

ITEM 110872 MGB-L1-ARA-AD4A1-S1-R-110872

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 (CES-AR and CET-AR)
- › 3 pushbuttons (illuminated, wh, wh, wh)
- › Incl. adhesive labels
- › With plug connector RC18
- › 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
- OL** Guard locking solenoid in locked position
- OI** Diagnostics; there is a fault

Pushbutton

- S1** 1 NO contact, white, illuminated
- S2** 1 NO contact, white, illuminated
- S3** 1 NO contact, white, 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	1×10^6
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	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	
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	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
		Power supply U_B
Operating voltage DC		
	U_B	24 V DC -15% ... 10% [3]
Current consumption		
	I_{UB}	max.80 mA [4]
		Power supply U_A
Operating voltage DC		
	U_A	24 V DC -15% ... 10% [5]
Current consumption		
	I_{UA}	max.375 mA [6]
		Safety outputs FO1A, FO1B
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
		Monitoring outputs OD, OT, OL, OI
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
		Controls and indicators
Switching voltage		$U_A \text{ V}$
Switching current		1 ... 10 mA
Breaking capacity		max.0,25 W
Power supply LED		24 V DC
		Solenoid control input IMP1, IMP2, IMM
Test pulses		max.5 ms
Test-pulse interval		min.100 ms

Controls and indicators

Assignment diagram	L1
Control/indicator	
	Position 1
Version	Illuminated push buttons
Special features	
Color	white
Switching element	1NO
Control/indicator	
	Position 2
Version	Illuminated push buttons
Special features	
Color	white
Switching element	1NO
Control/indicator	
	Position 3
Version	Illuminated push buttons
Special features	
Color	white
Switching element	1NO

Miscellaneous

Product version number	V3.0.3
Slide-in label	3 pc. without marking

Reliability values acc. to EN ISO 13849-1

	Monitoring of guard locking and the safety guard position
Category	4
Performance Level	PL e
PFH _D	3.7×10^{-9}
	Control of the guard locking
Category	4
Performance Level	PL e
PFH _D	2.8×10^{-9}
<hr/>	
Mission time	20 y

[1] X6

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

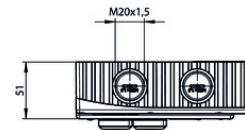
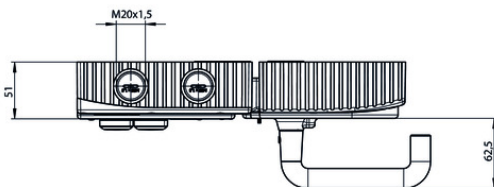
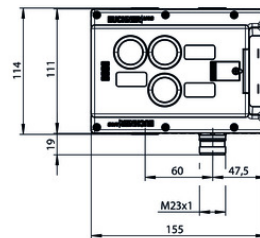
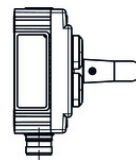
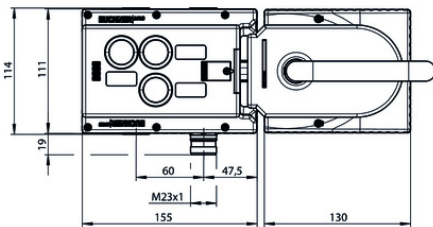
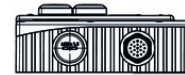
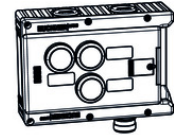
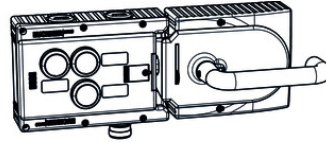
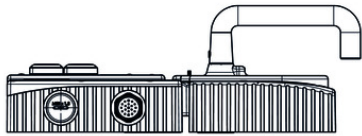
[3, 5] (Reverse polarity protected, regulated, residual ripple <5%, PELV)

[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

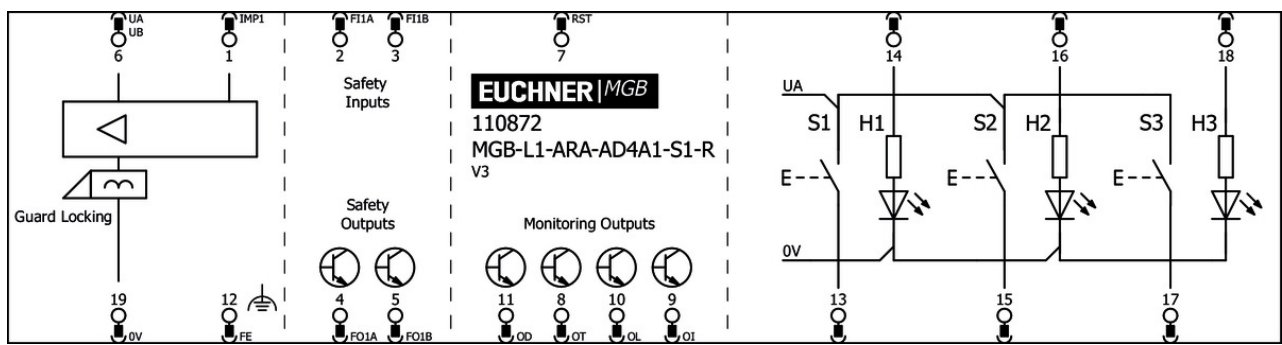
Dimension drawing



Dimension drawing



Plug connector RC18



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



126158 AY-SET-LNS-SY03-126158

▼ Lens set 6 colors



120378 AY-SET-LNS-0002-120378

▼ Adhesive labels

114529 MGB-A-PLATESET-NN01-114529

▼ Features

- › Adhesive labels suitable for MGB evaluation modules, bus modules and control modules
- › silver, blank
- › Packaging unit = 10 pcs.

▼ Lens set, three colors



158307 AY-SET-LNS-SY04-158307

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 mm² and 3 x 0.75 - 1 mm²
- › 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

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 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 Declaración UE de conformidad Déclaration UE de conformité Dichiarazione di conformità EU declaration of conformity	2123150	08-01/17	    	 0.3 MB