

## ITEM 113612 MGB-L1B-PNA-R-113612

Description	Technical data	Accessories	Downloads
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### Features

- › Guard locking with guard lock monitoring
- › With key-operated switch (form V, 90°)
- › 2 white pushbuttons illuminated with symbol
- › Connection via 7/8" and M12 plug
- › Pre-assembled on mounting plates
- › Integrated Profinet RT switch
- › Unicode

### Profinet connection

7/8" plugs according to ANSI/B93.55M-1981 and M12 plugs (d-coded) according to IEC 61076-2-101

### Profinet RT switch

Point-to-point topology network structure due to integrated RT switch.

### Flexible usage as interlocking or guard locking

By means of the corresponding evaluation of the safe device data by the control system, usage can be either as interlocking or guard locking (with or without monitoring).

## Approvals



## Mechanical values and environment

Housing material	Reinforced plastic, die-cast zinc nickel-plated, stainless steel
Weight	Net 3,1 kg
Ambient temperature	At $U_B = 24V$ DC -20 ... 55 °C
Degree of protection	IP42
Resilience to vibration	In accordance with EN 60947-5-3
Mechanical life	
In case of use as door stop, and 1 Joule impact energy	$1 \times 10^6$ $0,1 \times 10^6$
Installation position	Door hinge DIN right
Reaction time	
Operating mode selector switch	Switch-off timemax.220 ms <b>[1]</b>
Door position	Switch-off timemax.550 ms <b>[2]</b>
Bolt position	Switch-off timemax.550 ms <b>[3]</b>
Guard locking	Switch-off timemax.550 ms <b>[4]</b>
Switching frequency	0,25 Hz
Connection	
	7/8" Power <b>[5]</b>
	7/8" Power <b>[6]</b>
Acc. to IEC 61076-2-101, Profinet I/O cable, at least cat. 5e	M12 D-coded, screened <b>[7]</b>
Acc. to IEC 61076-2-101, Profinet I/O cable, at least cat. 5e	M12 D-coded, screened <b>[8]</b>
Guard locking principle	Closed-circuit current principle
Locking force $F_{Zh}$	2000 N

## Electrical connection ratings

Current consumption	max.500 mA
Rated insulation voltage $U_i$	75 V
Rated impulse withstand voltage $U_{imp}$	0,5 kV
Maximum feed-in current in the connection block	
	X1, X2 max.4000 mA

EMC protection requirements		In accordance with EN 61000-4 and EN 61326-3-1
Degree of contamination (external, according to EN 60947-1)		3
Connecting cable	Ethernet	Profinet I/O cable, at least cat. 5e
Safety class		III
Transponder coding		Unicode
<b>Power supply X1</b>		
Operating voltage DC	L1	24 V DC -15% ... 10% <sup>[9]</sup>
Auxiliary voltage DC	L2	24 V DC -15% ... +10% <sup>[10]</sup>
Fusing	external	Slow blow min. 1 A
<b>Power supply X2</b>		
Operating voltage DC	L1	24 V DC -15% ... 10% <sup>[11]</sup>
Auxiliary voltage DC	L2	24 V DC -15% ... +10% <sup>[12]</sup>

## Interface, bus

Data interface	Ethernet	
Data protocol	Bus protocol	Profinet (IEC 61158 type 10)
	Safety protocol	Profisafe (IEC 61784-3-3)

## Operating distance

Assured switch-off distance $S_{ar}$	Door position	max. 65 mm
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## Controls and indicators

Assignment diagram	L1
Assignment diagram	B4
Control/indicator	
<b>Position 1</b>	
Version	Key-operated switch
Special features	
Color	
Switching element	1NO
Slide-in label	
Control/indicator	

	<b>Position 90</b>
Version	Illuminated push buttons
Special features	Printed
Color	white
Switching element	1NO
Slide-in label	
Control/indicator	
	<b>Position 91</b>
Version	Operating mode selector switch
Special features	
Color	
Switching element	Code 2 of 3
Slide-in label	O ; I
Control/indicator	
	<b>Position 92</b>
Version	Illuminated push buttons
Special features	Printed
Color	white
Switching element	1NO
Slide-in label	

### Miscellaneous

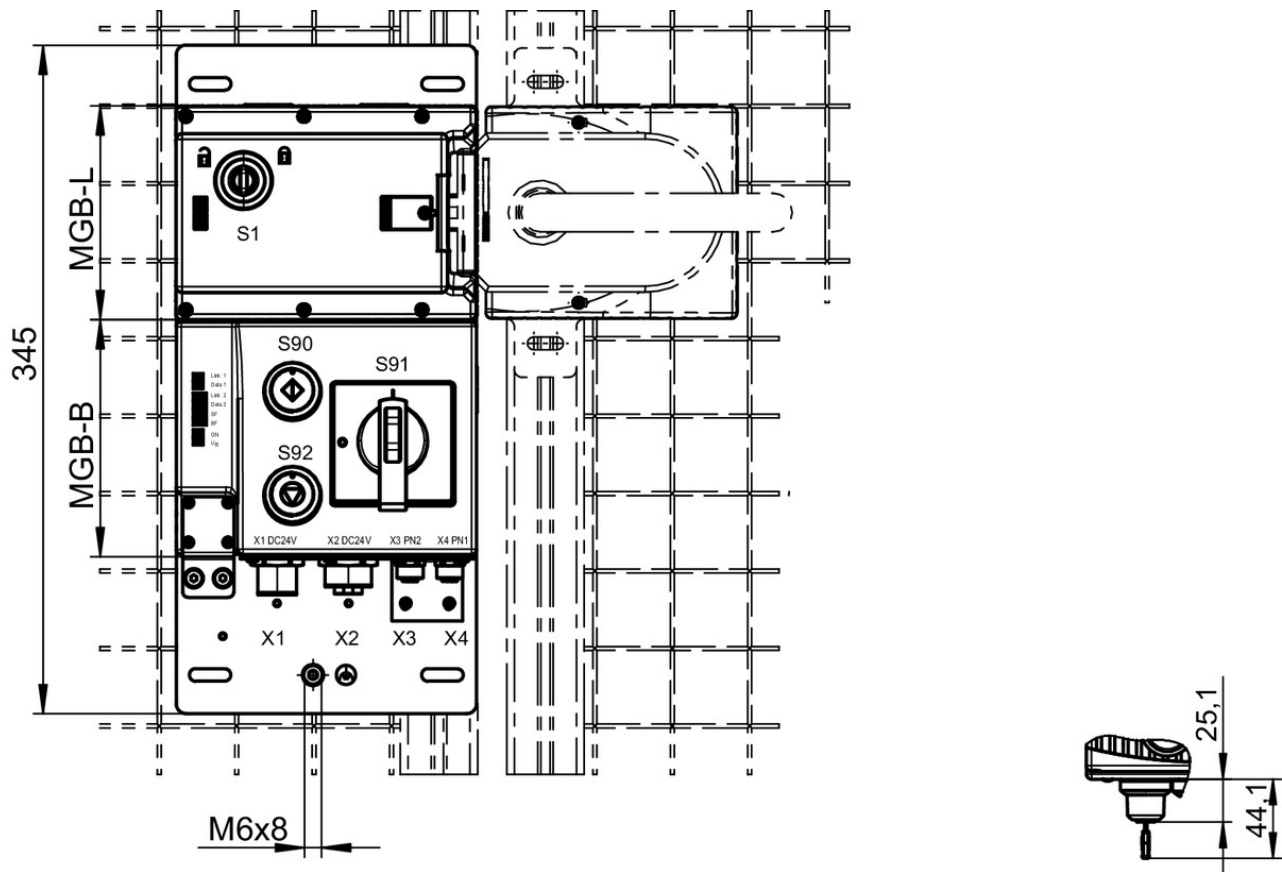
Product version number	V3.30.10
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### Reliability values acc. to EN ISO 13849-1

	<b>Monitoring of guard locking and the safety guard position</b>
Category	4
Performance Level	PL e
PFH <sub>D</sub>	$4.07 \times 10^{-8}$ [13]
Diagnostic Coverage (DC)	99
	<b>Control of the guard locking</b>
Category	4
Performance Level	PL e
PFH <sub>D</sub>	$3.91 \times 10^{-8}$
	<b>Selector switch evaluation</b>
Category	4
Performance Level	PL e
PFH <sub>D</sub>	$4.1 \times 10^{-8}$
Safety Integrity Level	SIL 3 (EN 62061:2005)
Mission time	20

- [1, 2, 3, 4] The reaction time is the max. time between the change in the input status and the deletion of the corresponding bit in the bus protocol.
- [5] X1 (The document PROFINET "Cabling and Interconnection Technology" from the PNO aids in the correct selection of wiring.)
- [6] X2 (The document PROFINET "Cabling and Interconnection Technology" from the PNO aids in the correct selection of wiring.)
- [7] X3 (The document PROFINET "Cabling and Interconnection Technology" from the PNO aids in the correct selection of wiring.)
- [8] X4 (The document PROFINET "Cabling and Interconnection Technology" from the PNO aids in the correct selection of wiring.)
- [9] (Reverse polarity protected, regulated, residual ripple <5%, PELV)
- [10] The auxiliary voltage is not required for the MGB system
- [11, 12] For looping through for connected devices
- [13] Fixed failure rate without consideration of faults in wearing parts.

**Dimension drawing**



Miscellaneous accessories

- ✓ Lens set 6 colors



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

- ✓ Lens set 5 colors



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

▼ Lens set labeled



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



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



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

▼ 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




## Instructions

▼ Betriebsanleitung Sicherheitssysteme MGB-L..B-PN.-... (PROFINET) mit Datenstruktur Typ A ab V3.30.0

	Doc. no.	Version	Language	Download
Betriebsanleitung Sicherheitssysteme MGB-L..B-PN.-... (PROFINET) mit Datenstruktur Typ A ab V3.30.0	114575	04-03/15		2.7 MB
Operating Instructions Safety Systems MGB-L..B-PN.-... (PROFINET) with Data Structure Type A from V3.30.0	114575	04-03/15		2.8 MB





▼ Sicherheitsinformation (Teil der Betriebsanleitung Sicherheitssystem MGB-L.B-PN.-... (PROFINET)) ab V3.30.0

Doc. no.	Version	Language	Download
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Sicherheitsinformation (Teil der Betriebsanleitung Sicherheitssystem MGB-L.B-PN.-... (PROFINET)) ab V3.30.0 Safety Information (Part of the Operating Instructions Safety System MGB-L.B-PN.-... (PROFINET)) from V3.30.0	123621	02-03/15	 	 0.2 MB
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## Application example

### ▼ Anschluss MGB-L1B-PN... an Siemens S7 315F (TIA Portal V13)







	Doc. no.	Version	Language	Download
Anschluss MGB-L1B-PN... an Siemens S7 315F (TIA Portal V13)	AP000226	01-02/17		 1.5 MB
Connecting MGB-L1B-PN... to Siemens S7 315F (TIA Portal V13)	AP000226	01-02/17		 1.7 MB

### ▼ Anschluss MGB-L2B-PN... an Siemens S7 315F

	Doc. no.	Version	Language	Download
Anschluss MGB-L2B-PN... an Siemens S7 315F	AP000222	02-09/16		 2.0 MB
Connection of MGB-L2B-PN... to Siemens S7 315F	AP000222	02-09/16		 1.6 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	2123624	06-01/17	    	 0.3 MB