

MGB-L1B-PNA-L-122740 (Order no. 122740)

Evaluation module and bus module MGB-L1...-PN... (guard locking by spring force) with 4 control elements, 7/8" and M12 plugs

- ▶ Guard locking with guard lock monitoring
- ▶ Emergency stop according to ISO 13850, illuminated
- ▶ 3 illuminated pushbuttons with symbol
- ▶ Connection via 7/8" and M12 plugs
- ▶ 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 use as interlocking or guard locking

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

Illuminated emergency stop

Emergency stop with illumination that can be controlled as required.

Technical data

Approvals



Workspace

Rated operating distances S_n	20 mm (Only applies for use on sliding doors with deactivated guard lock monitoring)
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Operating and display elements

Occupancy diagram

B1
L0

Item	Color	Extras	Note slide-in label	Slide-in label	Switching element	Version	Number	Designation1	LED
90	white	printed			1NO	Illuminated pushbutton			
91	white	printed			1NO	Illuminated pushbutton			
92	Green	printed			1NO	Illuminated pushbutton			
94					2 PD	Emergency stop illuminated			

Electrical connection values

Connecting cable	Ethernet	Profinet I/O cable, at least cat. 5e
Rated insulation voltage U_i	75 V	
Rated impulse voltage U_{imp}	0.5 kV	
EMC protection requirements	In accordance with EN 61000-4 and EN 61326-3-1	

maximum feed-in current in the connection block	
	X1, X2 max. 4000 mA
Safety class	III
Current consumption	max. 500 mA
Transponder coding	Unicode
Degree of contamination (external, according to EN 60947-1)	3

Power supply X1

Fuse	
	external min. 1 A slow blow

Operating voltage DC

L1 24 V DC -15% ... +10%
((reverse polarity protected, regulated, residual ripple<5%, PELV))

Auxiliary voltage DC

L2 24 V DC -15% ... +10%
(The auxiliary voltage is not required for the MGB system)

Power supply X2

Operating voltage DC

L1 24 V DC -15% ... +10%
(For looping through for connected devices)

Auxiliary voltage DC

L2 24 V DC -15% ... +10%
(For looping through for connected devices)

Mechanical values and environment

Connection type	7/8" Power (X2 (The PROFINET 'Cabling and Interconnection Technology' document from the PNO helps with the correct selection of cables).)
according to IEC 61076-2-101, Profinet I/O cable, at least cat. 5e	M12, D-coded, screened (X3 (The PROFINET 'Cabling and Interconnection Technology' document from the PNO helps with the correct selection of cables).)
according to IEC 61076-2-101, Profinet I/O cable, at least cat. 5e	

	M12, D-coded, screened (X4 (The PROFINET 'Cabling and Interconnection Technology' document from the PNO helps with the correct selection of cables).)
	7/8" Power (X1 (The PROFINET 'Cabling and Interconnection Technology' document from the PNO helps with the correct selection of cables).)
Installation orientation	Door hinge DIN left
Switching frequency	0.25 Hz
Mechanical life	
in case of use as door stop, and 1 Joule impact energy	0.1 x 10 ⁶ 1 x 10 ⁶
Response time	
Guard locking	max. 550 ms Turn-off time (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.)
Bolt position	max. 550 ms Turn-off time (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.)
Door position	max. 550 ms Turn-off time (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.)
Emergency stop / machine stop	max. 250 ms Turn-off time (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.)
Shock and vibration resistance	Acc. to EN IEC 60947-5-3
Degree of protection	IP54
Ambient temperature	
with U _B = 24 V DC	-20 ... +55 °C
Material	
Housing	Fiber glass reinforced plastic, nickel-plated die-cast zinc, stainless steel
Locking force F _{Zh}	2000 N
Guard locking principle	Closed-circuit current principle

Characteristic values according to EN ISO 13849-1 and EN IEC 62061

	PL	Maximum SIL	PFH _D	Category	Mission time
Control of guard locking	PL e	–	3.91×10^{-8}	4	20 y
Monitoring of the guard position	PL e	3	4.07×10^{-8}	4	20 y
Monitoring of guard locking	PL e	3	4.07×10^{-8}	4	20 y
Evaluating safety signals	PL e	3	4.1×10^{-8}	4	20 y
Applies to all additionally included safety functions such as EMERGENCY STOP, enabling switch, etc.					

	B10 _D	Mission time
Emergency stop	0.13×10^6	20 y

Miscellaneous

Product version number	V3.30.10
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Interface

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