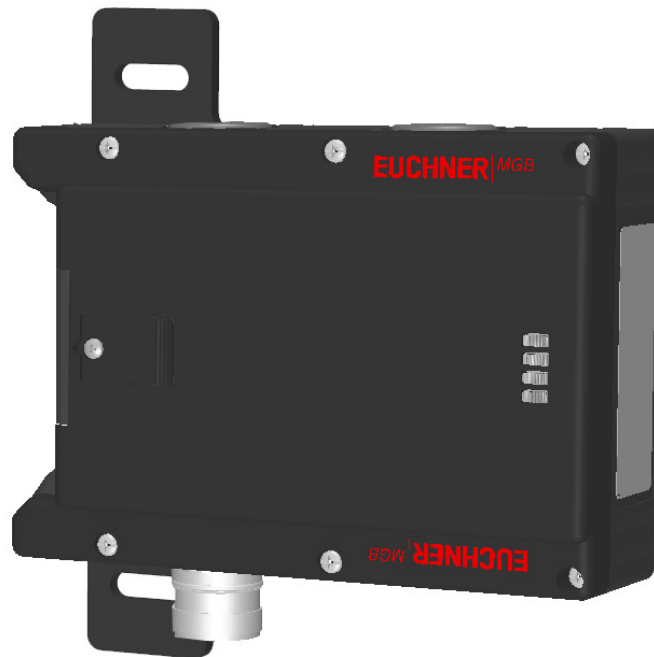


## ITEM 112599 MGB-L1-APA-AA1A2-S1-L-112599

Description	Technical data	Accessories	Downloads
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### Features

- › Guard locking with guard lock monitoring
- › With plug connector RC18
- › Mounted on mounting plates
- › Unicode

### Guard locking type

**MGB-** The locking arm is held in the locked position by spring force and is  
**L1...** unlocked by solenoid force (closed-circuit current principle, mechanically 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
  - OI** Diagnostics; there is a fault
- 

## Notice

The interlocking module is pre-assembled on a mounting plate.

## Approvals



## Mechanical values and environment

Housing material	Reinforced plastic; die-cast zinc nickel-plated, stainless steel
Weight	Net 1,35 kg
Ambient temperature	
At $U_B = 24V$ DC	-20 ... 55 °C
Degree of protection	IP65
Mechanical life	
	$1 \times 10^6$
In case of use as door stop, and 1 Joule impact energy	$0,1 \times 10^6$
Installation position	Door hinge DIN left
Switching frequency	0,25 Hz
Connection	Plug connector RC18 [1]
Guard locking principle	Closed-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 U<sub>B</sub></b>	
Operating voltage DC	U <sub>B</sub> 24 V DC -15% ... 10% [3]
Current consumption	I <sub>UB</sub> max.80 mA [4]
<b>Power supply U<sub>A</sub></b>	
Operating voltage DC	U <sub>A</sub> 24 V DC -15% ... 10% [5]
Current consumption	I <sub>UA</sub> max.375 mA [6]
<b>Safety outputs FO1A, FO1B</b>	
Test pulses	max.0,3 ms
Test-pulse interval	min.100 ms
Type of output	Semiconductor outputs, p-switching, short circuit-proof
Output voltage	U <sub>FO1A</sub> /U <sub>FO1B</sub> HIGH U <sub>B</sub> -2V ... U <sub>B</sub> V DC [7] U <sub>FO1A</sub> /U <sub>FO1B</sub> 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 <sub>A</sub> -2V ... U <sub>A</sub> 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
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## Miscellaneous

Additional feature	Mounting plate
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 x 10 <sup>-9</sup>
<b>Control of the guard locking</b>	

Category	4
Performance Level	PL e
PFH <sub>D</sub>	$2.8 \times 10^{-9}$
<hr/>	
Mission time	20 y

[1] X6

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

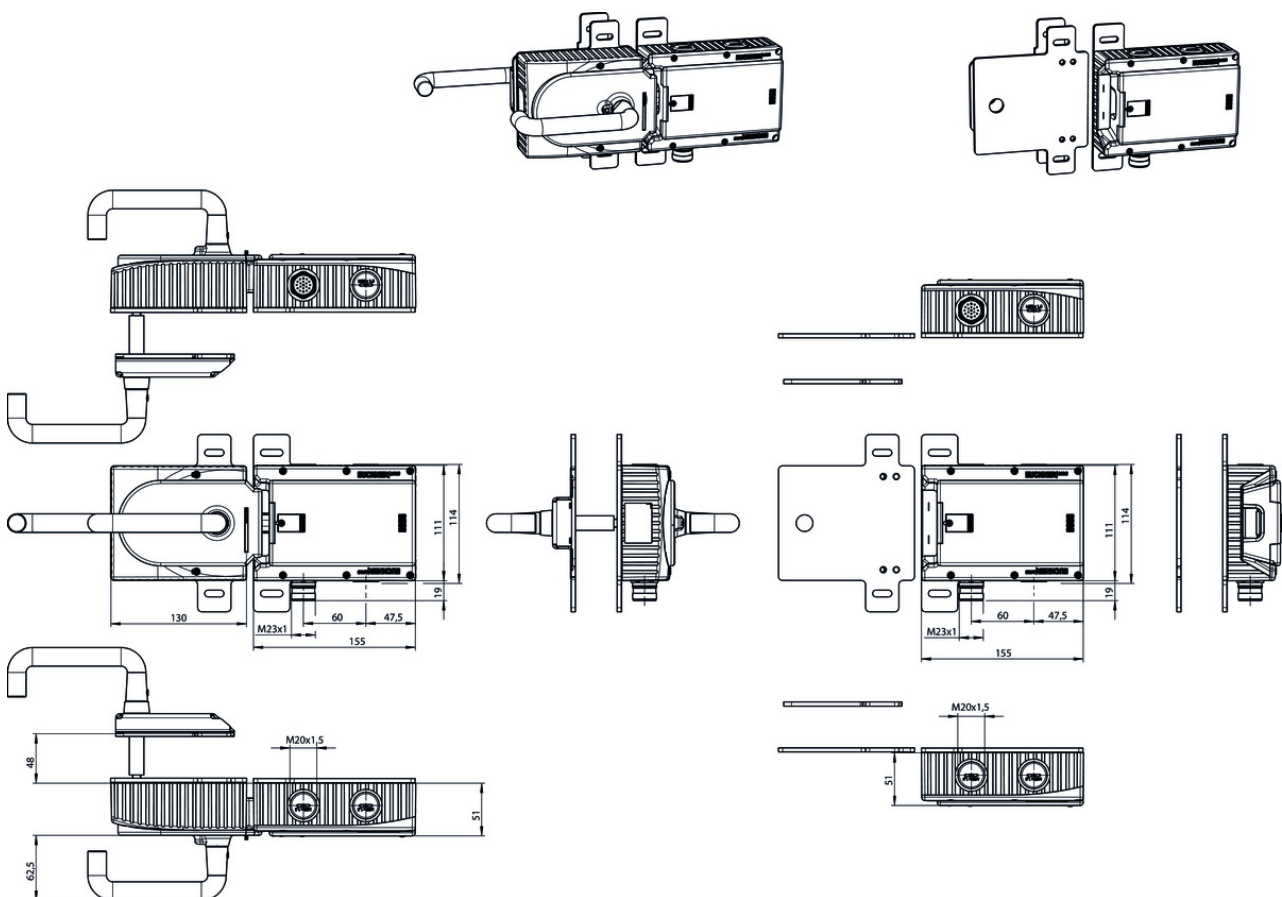
[3, 5] (Reverse polarity protected, regulated, residual ripple <5%, PELV)

[4] (no load on outputs)

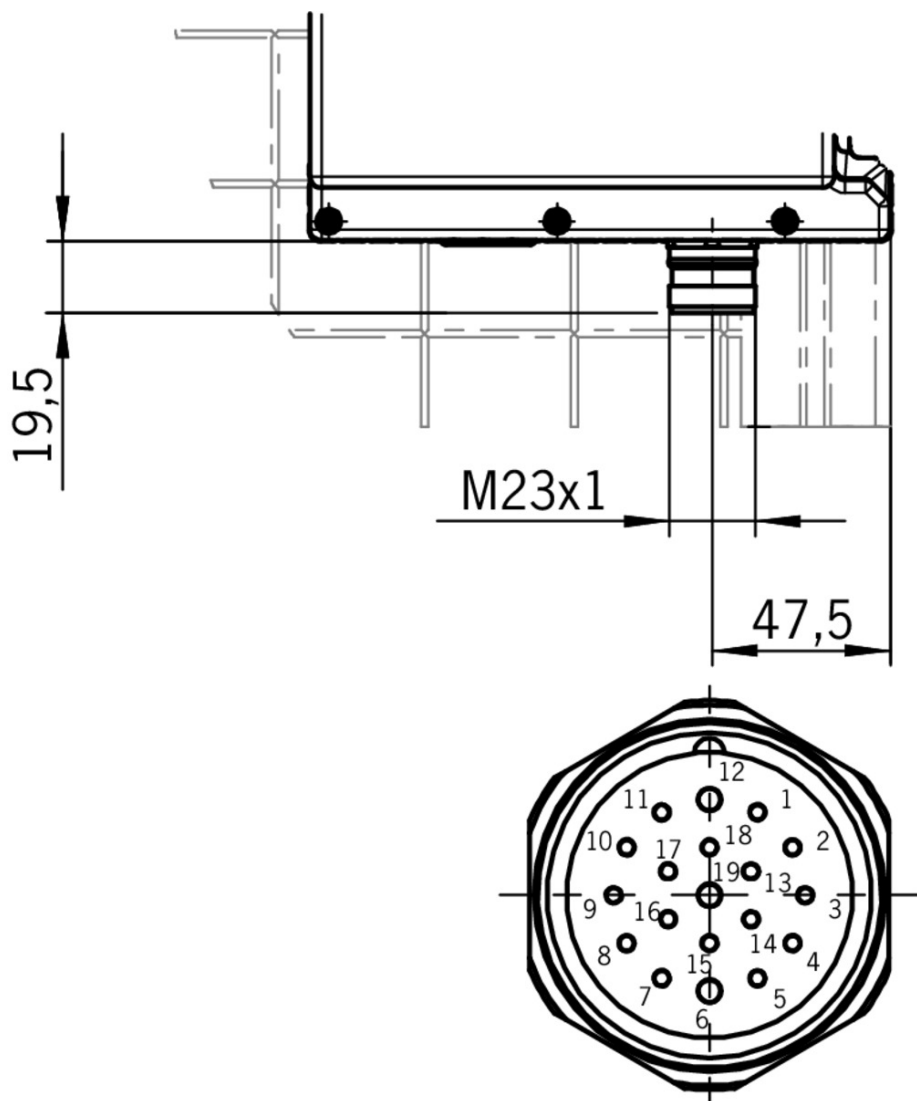
[6] (With energized guard locking solenoid and unloaded outputs OD, OT, OL, OI, +20 °C, 24V)

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

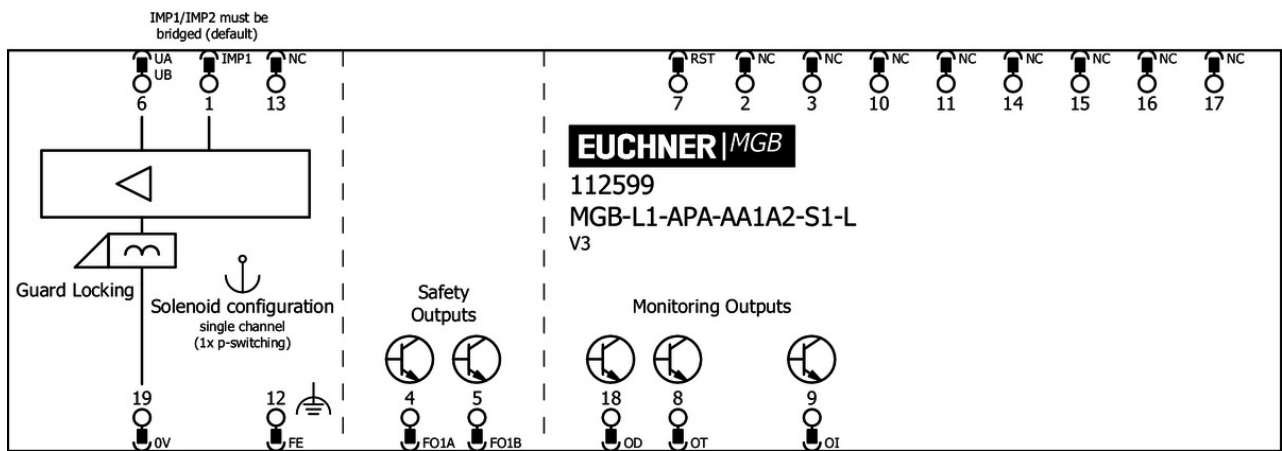
### Dimension drawing



**Dimension drawing**



**Plug connector RC18**



**Function expansion**

- Emergency unlocking for safety system MGB



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

#### ▼ Features

- › Quick emergency unlocking
  - › sealable
- 

## Connection material

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### ▼ 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

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- ✓ 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
- 

## Miscellaneous accessories

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- ✓ Lens set 5 colors



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

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- ✓ Lens set 6 colors





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

▼ Lens set labeled



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



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



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

## 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







Veiligheidsinformatie (Deel van de handleiding Beveiligingssysteem MGB-AR/MGB-AP) vanaf V3.0.0

	Doc. no.	Version	Language	Download
Sicherheitsinformation (Teil der Betriebsanleitung Sicherheitssystem MGB-AR/MGB-AP) ab V3.0.0 Información de seguridad (parte del manual de instrucciones Sistema de seguridad MGB-AR/MGB-AP) V3.0.0 o superior Information de sécurité (partie du mode d'emploi Système de sécurité MGB-AR/MGB-AP) à partir de V3.0.0 Informazioni sulla sicurezza (Parte delle istruzioni di impiego Sistema di sicurezza MGB-AR/MGB-AP) da V3.0.0 Säkerhetsinformation (Del av instruktionsboken Säkerhetssystem MGB-AR/MGB-AP) från V3.0.0 Safety Information (Part of the Operating Instructions Safety System MGB-AR/MGB-AP) from V3.0.0	123151	01-02/15		0.6 MB
Veiligheidsinformatie (Deel van de handleiding Beveiligingssysteem MGB-AR/MGB-AP) vanaf 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
Bezpečnostná informácia (časť návodu na prevádzku Bezpečnostný systém MGB-AR/MGB-AP) od V3.0.0	123151	01-02/15		0.2 MB
Güvenlik bilgisi (İşletim kılavuzunun parçası emniyet sistemi MGB-AR/MGB-AP) V3.0.0 ve üstü	123151	01-02/15		0.3 MB
Bezpečnostní informace (součást návodu k použití „Bezpečnostní systém MGB-AR/MGB-AP“) od V3.0.0	123151	01-02/15		0.2 MB

Informacje o bezpieczeństwie (Część instrukcji obsługi System bezpieczeństwa MGB-AR/MGB-AP) od 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
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
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 Declaración UE de conformidad Déclaration UE de conformité Dichiarazione di conformità EU declaration of conformity	2123150	08-01/17	    	 0.3 MB