

## ITEM 117020 MGB-L1B-PNC-R-117020

Description	Technical data	Accessories	Downloads
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### Features

- › Guard locking with guard lock monitoring
- › Emergency stop according to ISO 13850, illuminated
- › 3 pushbuttons illuminated with symbol
- › Push-pull plug
- › Including terminal plug for enabling switch (RC12, 12-pin)
- › Pre-assembled on mounting plates
- › Multicode

### Profinet connection

Connection via push-pull plugs according to IEC 61076-3-117

### 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).

### Illuminated emergency stop

Emergency stop with illumination that can be controlled as required.

## 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	IP54
Resilience to vibration	In accordance with EN 60947-5-3
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
Reaction time	
Emergency stop / machine stop	Switch-off timemax.250 ms <b>[1]</b>
Enabling switch	Switch-off timemax.250 ms <b>[2]</b>
Door position	Switch-off timemax.550 ms <b>[3]</b>
Bolt position	Switch-off timemax.550 ms <b>[4]</b>
Guard locking	Switch-off timemax.550 ms <b>[5]</b>
Switching frequency	0,25 Hz
Connection	
According to IEC 61076-3-117 variant 14, screened, Profinet I/O cable, at least cat. 5e	Push-pull power <b>[6]</b> Push-pull RJ45 <b>[7]</b>
	Plug connector RC12 <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 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	Multicode
	<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

## 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

## Controls and indicators

Assignment diagram	B1
Assignment diagram	L0
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	Illuminated push buttons
Special features	Printed
Color	Yellow
Switching element	1NO
Slide-in label	

Control/indicator	
	<b>Position 92</b>
Version	Illuminated push buttons
Special features	Printed
Color	Blue
Switching element	1NO
Slide-in label	
Control/indicator	
	<b>Position 94</b>
Version	Emergency stop illuminated
Special features	With adhesive ring
Color	
Switching element	2 pos. driven NC

### Miscellaneous

Product version number	V3.30.11
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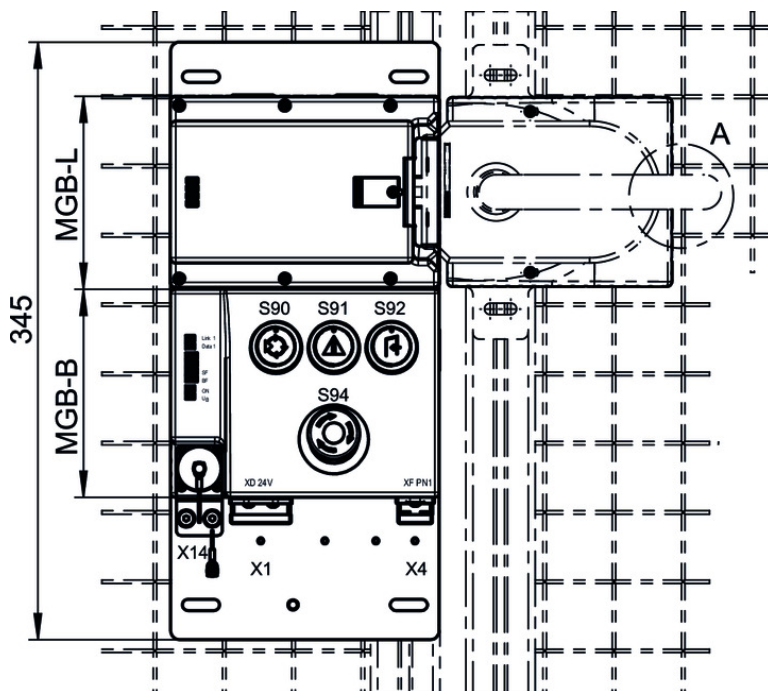
### Reliability values acc. to EN ISO 13849-1

	<b>Monitoring of guard locking and the safety guard position</b>
Category	4
Performance Level	PL e
PFH <sub>D</sub>	$4.07 \times 10^{-8}$ [11]
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>Emergency stop</b>
B10 <sub>D</sub>	
Emergency stop	$0.1 \times 10^6$
	<b>Emergency-stop evaluation</b>
Category	4
Performance Level	PL e
PFH <sub>D</sub>	$4.1 \times 10^{-8}$
	<b>Enabling switch</b>
B10 <sub>D</sub>	
Enabling switch	According to manufacturer's specifications
	<b>Enabling switch evaluation</b>
Category	4
Performance Level	PL e
PFH <sub>D</sub>	$4.1 \times 10^{-8}$

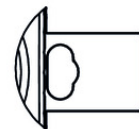
Safety Integrity Level	SIL 3 (EN 62061:2005)
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- [1, 2, 3, 4, 5] The reaction time is the max. time between the change in the input status and the deletion of the corresponding bit in the bus protocol.
- [6] X1 (The document PROFINET "Cabling and Interconnection Technology" from the PNO aids in the correct selection of wiring.)
- [7] X4 (The document PROFINET "Cabling and Interconnection Technology" from the PNO aids in the correct selection of wiring.)
- [8] X14
- [9] (Reverse polarity protected, regulated, residual ripple <5%, PELV)
- [10] The auxiliary voltage is not required for the MGB system
- [11] Fixed failure rate without consideration of faults in wearing parts.

### Dimension drawing



Detail A  
Sperrverriegelung im  
ausgefahrenen Zustand



### 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



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



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

▼ 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 B ab V3.30.0





	Doc. no.	Version	Language	Download
Betriebsanleitung Sicherheitssysteme MGB-L..B-PN.-... (PROFINET) mit Datenstruktur Typ B ab V3.30.0	115174	07-02/15		3.2 MB
Operating Instructions Safety Systems MGB-L..B-PN.-... (PROFINET) with Data Structure Type B from V3.30.0	115174	07-02/15		3.2 MB

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





	Doc. no.	Version	Language	Download
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

## 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	2123624	06-01/17		 0.3 MB
Declaración UE de conformidad				
Déclaration UE de conformité				
Dichiarazione di conformità				
EU declaration of conformity			