

## ITEM 121060 MGB-L1-ARA-AL2A1-M-R-121060

Description	Technical data	Accessories	Downloads
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### Features

- › Guard locking with guard lock monitoring
- › Can be connected in series with other AR devices (e.g. CES-AR and CET-AR)
- › 2 pushbuttons (illuminated)
- › 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 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.

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### 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

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### Pushbutton

- S2** 1 NO contact, illuminated
- S3** 1 NO contact, illuminated

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### Lens set

The color of the pushbutton can be selected using the lens set included (5 colors). Item no.: 120344 (see Accessories)

### 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.1 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		$U_A$ V
Switching current		1 ... 10 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 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

## Miscellaneous

Additional feature	Incl. cover set ID. No. 120344
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>	$3.7 \times 10^{-9}$
	<b>Control of the guard locking</b>
Category	4
Performance Level	PL e
PFH <sub>D</sub>	$2.8 \times 10^{-9}$

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

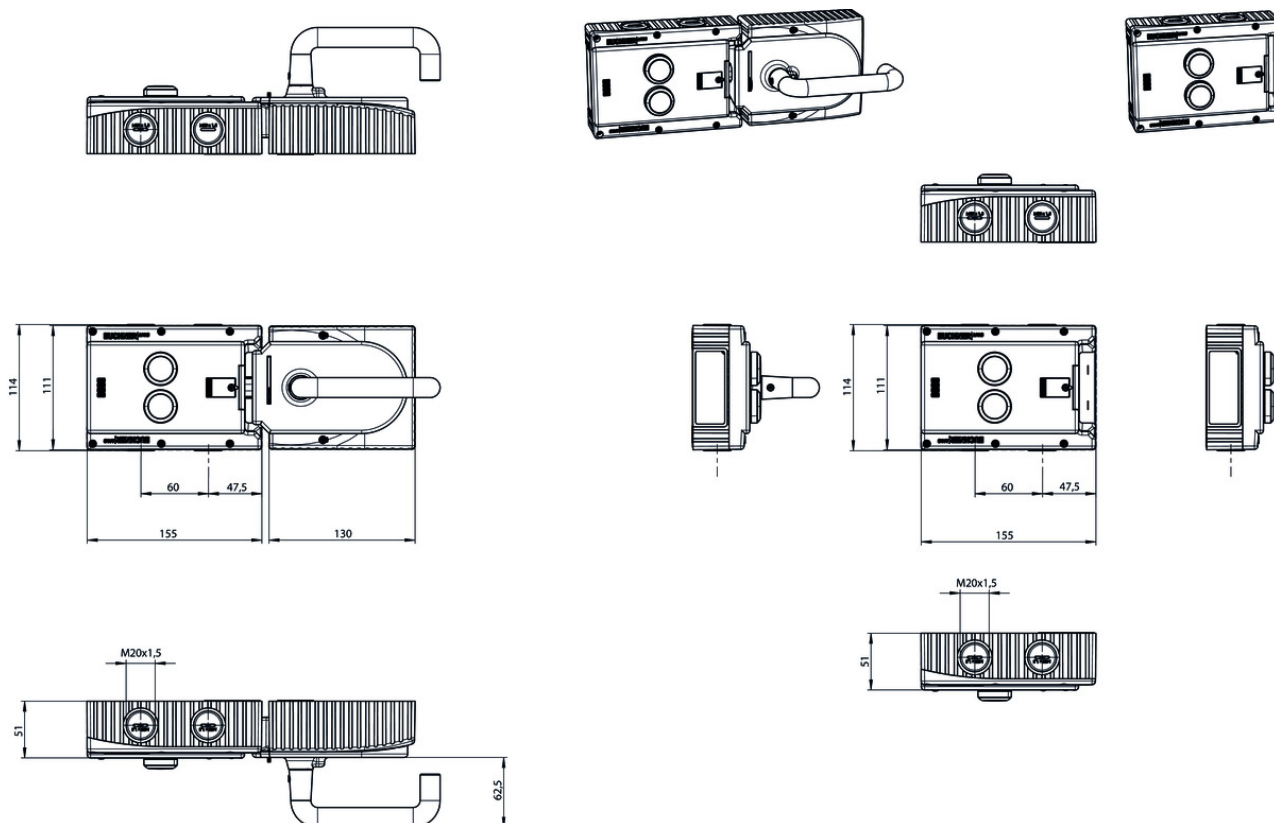
[2, 4] (Reverse polarity protected, regulated, residual ripple <5%, PELV)

[3] (no load on outputs)

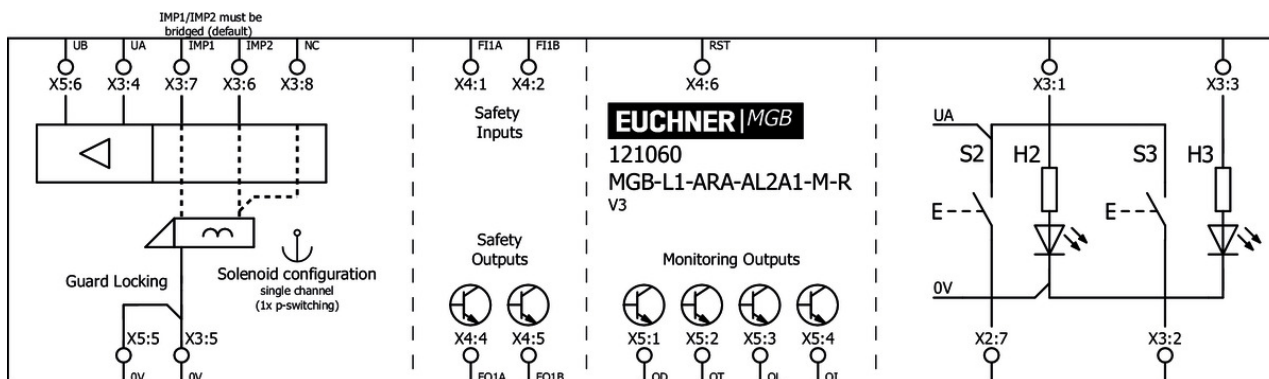
[5] (With energized guard locking solenoid and unloaded outputs OD, OT, OL, OI, +20 °C, 24V)

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

## Dimension drawing



## Cable entry



## Miscellaneous accessories

- ✓ Lens set 5 colors



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

- ✓ Lens set labeled



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



**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
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▼ Cable glands M20x1.5



**086233** EKPM20/06 086233

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## 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
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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


























## 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**

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