|
| Version | Magnetic sensor |
|---------|-----------------|

#### Electrical data

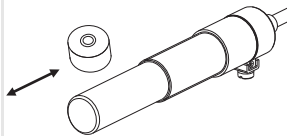
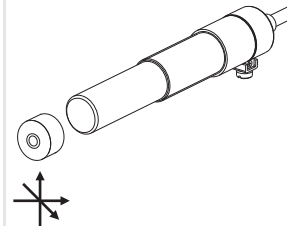
|                      |   |
|----------------------|---|
| Switching voltage    | ≤ 1NO, 1Change-over: 250 V AC                                   |
| Switching current    | ≤ 1NO, 1Change-over: max. 1.5 A                                 |
| Switching capacity   | 1Change-over: max. 50 VAW 1NO: max. 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

## Series EEx RC M20



### Technical Data

| Switching distance | Actuating magnets                               | Magnetic sensor | Switching distance (in mm)   |   |                      |          |  |  |    |    |
|--------------------|---|-----------------|--|---|----------------------|----------|--|--|----|----|
|                    |   |                 | actuation from side  |   | actuation from front |          |  |  |    |    |
|                    |   |                 | on   | off   | on                   | off      |  |  |    |    |
| M 100<br>M 100 U   | EEx RC M20 1W<br>EEx RC M20 1S<br>EEx RC M20 1W |                 |  |  | 05357E00             | 05361E00 |  |  |    |    |
|                    |   |                 |  |   |                      |          |  |  | 10 | 13 |
|                    |   |                 |  |   |                      |          |  |  | 22 | 12 |
| M 200<br>M 200 U   | EEx RC M20 1W<br>EEx RC M20 1S<br>EEx RC M20 1W |                 |  |   |                      |          |  |  |    |    |
|                    |   |                 |  |   |                      |          |  |  | 13 | 16 |
|                    |   |                 |  |   |                      |          |  |  | 30 | 30 |
| M 300<br>M 300 U   | EEx RC M20 1W<br>EEx RC M20 1S<br>EEx RC M20 1W |                 |  |   |                      |          |  |  |    |    |
|                    |   |                 |  |   |                      |          |  |  | 17 | 20 |
|                    |   |                 |  |   |                      |          |  |  | 37 | 23 |
| M 400 U            | EEx RC M20 1W<br>EEx RC M20 1S<br>EEx RC M20 1W |                 |  |   |                      |          |  |  |    |    |
|                    |   |                 |  |   |                      |          |  |  | 25 | 50 |
|                    |   |                 |  |   |                      |          |  |  | 30 | 60 |
| M 700              | EEx RC M20 1W<br>EEx RC M20 1S<br>EEx RC M20 1W |                 |  |   |                      |          |  |  |    |    |
|                    |   |                 |  |   |                      |          |  |  | 33 | 37 |
|                    |   |                 |  |   |                      |          |  |  | 63 | 43 |
|                    |   |                 |  |   |                      |          |  |  |    |    |
|                    |   |                 |  |   |                      |          |  |  | 50 | 90 |
|                    |   |                 |  |   |                      |          |  |  | 30 | 35 |
|                    |   |                 |  |   |                      |          |  |  |    |    |
|                    |   |                 |  |   |                      |          |  |  | 60 | 40 |
|                    |   |                 |  |   |                      |          |  |  | 40 | 75 |
| Service life       | 10 <sup>6</sup> ... 10 <sup>9</sup> operations  |                 |  |   |                      |          |  |  |    |    |

### Ambient conditions

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

### Mechanical data

|                         |  |
|-------------------------|--|
| Degree of protection    | IP67 to IEC/EN 60529                         |
| Material                |  |
| 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 <sup>2</sup> or MNZ 45 MC 3 x 0.75 mm <sup>2</sup> ; 1NC, 1Change-over: H05VV-F 4 x 0.5 mm <sup>2</sup> or MNZ 45 M 4 x 0.75 mm <sup>2</sup> |
|-----------------|--|

### Technical Data

|         |                   |                   |
|---------|-------------------|-------------------|
| Version | Actuating magnets | Actuating magnets |
|---------|-------------------|-------------------|

### Ambient conditions

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

### Mechanical data

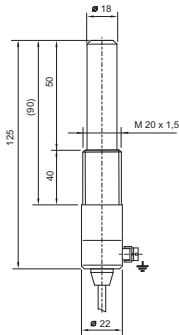
|                    |                                       |                               |
|--------------------|---------------------------------------|-------------------------------|
| Version            | unenclosed                            | enclosed                      |
| Types              | 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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# Magnetic Sensor

## Series EEx RC M20

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



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**EEx RC Magnetic sensor**

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.