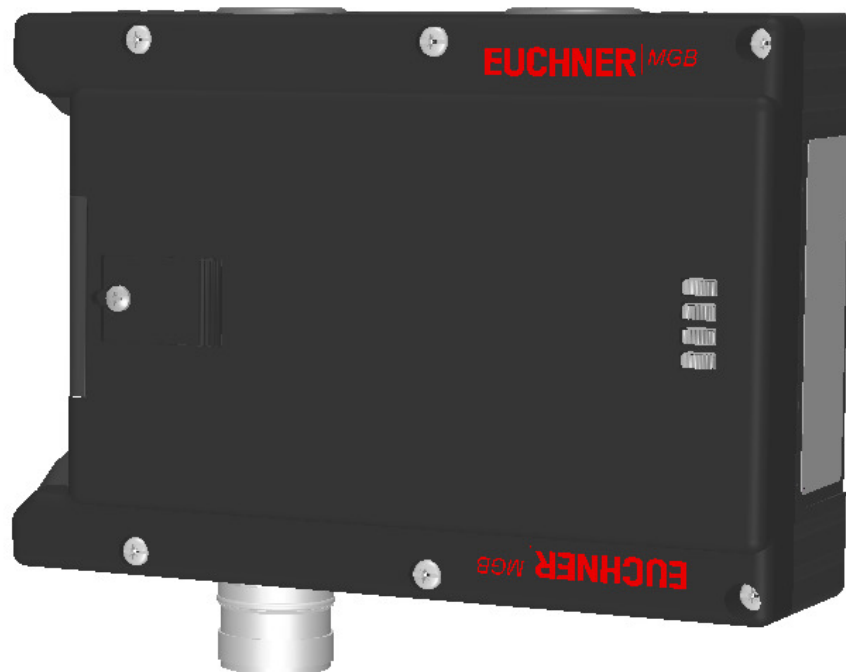


## ITEM 109777 MGB-L2-ARA-AA1A1-S1-L-109777

| Description | Technical data | Accessories | Downloads |
|-------------|----------------|-------------|-----------|
|-------------|----------------|-------------|-----------|



### Features

- › Guard locking with guard lock monitoring
- › Can be connected in series with other AR devices (e.g. CES-AR and CET-AR)
- › With plug connector RC18
- › Unicode

### Guard locking type

**MGB-** The locking arm is kept in locked position by solenoid force and  
**L2...** unlocked by spring force when the solenoid is switched off (open-circuit current principle, electrically locked).

### Door hinge

A mechanical door stop is permanently integrated into the evaluation module of the MGB. A marking on the stop makes adjustment easier.

### LED indicator

The LED indicator indicates all important system and status information.

## Monitoring outputs

- OD** ON when the door is closed
- OT** Bolt tongue inserted in the evaluation module
- OL** Guard locking solenoid in locked position
- OI** Diagnostics; there is a fault

## Approvals



## Mechanical values and environment

|  |  |
|--|--|
| Housing material                                       | Reinforced plastic; die-cast zinc nickel-plated, stainless steel |
| Weight   | Net 0,75 kg  |
| Ambient temperature                                    | At $U_B = 24V$ DC -20 ... 55 °C                                  |
| Degree of protection                                   | IP65   |
| Mechanical life  |  |
| In case of use as door stop, and 1 Joule impact energy | $1 \times 10^6$<br>$0,1 \times 10^6$                             |
| Installation position                                  | Door hinge DIN left  |
| Switching frequency                                    | 0,25 Hz  |
| Connection   | Plug connector RC18 [1]  |
| Guard locking principle                                | Open-circuit current principle                                   |
| Locking force $F_{Zh}$                                 | 2000 N   |

## Electrical connection ratings

|   |                                      |
|---|--------------------------------------|
| Utilization category according to EN 60947-5-2              | DC-13 24V 200mA [2]                  |
| Rated insulation voltage $U_i$                              | 30 V                                 |
| Rated impulse withstand voltage $U_{imp}$                   | 1,5 kV                               |
| Degree of contamination (external, according to EN 60947-1) | 3                                    |
| Safety class  | III                                  |
| Discrepancy time  |                                      |
| Between FO1A and FO1B                                       | max.10 ms                            |
| Risk time according to EN 60947-5-3                         | max.350 ms                           |
| Transponder coding  | Unicode                              |
|   | <b>Power supply <math>U_B</math></b> |
| Operating voltage DC  |                                      |

|                      |                                    |   |
|----------------------|------------------------------------|---|
|                      | $U_B$                              | 24 V DC -15% ... 10% [3]                                |
| Current consumption  | $I_{UB}$                           | max.80 mA [4]   |
|                      |                                    | <b>Power supply <math>U_A</math></b>                    |
| Operating voltage DC | $U_A$                              | 24 V DC -15% ... 10% [5]                                |
| Current consumption  | $I_{UA}$                           | max.375 mA [6]  |
|                      |                                    | <b>Safety outputs FO1A, FO1B</b>                        |
| Test pulses          |                                    | max.1 ms  |
| Test-pulse interval  |                                    | min.100 ms  |
| Type of output       |                                    | Semiconductor outputs, p-switching, short circuit-proof |
| Output voltage       | $U_{FO1A} / U_{FO1B} \text{ HIGH}$ | $U_B - 2V \dots U_B \text{ V DC}$ [7]                   |
|                      | $U_{FO1A} / U_{FO1B} \text{ LOW}$  | 0 ... 1 V DC  |
| Output current       |                                    |   |
|                      | Per safety output FO1A / FO1B      | 1 ... 200 mA  |
|                      |                                    | <b>Monitoring outputs OD, OT, OL, OI</b>                |
| Type of output       |                                    | Semiconductor outputs, p-switching, short circuit-proof |
| Output voltage       |                                    | $U_A - 2V \dots U_A \text{ V DC}$ [8]                   |
| Output current       |                                    | max.50 mA   |
|                      |                                    | <b>Solenoid control input IMP1, IMP2, IMM</b>           |
| Test pulses          |                                    | max.5 ms  |
| Test-pulse interval  |                                    | min.100 ms  |

## Controls and indicators

|                    |    |
|--------------------|----|
| Assignment diagram | L0 |
|--------------------|----|

## Miscellaneous

|                        |        |
|------------------------|--------|
| Product version number | V3.0.3 |
|------------------------|--------|

## Reliability values acc. to EN ISO 13849-1

|                   |  |
|-------------------|--|
|                   | <b>Monitoring of guard locking and the safety guard position</b> |
| Category          | 4  |
| Performance Level | PL e   |
| PFH <sub>D</sub>  | $3.7 \times 10^{-9}$   |

|              |      |
|--------------|------|
| Mission time | 20 y |
|--------------|------|

[1] X6

[2] Caution: outputs must be protected with a free-wheeling diode in case of inductive loads.

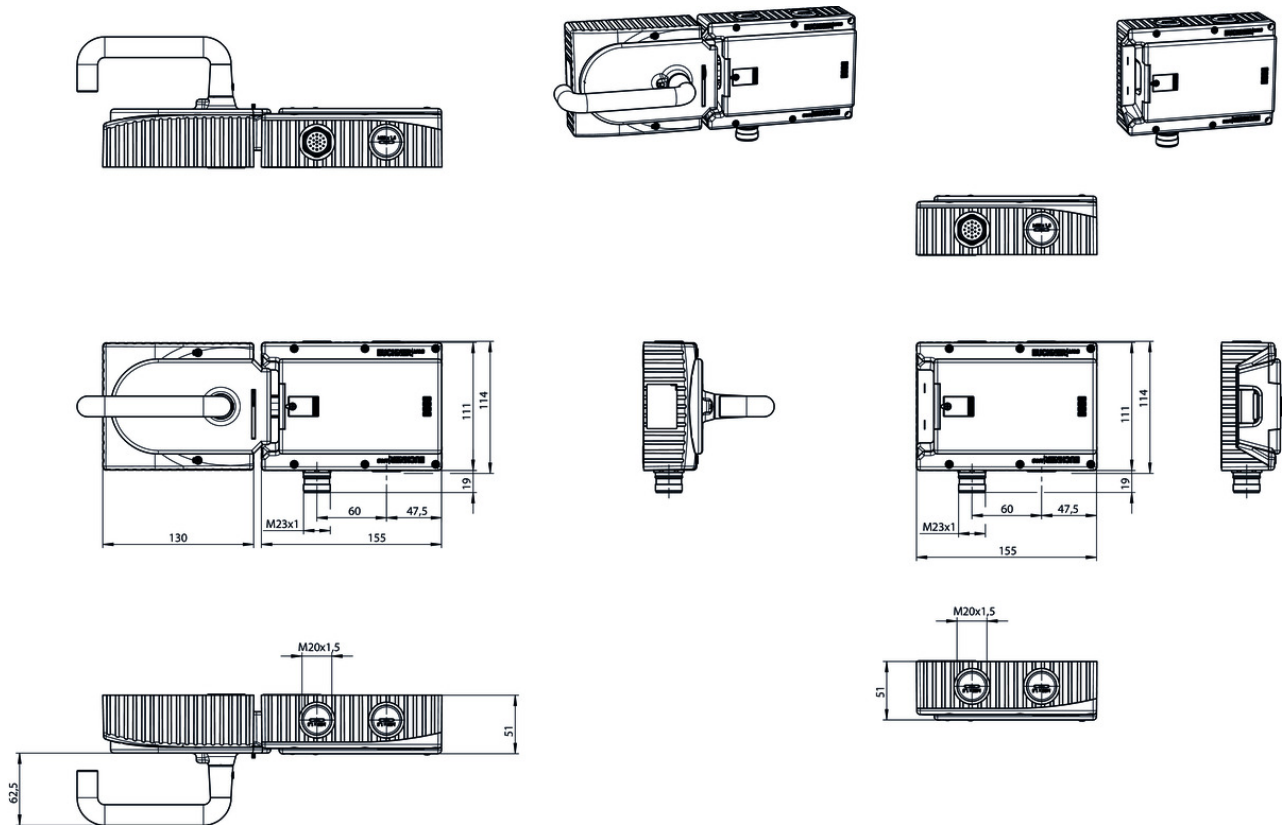
[3, 5] (Reverse polarity protected, regulated, residual ripple <5%, PELV)

[4] (no load on outputs)

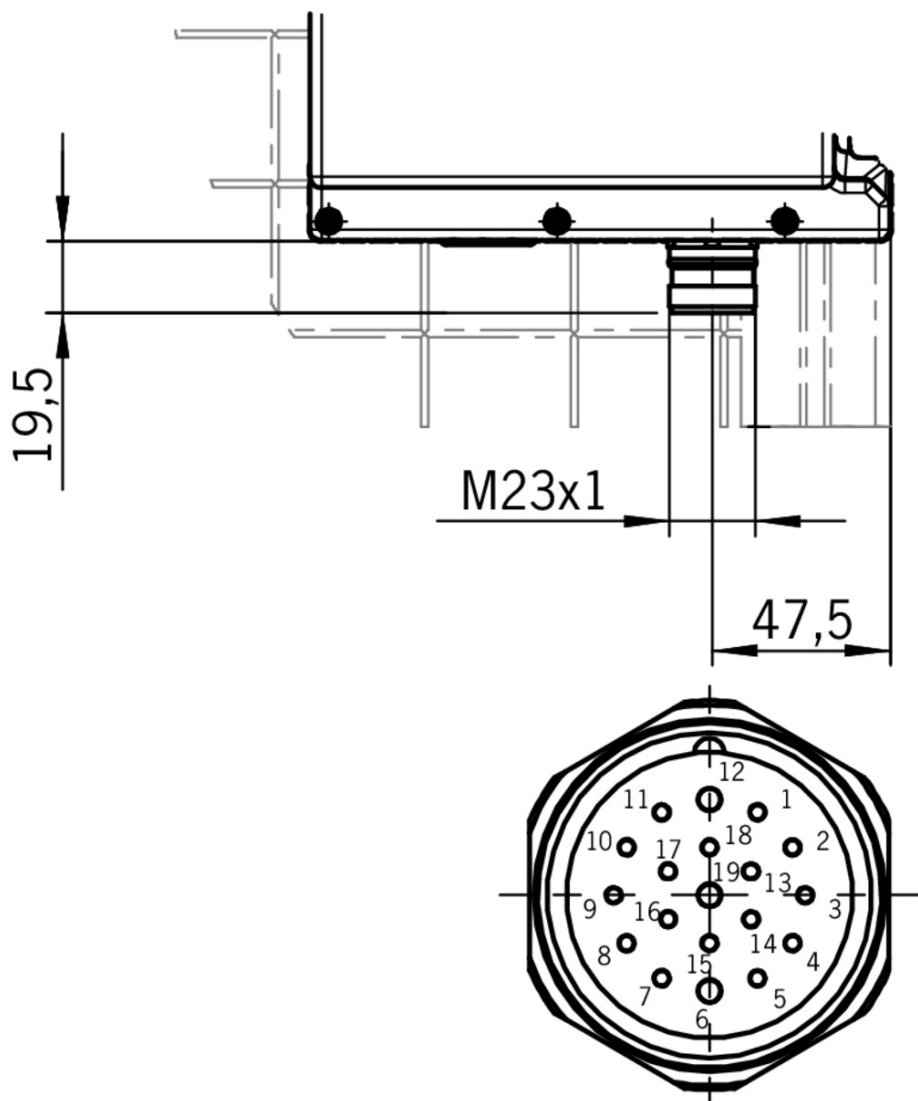
[6] (With energized guard locking solenoid and unloaded outputs OD, OT, OL, OI, +20 °C, 24V)

[7, 8] Value at a switching current of 50mA without taking into account the cable lengths

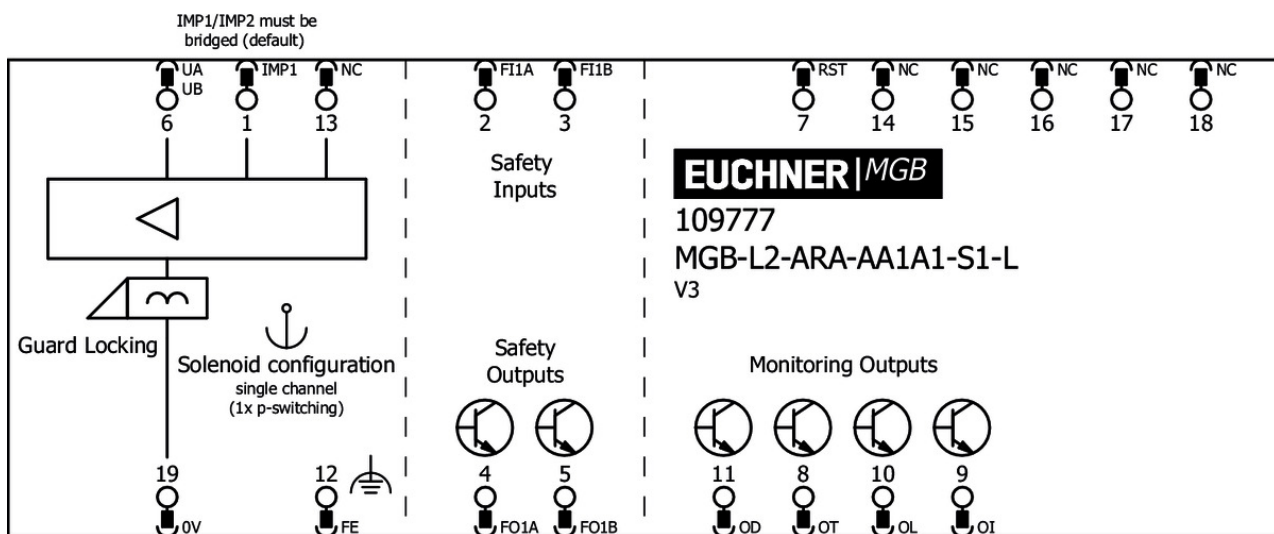
## Dimension drawing



**Dimension drawing**



**Plug connector RC18**



Connection material

▼ Female plug RC18 straight with option C1825



**077025** RC18EF-C1825

▼ Features

- › Plug connector M23, straight
- › Number of pins: 19-pin with screen bonding clamp

▼ Replacement crimp contacts for female connector RC18 with option C1825

**094310** CRIMPKONTAKT BUCHSE RCF-C1825

▼ Features

- › 19 crimp sockets
- › Conductor cross-section 16 x 0.25 - 0.5 mm<sup>2</sup> and 3 x 0.75 - 1 mm<sup>2</sup>
- › For plug connector RC18..C1825

▼ Connection cable with plug connector M23 with option C1825, 1.5m, straight



**092761** C-M23F19-19XDIFPU01,5-MA-092761

▼ Features

- › M23 plug connector, 18-pin + PE
- › Straight plug connector
- › PUR cable
- › Cable length 1.5 m
- › With flying lead
- › Cores color-coded

▼ Connection cable with plug connector M23 with option C1825, 3m, straight



**092816** C-M23F19-19XDIFPU03,0-MA-092816

▼ Features

- › M23 plug connector, 18-pin + PE
- › Straight plug connector
- › PUR cable
- › Cable length 3 m
- › With flying lead
- › Cores color-coded

▼ Connection cable with plug connector M23 with option C1825, 6m, straight



**077014** C-M23F19-19XDIFPU06,0-MA-077014

▼ Features

- › M23 plug connector, 18-pin + PE
- › Straight plug connector
- › PUR cable
- › Cable length 6 m
- › With flying lead
- › Cores color-coded

▼ Connection cable with plug connector M23 with option C1825, 8m, straight



**077015** C-M23F19-19XDIFPU08,0-MA-077015

▼ Features

- › M23 plug connector, 18-pin + PE
  - › Straight plug connector
  - › PUR cable
  - › Cable length 8 m
  - › With flying lead
  - › Cores color-coded
- 

▼ Connection cable with plug connector M23 with option C1825, 10m, straight



**092898** C-M23F19-19XDIFPU10,0-MA-092898

▼ Features

- › M23 plug connector, 18-pin + PE
  - › Straight plug connector
  - › PUR cable
  - › Cable length 10 m
  - › With flying lead
  - › Cores color-coded
- 

▼ Connection cable with plug connector M23 with option C1825, 15m, straight



**077016** C-M23F19-19XDIFPU15,0-MA-077016

▼ Features

- › M23 plug connector, 18-pin + PE
  - › Straight plug connector
  - › PUR cable
  - › Cable length 15 m
  - › With flying lead
  - › Cores color-coded
- 

▼ Connection cable with plug connector M23 with option C1825, 20m, straight



**092726** C-M23F19-19XDIFPU20,0-MA-092726

▼ Features

- › M23 plug connector, 18-pin + PE
  - › Straight plug connector
  - › PUR cable
  - › Cable length 20 m
  - › With flying lead
  - › Cores color-coded
- 

▼ Connection cable with plug connector M23 with option C1825, 25m, straight



**092727** C-M23F19-19XDIFPU25,0-MA-092727

▼ Features

- › M23 plug connector, 18-pin + PE
  - › Straight plug connector
  - › PUR cable
  - › Cable length 25 m
  - › With flying lead
  - › Cores color-coded
- 

▼ Connection cable with plug connector M23 with option C1825, 30m, straight



**095993** C-M23F19-19XDIFPU30,0-MA-095993

▼ Features

- › M23 plug connector, 18-pin + PE
- › Straight plug connector
- › PUR cable
- › Cable length 30 m
- › With flying lead
- › Cores color-coded

▼ Connection cable with plug connector M23 with option C1825, 40m, straight



**102490** C-M23F19-19XDIFPU40,0-MA-102490

▼ Features

- › M23 plug connector, 18-pin + PE
- › Straight plug connector
- › PUR cable
- › Cable length 40 m
- › With flying lead
- › Cores color-coded

## Mounting accessories

▼ Mounting plate for evaluation modules MGB-L.-AR.-... and MGB-L.-AP.-...



**109490** MGB-A-MOUNTINGPLATE-L-109490

▼ Features

- › Easy and quick mounting (only two screws required)
- › Quick module replacement
- › Steel, powder-coated
- › Suitable for doors hinged on the right or left

## Function expansion

▼ Emergency unlocking for safety system MGB



**112989** MGB-A-EMERGENCYRELEASE-112989

▼ Features

- › Quick emergency unlocking
- › sealable

## Miscellaneous accessories

▼ Lens set 5 colors



**120344** AY-SET-LNS-0001-120344

▼ Lens set 6 colors





**120378** AY-SET-LNS-0002-120378

**▼** Lens set labeled



**120377** AY-SET-LNS-SY01-120377



**126158** AY-SET-LNS-SY03-126158



**125359** AY-SET-LNS-SY02-125359

## Instructions

**▼** Návod k použití – bezpečnostní systémy MGB-L1...AR.-... / MGB-L2...AR.-... a MGB-L1...AP.-... / MGB-L2...AP.-... od V3.0.0

|  | Doc. no. | Version  | Language | Download |
|--|----------|----------|----------|----------|
| Betriebsanleitung MGB-L1...AR.-... / MGB-L2...AR.-... und MGB-L1...AP.-... / MGB-L2...AP.-... ab V3.0.0                    | 2119167  | 04-05/18 |          | 3.7 MB   |
| Mode d'emploi MGB-L1...AR.-... / MGB-L2...AR.-... et MGB-L1...AP.-... / MGB-L2...AP.-... à partir de V3.0.0                | 2119167  | 04-05/18 |          | 3.7 MB   |
| Manual de instrucciones MGB-L1...AR.-... / MGB-L2...AR.-... y MGB-L1...AP.-... / MGB-L2...AP.-... V3.0.0 o superior        | 2119167  | 04-05/18 |          | 3.7 MB   |
| Návod k použití – bezpečnostní systémy MGB-L1...AR.-... / MGB-L2...AR.-... a MGB-L1...AP.-... / MGB-L2...AP.-... od V3.0.0 | 2119167  | 04-05/18 |          | 4.0 MB   |
| Operating Instructions MGB-L1...AR.-... / MGB-L2...AR.-... and MGB-L1...AP.-... / MGB-L2...AP.-... from V3.0.0             | 2119167  | 04-05/18 |          | 3.7 MB   |
| Istruzioni di impiego MGB-L1...AR.-... / MGB-L2...AR.-... und MGB-L1...AP.-... / MGB-L2...AP.-... da V3.0.0                | 2119167  | 04-05/18 |          | 3.7 MB   |
| Handleiding MGB-L1...AR.-... / MGB-L2...AR.-... en MGB-L1...AP.-... / MGB-L2...AP.-... vanaf V3.0.0                        | 2119167  | 04-05/18 |          | 3.7 MB   |
| Instrukcja obsługi MGB-L1...AR.-... / MGB-L2...AR.-... i MGB-L1...AP.-... / MGB-L2...AP.-... od V3.0.0                     | 2119167  | 04-05/18 |          | 4.0 MB   |
| Manual de instruções MGB-L1...AR.-... / MGB-L2...AR.-... e MGB-L1...AP.-... / MGB-L2...AP.-... a partir de V3.0.0          | 2119167  | 04-05/18 |          | 3.7 MB   |

|   |         |          |  |        |
|---|---------|----------|--|--------|
| Инструкция по эксплуатации MGB-L1...AR.-... / MGB-L2...AR.-... и MGB-L1...AP.-... / MGB-L2...AP.-... с V3.0.0               | 2119167 | 04-05/18 |  | 4.2 MB |
| Návod na prevádzku Bezpečnostné systémy MGB-L1...AR.-... / MGB-L2...AR.-... a MGB-L1...AP.-... / MGB-L2...AP.-... od V3.0.0 | 2119167 | 04-05/18 |  | 4.0 MB |
| Instruktionsbok MGB-L1...AR.-... / MGB-L2...AR.-... och MGB-L1...AP.-... / MGB-L2...AP.-... fr. V3.0.0                      | 2119167 | 04-05/18 |  | 3.7 MB |
| İşletim kılavuzu MGB-L1...AR.-... / MGB-L2...AR.-... ve MGB-L1...AP.-... / MGB-L2...AP.-... itibaren V3.0.0                 | 2119167 | 04-05/18 |  | 4.1 MB |
| 操作指示書 安全システム MGB-L1...AR.-... / MGB-L2...AR.-... および MGB-L1...AP.-... / MGB-L2...AP.-... V3.0.0以降                           | 2119167 | 04-05/18 |  | 4.1 MB |
| 使用说明书 安全系统 MGB-L1...AR.-... / MGB-L2...AR.-... 和 MGB-L1...AP.-... / MGB-L2...AP.-... V3.0.0 以上                              | 2119167 | 04-05/18 |  | 4.1 MB |







**Sicherheitsinformation (Teil der Betriebsanleitung Sicherheitssystem MGB-AR/MGB-AP) ab V3.0.0**

|   | Doc. no. | Version  | Language             | Download |
|---|----------|----------|----------------------|----------|
| Sicherheitsinformation (Teil der Betriebsanleitung Sicherheitssystem MGB-AR/MGB-AP) ab V3.0.0<br>Información de seguridad (parte del manual de instrucciones Sistema de seguridad MGB-AR/MGB-AP) V3.0.0 o superior<br>Information de sécurité (partie du mode d'emploi Système de sécurité MGB-AR/MGB-AP) à partir de V3.0.0<br>Informazioni sulla sicurezza (Parte delle istruzioni di impiego Sistema di sicurezza MGB-AR/MGB-AP) da V3.0.0<br>Säkerhetsinformation (Del av instruktionsboken Säkerhetssystem MGB-AR/MGB-AP) från V3.0.0<br>Safety Information (Part of the Operating Instructions Safety System MGB-AR/MGB-AP) from V3.0.0 | 123151   | 01-02/15 | <br><br><br><br><br> | 0.6 MB   |
| Informacje o bezpieczeństwie (Część instrukcji obsługi System bezpieczeństwa MGB-AR/MGB-AP) od V3.0.0   | 123151   | 01-02/15 |                      | 0.2 MB   |
| Bezpečnostní informace (součást návodu k použití „Bezpečnostní systém MGB-AR/MGB-AP“) od V3.0.0   | 123151   | 01-02/15 |                      | 0.2 MB   |
| Informação de segurança (Parte do manual de instruções Sistema de segurança MGB-AR/MGB-AP) a partir de V3.0.0   | 123151   | 01-02/15 |                      | 0.2 MB   |
| Veiligheidsinformatie (Deel van de handleiding Beveiligingssysteem MGB-AR/MGB-AP) vanaf V3.0.0  | 123151   | 01-02/15 |                      | 0.2 MB   |
| Информация о безопасности (часть инструкции по эксплуатации Предохранительная система MGB-AR/MGB-AP) с V3.0.0   | 123151   | 01-02/15 |                      | 0.3 MB   |

|  |        |          |   |  |
|--|--------|----------|---|--|
| Bezpečnostná informácia (časť návodu na prevádzku Bezpečnostný systém MGB-AR/MGB-AP) od V3.0.0 | 123151 | 01-02/15 |   |  0.2 MB  |
| 安全信息 (安全系统 MGB-AR/MGB-AP使用说明书的组成部分) V3.0.0以上   | 123151 | 01-02/15 |  |  0.3 MB |
| Güvenlik bilgisi (İşletim kılavuzunun parçası emniyet sistemi MGB-AR/MGB-AP) V3.0.0 ve üstü    | 123151 | 01-02/15 |  |  0.3 MB |
| 安全情報 MGB-AR/MGB-AP   | 123151 | 01-02/15 |  |  0.6 MB |

## Declaration of conformity

### EU-Konformitätserklärung

|  | Doc. no. | Version  | Language  | Download   |
|--|----------|----------|---|--|
| EU-Konformitätserklärung<br>Declaración UE de conformidad<br>Déclaration UE de conformité<br>Dichiarazione di conformità<br>EU declaration of conformity | 2123150  | 08-01/17 | <br><br><br><br> |  0.3 MB |