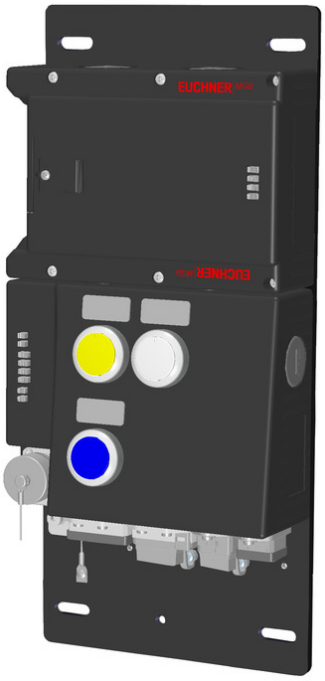
ITEM 115421 MGB-L1B-PNC-L-115421

Description | Technical data | Accessories | Downloads



Features

- Guard locking with guard lock monitoring
- 3 illuminated pushbuttons
- Including adhesive labels
- Push-pull plug
- Including terminal plug for enabling switch (RC12, 12-pin)
- Pre-assembled on mounting plates
- Integrated Profinet RT switch
- Multicode

Profinet connection

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

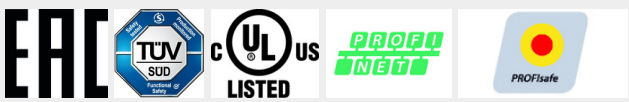
Profinet RT switch

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	IP54
Resilience to vibration	In accordance with EN 60947-5-3
Mechanical life	
In case of use as door stop, and 1 Joule impact energy	1×10^6 $0{,}1 \times 10^6$
Installation position	Door hinge DIN left
Reaction time	
Enabling switch	Switch-off timemax.250 ms [1]
Door position	Switch-off timemax.550 ms [2]
Bolt position	Switch-off timemax.550 ms [3]
Guard locking	Switch-off timemax.550 ms [4]
Switching frequency	0,25 Hz
Connection	
	Push-pull power [5]
	Push-pull power [6]
According to IEC 61076-3-117 variant 14, screened, Profinet I/O cable, at least cat. 5e	Push-pull RJ45 [7]
According to IEC 61076-3-117 variant 14, screened, Profinet I/O cable, at least cat. 5e	Push-pull RJ45 [8]
	Plug connector RC12 [9]
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	Multicode
	Power supply X1
Operating voltage DC	
L1	24 V DC -15% ... 10% [10]
Auxiliary voltage DC	
L2	24 V DC -15% ... +10% [11]
Fusing	
external	Slow blowmin.1 A
	Power supply X2
Operating voltage DC	
L1	24 V DC -15% ... 10% [12]
Auxiliary voltage DC	
L2	24 V DC -15% ... +10% [13]

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	
	Position 90
Version	Illuminated push buttons
Special features	
Color	Yellow

Switching element	1NO
Slide-in label	
Control/indicator	
	Position 91
Version	Illuminated push buttons
Special features	
Color	white
Switching element	1NO
Control/indicator	
	Position 95
Version	Illuminated push buttons
Special features	
Color	Blue
Switching element	1NO
Slide-in label	

Miscellaneous

Product version number	V3.30.10
Slide-in label	
	Automatik Start
	Störung Quittieren
	Zutritt Anforderung
	Automatic Start
	Failure Reset
	Access Request

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	4.07×10^{-8} **[14]**
Diagnostic Coverage (DC)	99
	Control of the guard locking
Category	4
Performance Level	PL e
PFH_D	3.91×10^{-8}
	Enabling switch
$B10_D$	
Enabling switch	According to manufacturer’s specifications
	Enabling switch evaluation
Category	4
Performance Level	PL e
PFH_D	4.1×10^{-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] X14

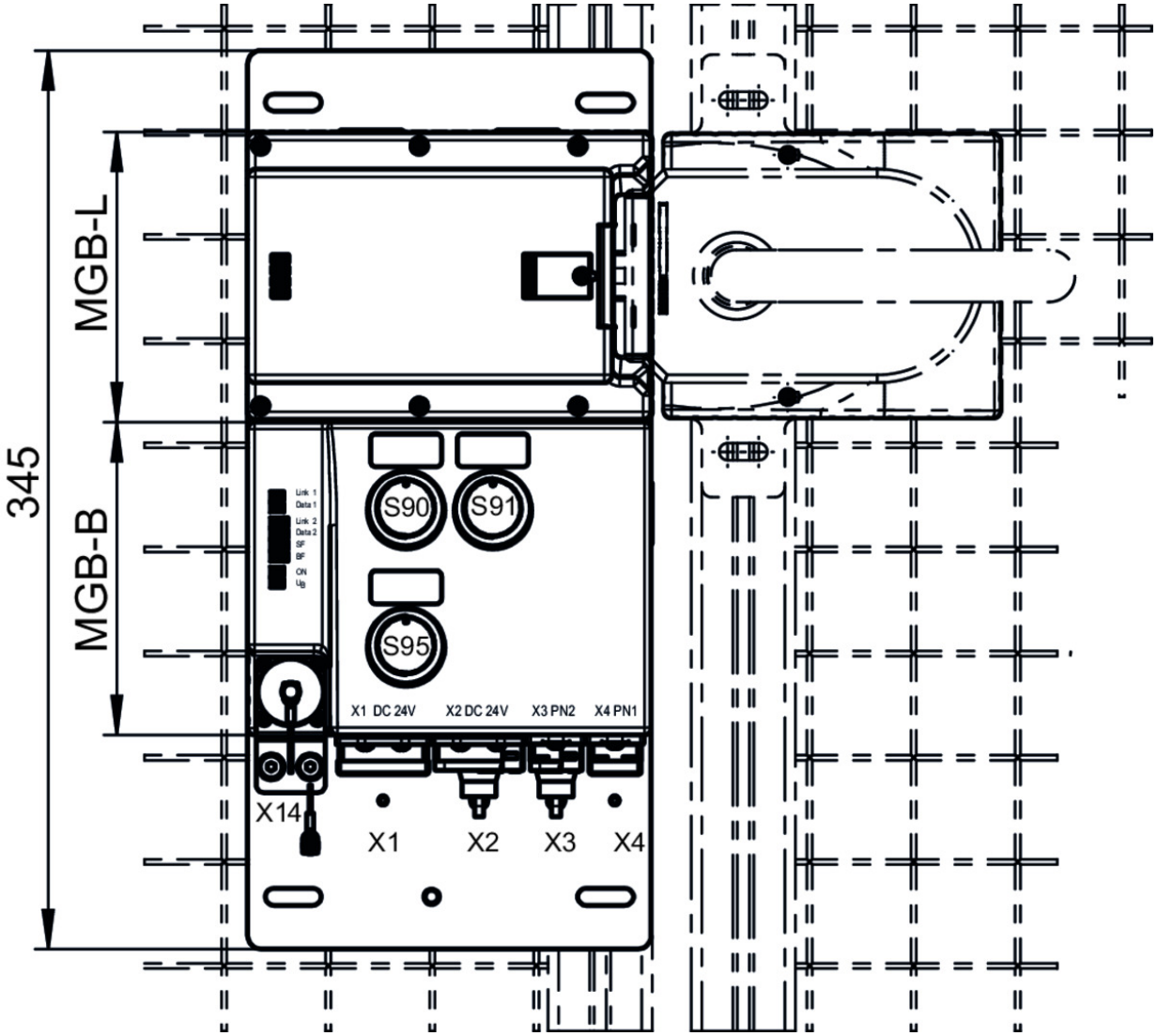
[10] (Reverse polarity protected, regulated, residual ripple <5%, PELV)

[11] The auxiliary voltage is not required for the MGB system

[12, 13] For looping through for connected devices

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