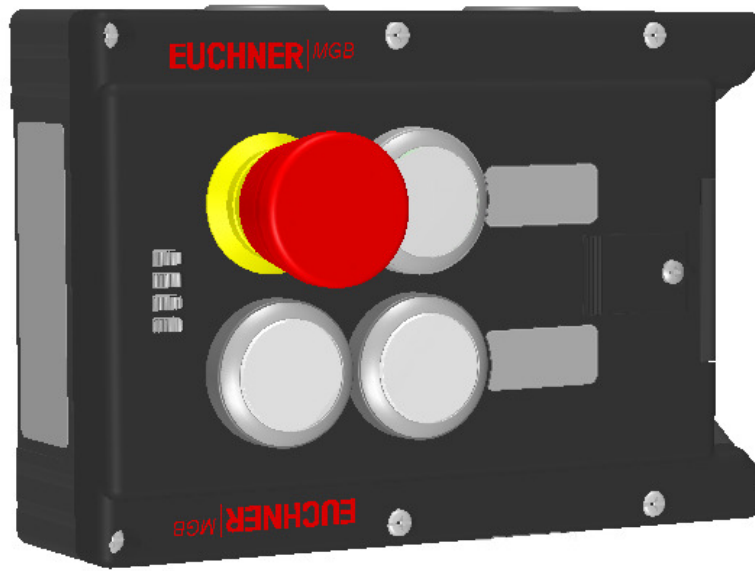


## ITEM 137326 MGB-L1-APA-AP4A1-M-R-137326

Description	Technical data	Accessories	Downloads
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### Features

- › Guard locking with guard locking monitoring
- › Can be connected in series with other AR devices (e.g. CES-AR and CET-AR)
- › Emergency stop according to ISO 13850
- › Three pushbuttons (illuminated, three pushbuttons = NO contacts)
- › incl. adhesive labels
- › With lens set, 6 pcs.
- › With cable entry
- › 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 stop

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.

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## Monitoring outputs

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

## Emergency stop device

- S1** Two positively driven contacts and one NO contact (e.g. monitoring contact), emergency stop with turn-to-reset, not illuminated
- 

## Pushbutton

- S2** One NO contact, illuminated
  - S3** One NO contact, illuminated
  - S4** One NO contact, illuminated
- 

## Adhesive labels

Devices with adhesive labels have pre-formed recesses. The adhesive labels enclosed (standard size 12.5 x 27 mm) can be affixed in these recesses.

## 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	
	$1 \times 10^6$
In case of use as door stop, and 1 Joule impact energy	$0,1 \times 10^6$
Installation position	Door hinge DIN right
Switching frequency	0,25 Hz
Connection	Cable entries M20x1.5

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 <sup>[1]</sup>
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
Connection cross-section		
(Rigid/flexible)		0,13 ... 1,5 mm <sup>2</sup>
(Rigid/flexible) with cable end sleeve according to DIN 46 228/1		0,25 ... 1,5 mm <sup>2</sup>
(Rigid/flexible) with cable end sleeve with collar according to DIN 46 228/1		0,25 ... 0,75 mm <sup>2</sup>
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% <sup>[2]</sup>
Current consumption	$I_{UB}$	max.80 mA <sup>[3]</sup>
		<b>Power supply <math>U_A</math></b>
Operating voltage DC	$U_A$	24 V DC -15% ... 10% <sup>[4]</sup>
Current consumption	$I_{UA}$	max.375 mA <sup>[5]</sup>
		<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		
$U_{FO1A} / U_{FO1B}$ HIGH		$U_B - 2V \dots U_B$ V DC <sup>[6]</sup>
$U_{FO1A} / U_{FO1B}$ 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		$U_A - 2V \dots U_A$ V DC <sup>[7]</sup>
Output current		max.50 mA
		<b>Controls and indicators</b>

Switching voltage	U <sub>A</sub> V
Switching current	1 ... 10 mA
Breaking capacity	max.0,25 W
Power supply LED	24 V DC
	<b>Emergency stop</b>
Switching voltage	5 ... 24 V
Switching current	1 ... 100 mA
Breaking capacity	max.0,25 W
Power supply LED	24 V DC
	<b>Solenoid control input IMP1, IMP2, IMM</b>
Test pulses	max.5 ms
Test-pulse interval	min.100 ms

## Controls and indicators

Assignment diagram	L1
Control/indicator	
	<b>Position 1</b>
Version	Emergency stop
Special features	
Color	
Switching element	2 pos. driven NC
Control/indicator	
	<b>Position 2</b>
Version	Illuminated push buttons
Special features	
Color	
Switching element	1NO
Control/indicator	
	<b>Position 3</b>
Version	Illuminated push buttons
Special features	
Color	
Switching element	1NO
Control/indicator	
	<b>Position 4</b>
Version	Illuminated push buttons
Special features	
Color	
Switching element	1NO

## Miscellaneous

Additional feature	Incl. cover set ID. No. 120344
Product version number	V3.0.3

Slide-in label	2 pcs. without marking
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**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>	$3.7 \times 10^{-9}$
<b>Control of the guard locking</b>	
Category	4
Performance Level	PL e
PFH <sub>D</sub>	$2.8 \times 10^{-9}$
<b>Emergency stop</b>	
B10 <sub>D</sub>	
Emergency stop	$0,065 \times 10^6$

Mission time	20 y
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**[1]** Caution: outputs must be protected with a free-wheeling diode in case of inductive loads.

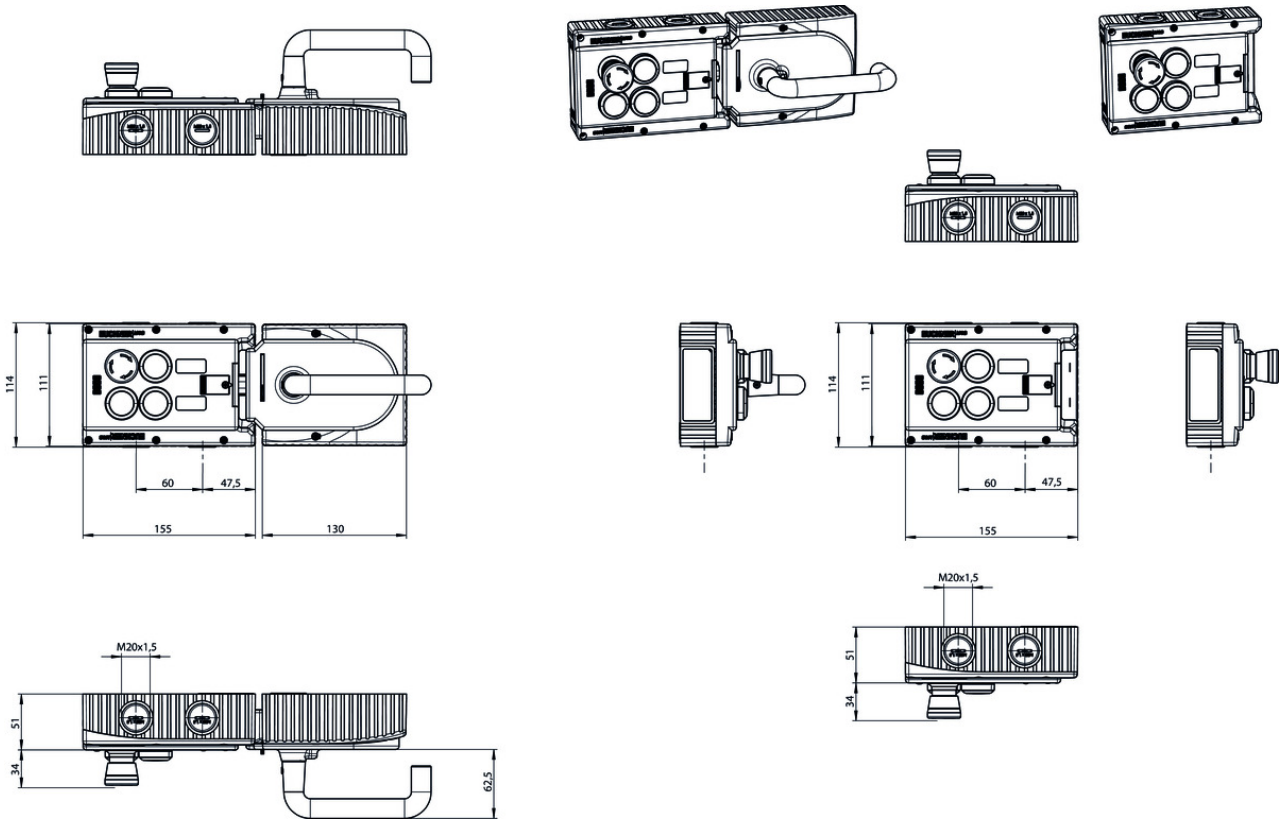
**[2, 4]** (Reverse polarity protected, regulated, residual ripple <5%, PELV)

**[3]** (no load on outputs)

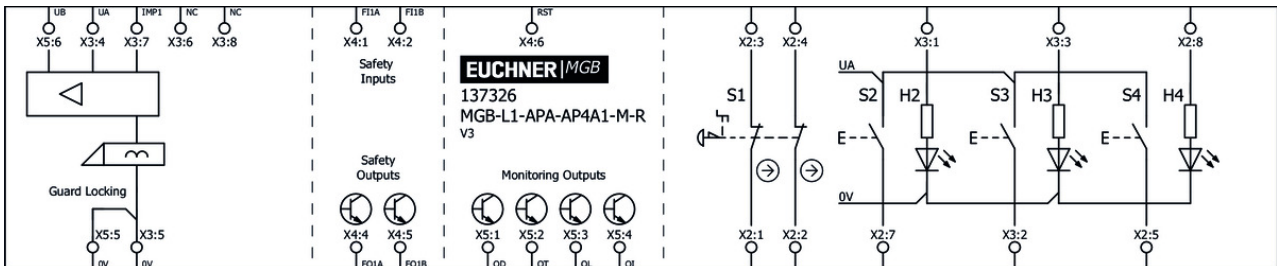
**[5]** (With energized guard locking solenoid and unloaded outputs OD, OT, OL, OI, +20 °C, 24V)

**[6, 7]** Value at a switching current of 50mA without taking into account the cable lengths

## Dimension drawing



## Cable entry



## 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

## Miscellaneous accessories

- ▼ Lens set 5 colors



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

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▼ Lens set labeled



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

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

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

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▼ Lens set 6 colors



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

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▼ Lens set, three colors



**158307** AY-SET-LNS-SY04-158307

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## Connection material

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▼ Built-in connector RC18

**120403** MGB-A-PLUGCONNECTOR-RC18-120403

▼ Features

- › For all MGB with cable entry
- 

▼ Cable glands M20x1.5



**086233** EKPM20/06 086233

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## Function expansion

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▼ Emergency unlocking for safety system MGB



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

▼ Features

- › Quick emergency unlocking
  - › sealable
-


























## 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 Safety Information (Part of the Operating Instructions Safety System MGB-AR/MGB-AP) from 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	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
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
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
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 EU declaration of conformity Declaración UE de conformidad Déclaration UE de conformité Dichiarazione di conformità	2123150	08-01/17	    	 0.3 MB

