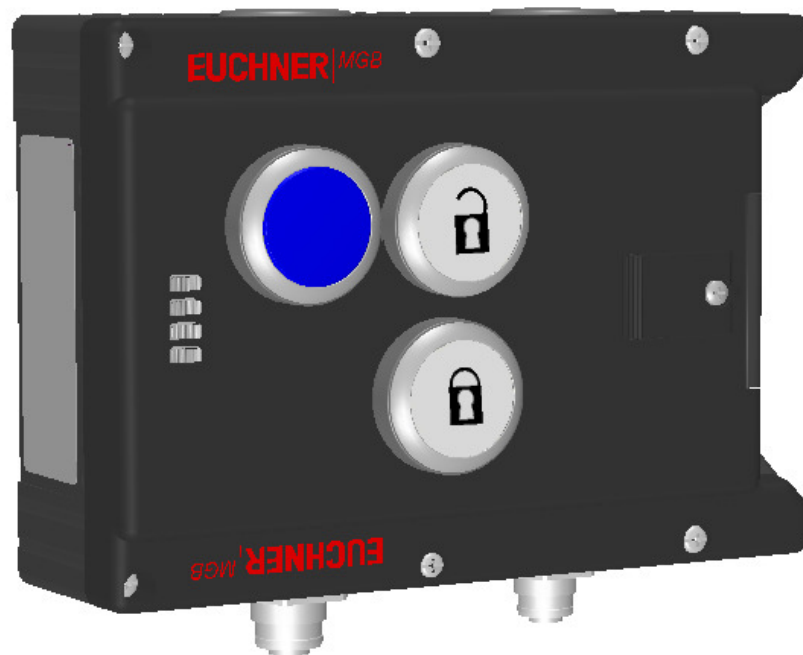


**ITEM 155999 MGB-L1-APA-AD3A1-S9-R-155999**

Description	Technical data	Accessories	Downloads
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### Features

- › Guard locking with guard locking monitoring
- › Three pushbuttons (illuminated, bu, wh, wh)
- › With plug connector M12, 5-pin
- › With plug connector M12, 8-pin
- › Unicode
- › Connection for Bihl-Wiedemann modules BW 3376 and BW 3377

### 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.

## Monitoring outputs

- OT** Bolt tongue inserted in the evaluation module
- OI** Diagnostics; there is a fault

## Pushbutton

- S1** One NO contact, blue, illuminated
- S2** One NO contact, white, illuminated
- S3** One NO contact, white, illuminated

## 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	Plug connector SM5 [1] Plug connector SM8 [2]
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 [3]
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% [4]
Current consumption	
	I <sub>UB</sub> max.80 mA [5]
	<b>Power supply U<sub>A</sub></b>
Operating voltage DC	
	U <sub>A</sub> 24 V DC -15% ... 10% [6]
Current consumption	
	I <sub>UA</sub> max.375 mA [7]
	<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 [8]
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 [9]
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>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	Illuminated push buttons

Special features	
Color	Blue
Switching element	1NO
Control/indicator	
	<b>Position 2</b>
Version	Illuminated push buttons
Special features	Printed
Color	white
Switching element	1NO
Control/indicator	
	<b>Position 3</b>
Version	Illuminated push buttons
Special features	Printed
Color	white
Switching element	1NO

### Miscellaneous

Product version number	V3.0.3
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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>	$2.8 \times 10^{-9}$

Mission time	20 y
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[1] X6

[2] X7

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

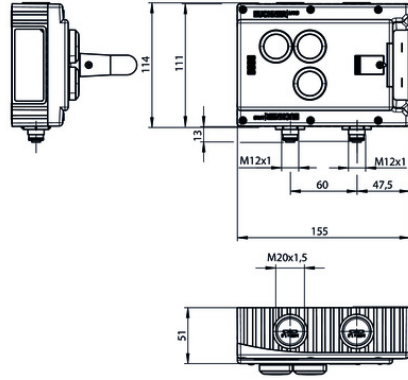
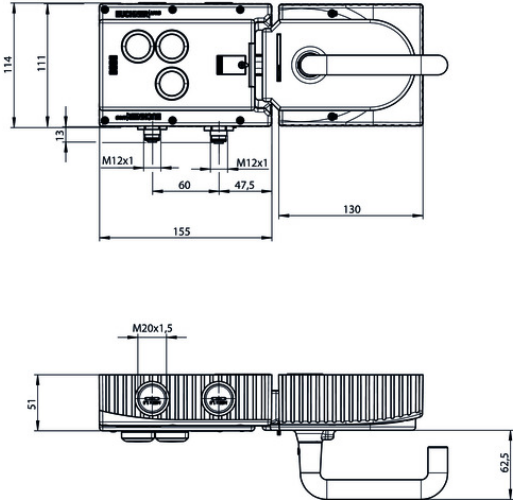
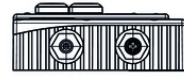
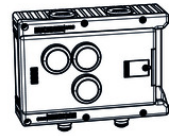
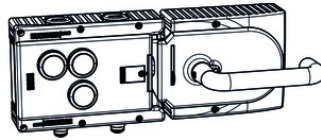
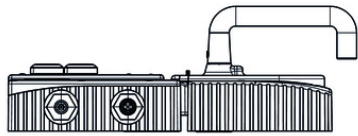
[4, 6] (Reverse polarity protected, regulated, residual ripple <5%, PELV)

[5] (no load on outputs)

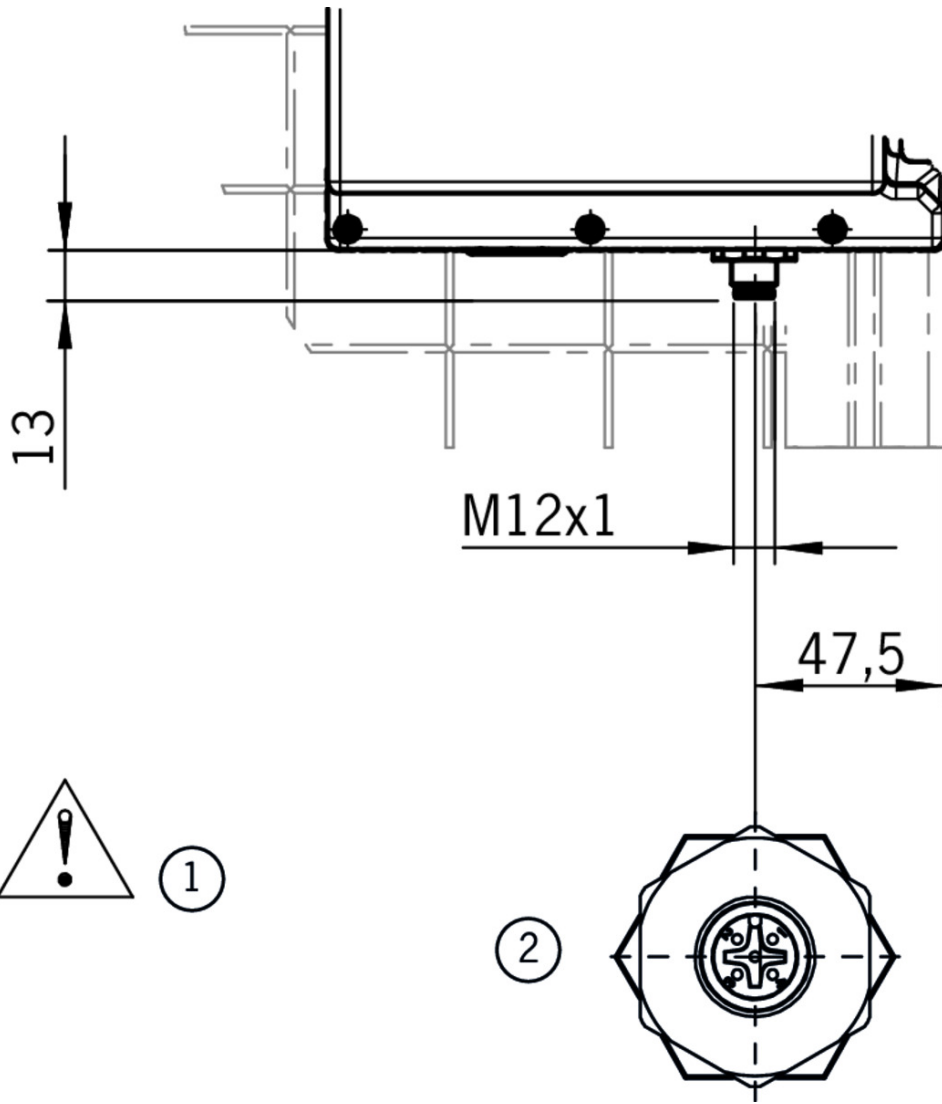
[7] (With energized guard locking solenoid and unloaded outputs OD, OT, OL, OI, +20 °C, 24V)

[8, 9] Value at a switching current of 50mA without taking into account the cable lengths

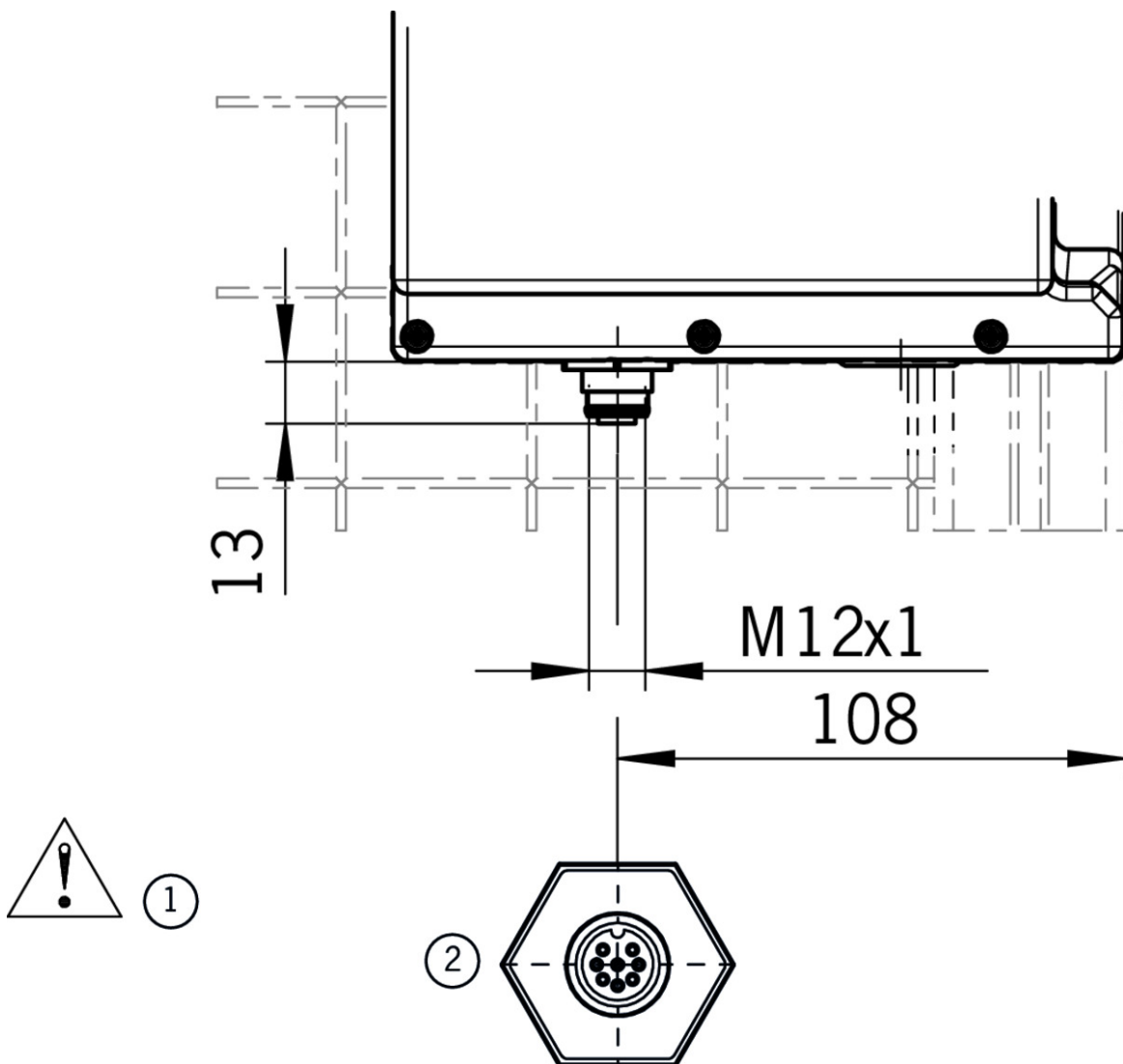
# Dimension drawing



Dimension drawing



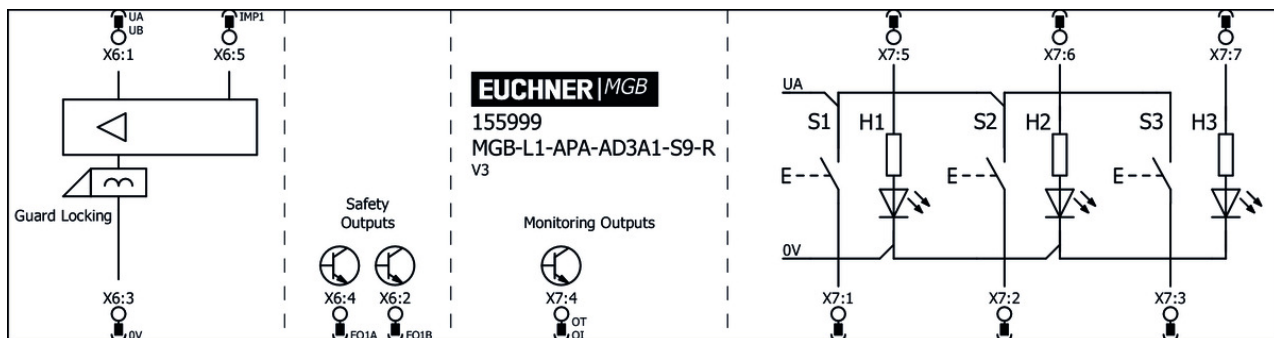
### Dimension drawing



### Legende

- 1 Plug connector current rating: max. 1.5 A
- 2 Built-in connector not aligned

### Plug connector M12



## 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

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### ✓ Lens set labeled



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

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

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

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### ✓ Lens set, three colors



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

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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
- 

## Function expansion

---

### ✓ Emergency unlocking for safety system MGB



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

#### ✓ Features

- › Quick emergency unlocking
  - › sealable
-



## Connection material

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- ▼ Connection cable with plug connector M12, 5-pin, 50m



**156064** C-M12F05-05X034PV50,0-MA-156064

- ▼ Features

- › M12 female plug, 5-pin
  - › Straight plug connector
  - › PVC cable
  - › Cable length 50 m
  - › With flying lead
- 

- ▼ Connection cable with plug connector M12, 5-pin, 20m



**100185** C-M12F05-05X034PV20,0-MA-100185

- ▼ Features

- › M12 female plug, 5-pin
  - › Straight plug connector
  - › PVC cable
  - › Cable length 20 m
  - › With flying lead
- 

- ▼ Connection cable with plug connector M12, 5-pin, 10m



**100184** C-M12F05-05X034PV10,0-MA-100184

- ▼ Features

- › M12 female plug, 5-pin
  - › Straight plug connector
  - › PVC cable
  - › Cable length 10 m
  - › With flying lead
- 

- ▼ Connection cable with straight plug connector M12, 5-pin, 5m



**100183** C-M12F05-05X034PV05,0-MA-100183

- ▼ Features

- › M12 female plug, 5-pin
  - › Straight plug connector
  - › PVC cable
  - › Cable length 5 m
  - › With flying lead
- 



**113620** C-M12F05-05X034PU05,0-MA-113620

- ▼ Features

- › M12 female plug, 5-pin
  - › Straight plug connector
  - › PUR cable
  - › Cable length 5 m
  - › With flying lead
- 

- ▼ Connection cable with 2 plug connectors M12, 5-pin, 20m



**100182** C-M12F05-05X034PV20,0-M12M05-100182

▣ Features

- › M12 female plug to M12 plug connector, 5-pin
  - › Straight female plug and plug connector
  - › PVC cable
  - › Cable length 20 m
- 



**119971** C-M12F05-05X034PU20,0-M12M05-119971

▣ Features

- › M12 female plug to M12 plug connector, 5-pin
  - › Straight female plug and plug connector
  - › PUR cable
  - › Cable length 20 m
- 

▣ Connection cable with 2 plug connectors M12, 5-pin, 10m



**100181** C-M12F05-05X034PV10,0-M12M05-100181

▣ Features

- › M12 female plug to M12 plug connector, 5-pin
  - › Straight female plug and plug connector
  - › PVC cable
  - › Cable length 10 m
- 



**119947** C-M12F05-05X034PU10,0-M12M05-119947

▣ Features

- › M12 female plug to M12 plug connector, 5-pin
  - › Straight female plug and plug connector
  - › PUR cable
  - › Cable length 10 m
- 

▣ Connection cable with 2 plug connectors M12, 5-pin, 5m



**100180** C-M12F05-05X034PV05,0-M12M05-100180

▣ Features

- › M12 female plug to M12 plug connector, 5-pin
  - › Straight female plug and plug connector
  - › PVC cable
  - › Cable length 5 m
- 



**119932** C-M12F05-05X034PU05,0-M12M05-119932

▣ Features

- › M12 female plug to M12 plug connector, 5-pin
  - › Straight female plug and plug connector
  - › PUR cable
  - › Cable length 5 m
- 

▣ Connection cable with straight plug connector M12, 5-pin, 30 m



**122784** C-M12F05-05X034PU30,0-MA-122784

▣ Features

- › M12 female plug, 5-pin

- › Straight plug connector
  - › PUR cable
  - › Cable length 30 m
  - › With flying lead
- 

▼ Connection cable with straight plug connector M12, 5-pin, 20 m



**113682** C-M12F05-05X034PU20,0-MA-113682

▼ Features

- › M12 female plug, 5-pin
  - › Straight plug connector
  - › PUR cable
  - › Cable length 20 m
  - › With flying lead
- 

▼ Connection cable with straight plug connector M12, 5-pin, 10m



**113640** C-M12F05-05X034PU10,0-MA-113640

▼ Features

- › M12 female plug, 5-pin
  - › Straight plug connector
  - › PUR cable
  - › Cable length 10 m
  - › With flying lead
- 

▼ Connecting cable with plug connector M12, 8-pin, 40 m



**156065** C-M12F08-08X025PV40,0-MA-156065

▼ Features

- › M12 female plug, 8-pin
  - › Straight plug connector
  - › PVC cable
  - › Cable length 40 m
  - › With flying lead
- 

▼ Connection cable with plug connector M12, 8-pin, 30m



**115116** C-M12F08-08X025PV30,0-MA-115116

▼ Features

- › M12 female plug, 8-pin
  - › Straight plug connector
  - › PVC cable
  - › Cable length 30 m
  - › With flying lead
- 



**115257** C-M12F08-08X025PU30,0-MA-115257

▼ Features

- › M12 female plug, 8-pin
- › Straight plug connector
- › PUR cable
- › Cable length 30 m
- › With flying lead

---

▼ Connection cable with plug connector M12, 8-pin, 20m



**100179** C-M12F08-08X025PV20,0-MA-100179

▼ Features

- › M12 female plug, 8-pin
- › Straight plug connector
- › PVC cable
- › Cable length 20 m
- › With flying lead



**115114** C-M12F08-08X025PU20,0-MA-115114

▼ Features

- › M12 female plug, 8-pin
- › Straight plug connector
- › PUR cable
- › Cable length 20 m
- › With flying lead

---

▼ Connection cable with plug connector M12, 8-pin, 10m



**100178** C-M12F08-08X025PV10,0-MA-100178

▼ Features

- › M12 female plug, 8-pin
- › Straight plug connector
- › PVC cable
- › Cable length 10 m
- › With flying lead



**115113** C-M12F08-08X025PU10,0-MA-115113

▼ Features

- › M12 female plug, 8-pin
- › Straight plug connector
- › PUR cable
- › Cable length 10 m
- › With flying lead

---

▼ Connection cable with plug connector M12, 8-pin, 5m



**100177** C-M12F08-08X025PV05,0-MA-100177

▼ Features

- › M12 female plug, 8-pin
- › Straight plug connector
- › PVC cable
- › Cable length 5 m
- › With flying lead



**115112** C-M12F08-08X025PU05,0-MA-115112





























▼ Features

- › M12 female plug, 8-pin
- › Straight plug connector
- › PUR cable

- › Cable length 5 m
- › With flying lead

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