



Solenoid interlock AZM40B-I2-ST-1P2P-PH

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1 General information

1.1 Product description

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AZM40



PFH



2.4

Approvals - Standards

Certificates	TÜV cULus FCC IC UKCA ANATEL
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General data

Standards	EN ISO 13849-1 EN ISO 14119 EN IEC 60947-5-3 EN IEC 61508
Coding	
Coding level according to EN ISO 14119	High
Working principle	RFID
Frequency band RFID	125 kHz
Transmitter output RFID, maximum	-6 dBm
Housing material	Light alloy die cast and plastic (glass-fibre reinforced thermoplastic)
Reaction time, maximum	100 ms
Duration of risk, maximum	200 ms
Reaction time, switching off safety outputs via safety inputs, maximum	1.5 ms
Gross weight	306 g

General data - Features

Actuator monitored	Yes
Latching	Yes
Manual release	Yes
Short circuit detection	Yes
Cross-circuit detection	Yes
Series-wiring	Yes
Safety functions	Yes
Integral system diagnostics, status	Yes
Number of safety contacts	2

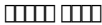
Safety classification

Vorschriften	EN ISO 13849-1 EN IEC 61508
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Safety classification - Interlocking function

Performance Level, up to	e
Category	4
PFH value	1.10×10^{-9} /h
PFD value	8.90×10^{-5}
Safety Integrity Level (SIL), suitable for applications in	3
Mission time	20 Year(s)

Mechanical data

Interlocking principle	
Mechanical lifetime, locking cycles	1,000,000 Operations
Mechanical lifetime, actuator cycles	500,000 Operations
Note (Mechanical lifetime)	from device version V2 (V1 = 200.000 actuator cycles)
Holding force F_{Zh} in accordance with EN ISO 14119	2,000 N
Holding force F_{max} , maximum	2,600 N
Latching force	40 N
Note (Latch force)	+/- 25%
Actuating speed, maximum	0.5 m/s
Mounting	
Type of the fixing screws	2x M5
Tightening torque of the fixing screws, minimum	4 Nm

Electrical data

Operating voltage	24 VDC -15 % / +10 % (PELV□□□□□□)
No-load supply current I_0 , typical	100 mA
Current consumption magnet at switching moment, peak	600 mA / 100 ms
Rated operating voltage	24 VDC
Operating current	1,200 mA
Required rated short-circuit current	100 A
External wire and device fuse rating	2 A gG
Time to readiness, maximum	4,000 ms
Switching frequency, maximum	0.25 Hz
Utilisation category DC-12	24 VDC / 0.05 A
Electrical fuse rating, maximum	2 A

Electrical data - Magnet control

Designation, Magnet control	IN
Switching thresholds	-3 V ... 5 V (Low) 15 V ... 30 V (High)
Magnet switch-on time	100 %
Test pulse duration, maximum	5 ms
Test pulse interval, minimum	40 ms
Classification ZVEI CB24I, Sink	C0
Classification ZVEI CB24I, Source	C1 C2 C3
Current consumption at 24V, minimum	10 mA
Current consumption at 24V, maximum	15 mA

Electrical data - Safety digital inputs

Designation, Safety inputs	X1 and X2
Switching thresholds	-3 V ... 5 V (Low) 15 V ... 30 V (High)
Current consumption at 24 V	5 mA
Test pulse duration, maximum	1 ms
Test pulse interval, minimum	100 ms
Classification ZVEI CB24I, Sink	C1
Classification ZVEI CB24I, Source	C1 C2 C3

Electrical data - Safety digital outputs

Designation, Safety outputs	Y1 and Y2
Rated operating current (safety outputs)	250 mA
Design of control elements	short-circuit proof, p-type
Voltage drop U_d , maximum	2 V
Leakage current I_r , maximum	0.5 mA
Voltage, Utilisation category DC-12	24 VDC
Current, Utilisation category DC-12	0.25 A
Voltage, Utilisation category DC-13	24 VDC
Current, Utilisation category DC-13	0.25 A
Test pulse interval, typical	1000 ms
Test pulse duration, maximum	0.5 ms
Classification ZVEI CB24I, Source	C2
Classification ZVEI CB24I, Sink	C1 C2

Electrical data - Diagnostic outputs

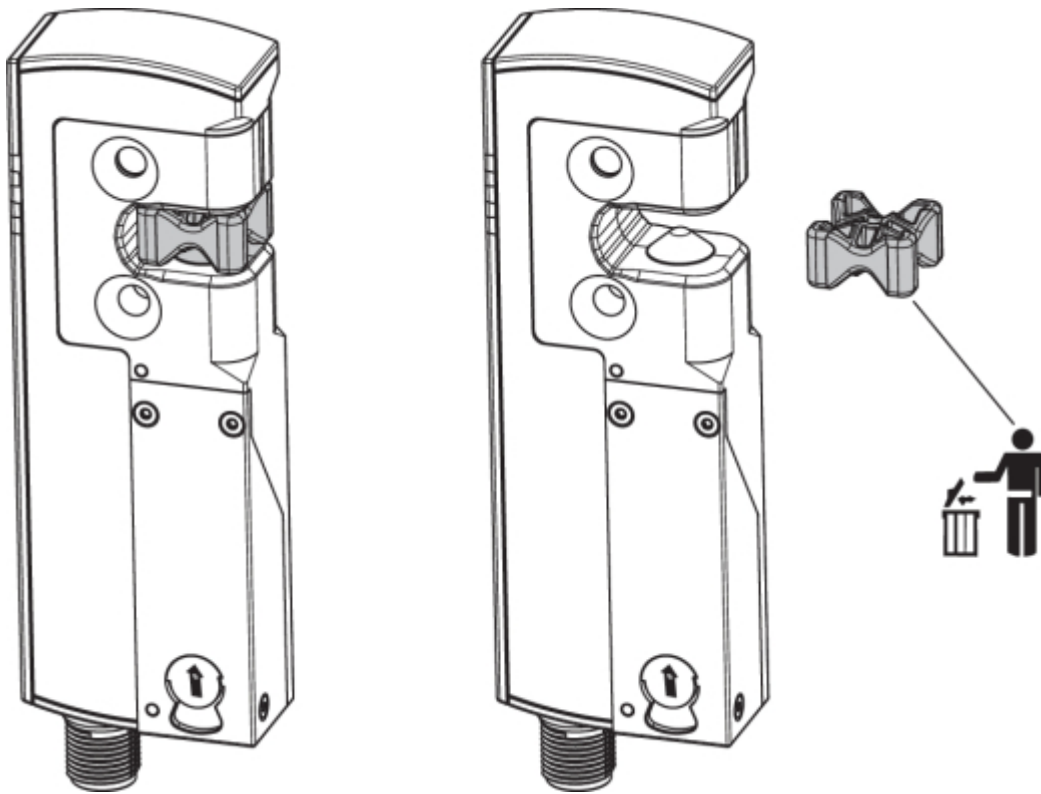
Designation, Diagnostic outputs	OUT
Design of control elements	short-circuit proof, p-type
Voltage drop U_d , maximum	2 V
Voltage, Utilisation category DC-12	24 VDC
Current, Utilisation category DC-12	0.05 A
Voltage, Utilisation category DC-13	24 VDC
Current, Utilisation category DC-13	0.05 A

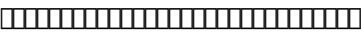
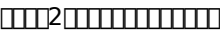
Status indication

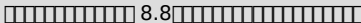
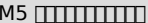
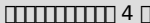
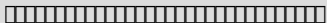
Note (LED switching conditions display)	Operating condition: LED green Error / functional defect: LED red Supply voltage UB: LED green
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Pin assignment

PIN 1	A1 Supply voltage UB
PIN 2	X1 Safety input 1
PIN 3	A2 GND
PIN 4	Y1 Safety output 1
PIN 5	OUT Diagnostic output
PIN 6	X2 Safety input 2
PIN 7	Y2 Safety output 2




M5 

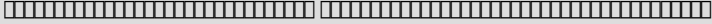

M5  8.8  80  M5  4  4  6 Nm 

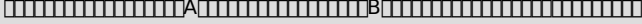
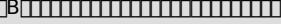


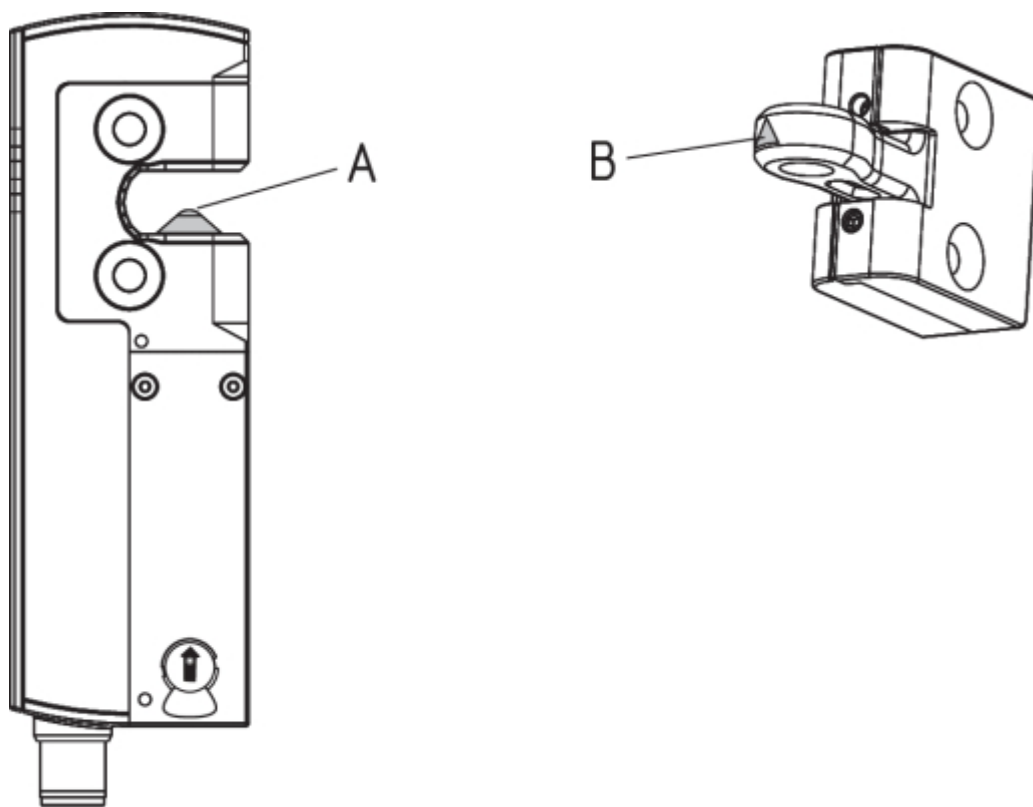




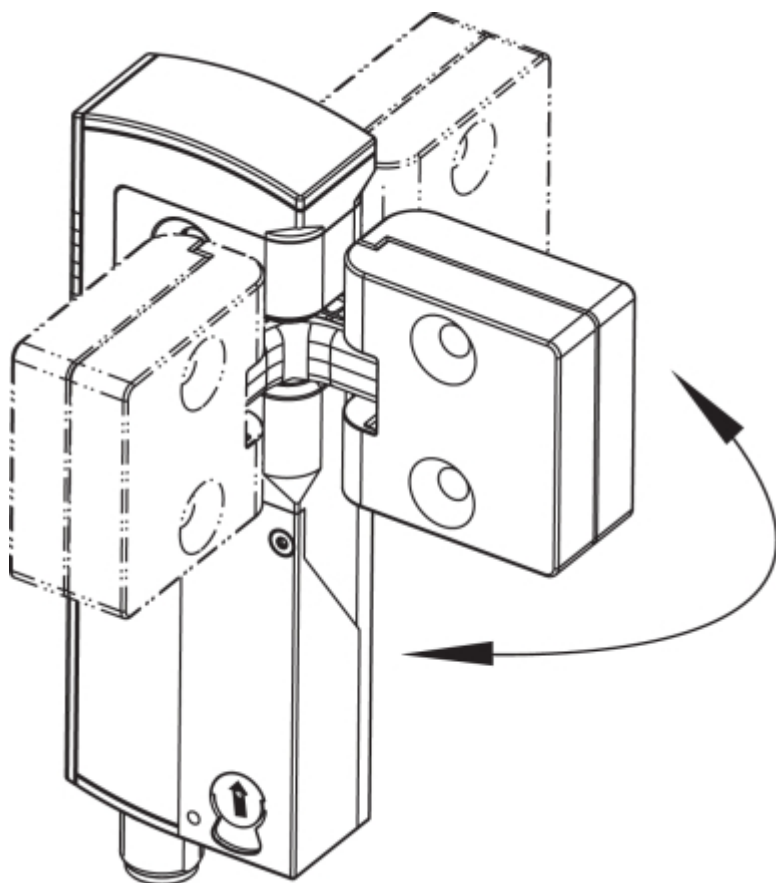





 A  B 



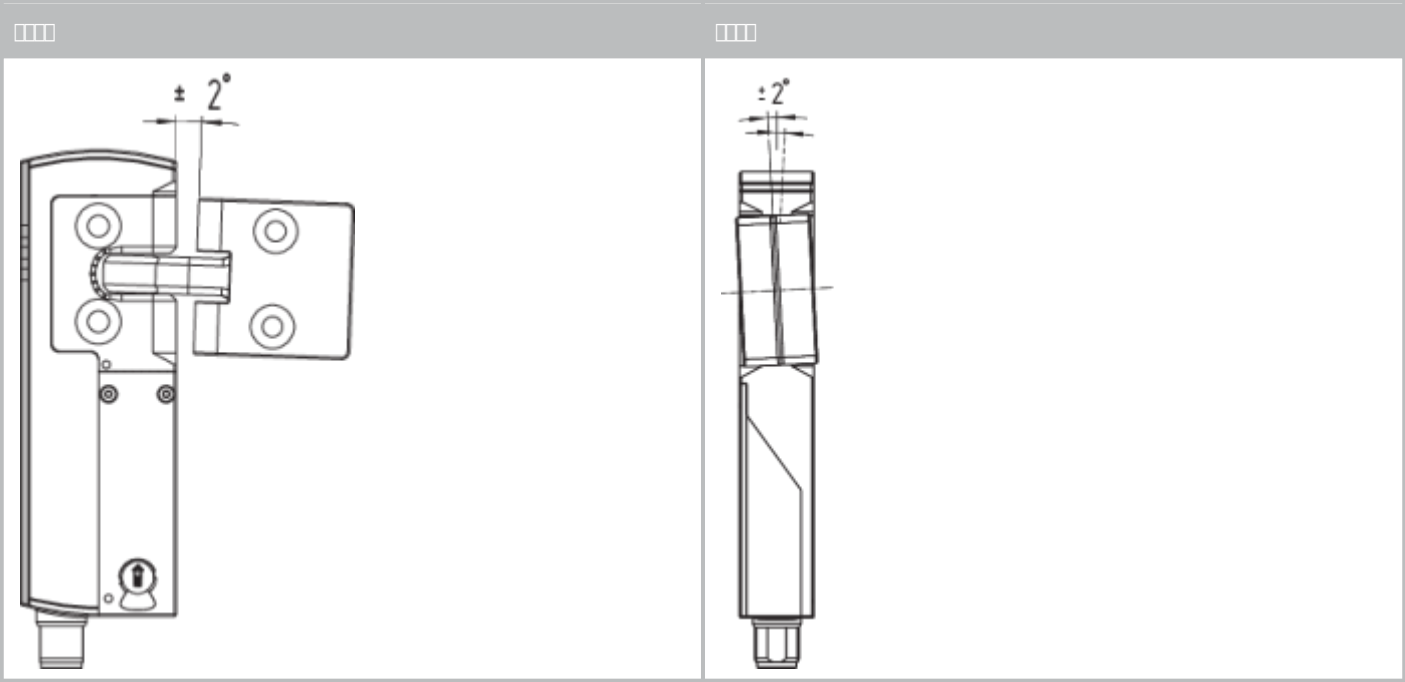
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2 M4 AF 2 mm X

M4

ACC-AZM40-LEV

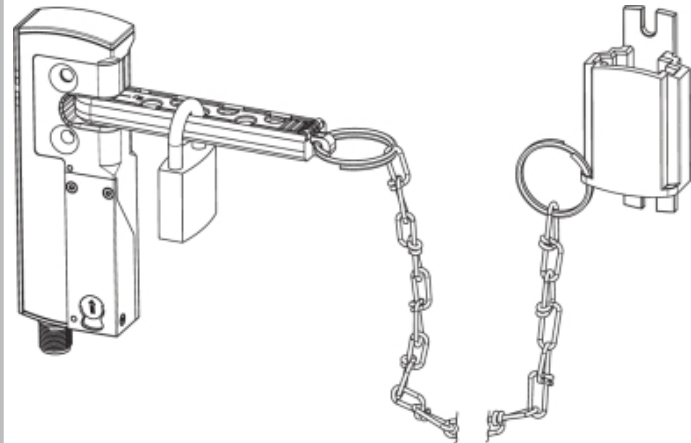


ACC-AZM40-PT

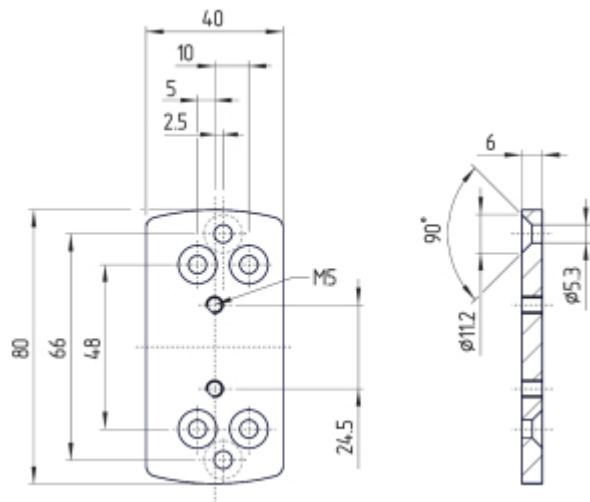


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□□□□□□	SZ40	103053182
□□□□□□□□□□20□30□45□50□60mm□□□□□□□□□□	MP-AZM40	103045324
□□□□□□□□ M5 x 25, □□□ 2 pcs.	ACC-NRS-M5X25-FHS-2PCS	103045415
□□□□□□□□ M5 x 25, □□□ 2 pcs.	ACC-NRS-M5X25-CSS-2PCS	103045416

SZ40

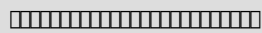


MP-AZM40

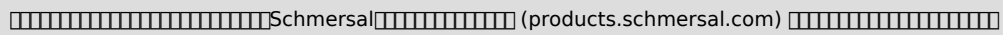
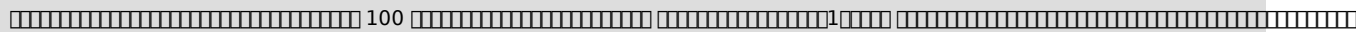


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4.1 □□□□□□□□



2 PNP (OSSD)



					EN 60947-5-2
A1	Ue	1			
X1	1	2			
A2	GND	3			
Y1	1	4			
OUT		5			
X2	2	6			
Y2	2	7			
IN		8			

8-pole (8)

 M12, 8 - 8 x 0.25 mm², IP67 / IP69

Length	Part number
2.5 m	103011415
5.0 m	103007358
10.0 m	103007359
15.0 m	103011414

Connecting cables (PVC) with socket (female)

 M12, 8-pole - 8 x 0.21 mm², IP69

Length	Part number
5.0 m	101210560
5.0 m, 8	101210561
10.0 m	103001389
15.0 m	103014823

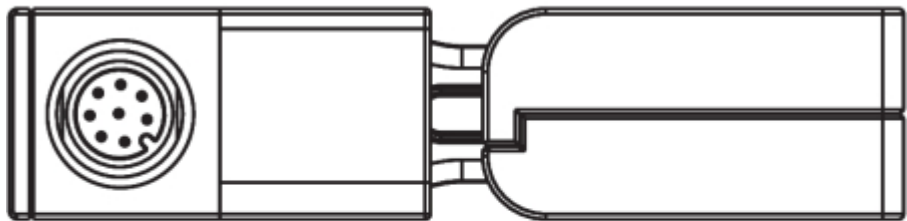
8-pole (8)



8-pole (8)

AZM40

AZM40-B1



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8-pole (8)

8-pole (8): AZM40

8-pole (8)

6.2

AZM 40Z OFF AZM 40Z ON

AZM40B OFF

ON OFF OFF

6.3 LED

3 LED

	ON
	(2: / LED)

LED (X1X2) LED (1Hz)

X1 X2		LED	
	(1Hz)	Off	Off
	(1Hz)	Off	
	(1Hz)	Off	On

6.4

PLC

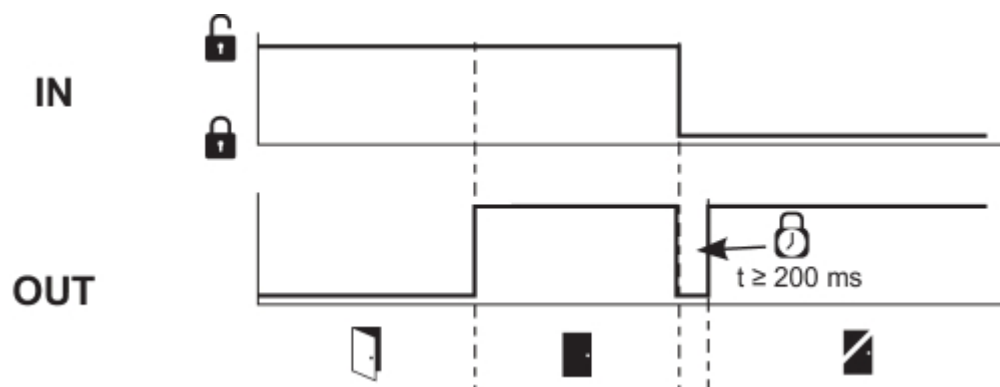
30 OFF LED 2



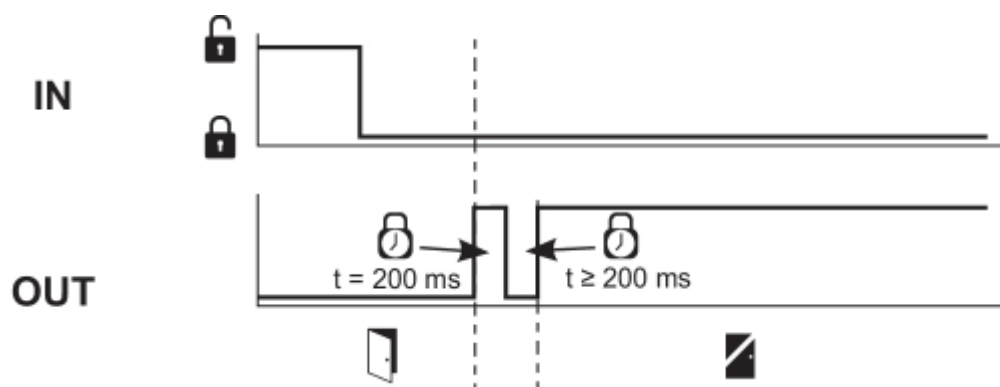


Y1Y2

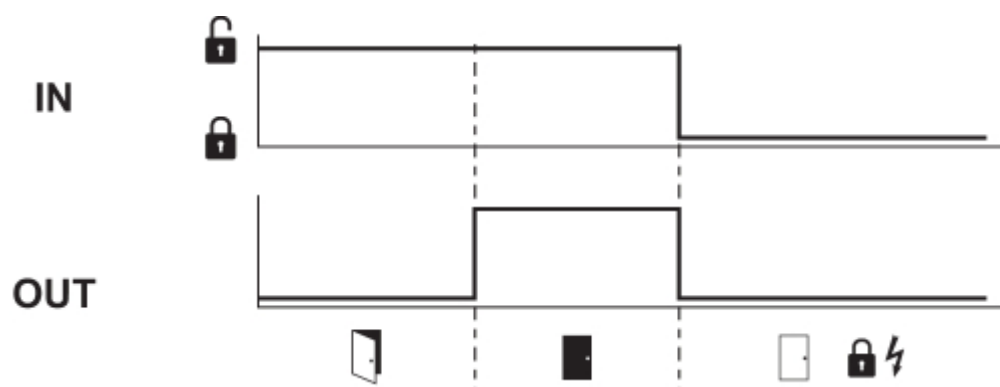
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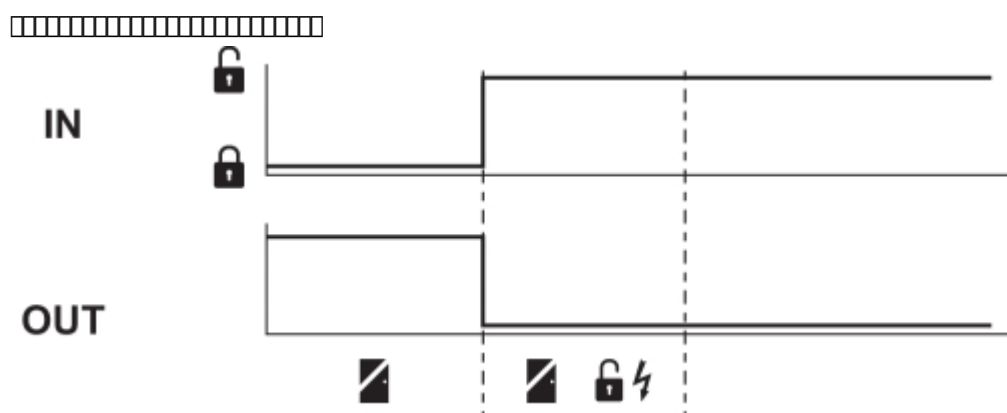
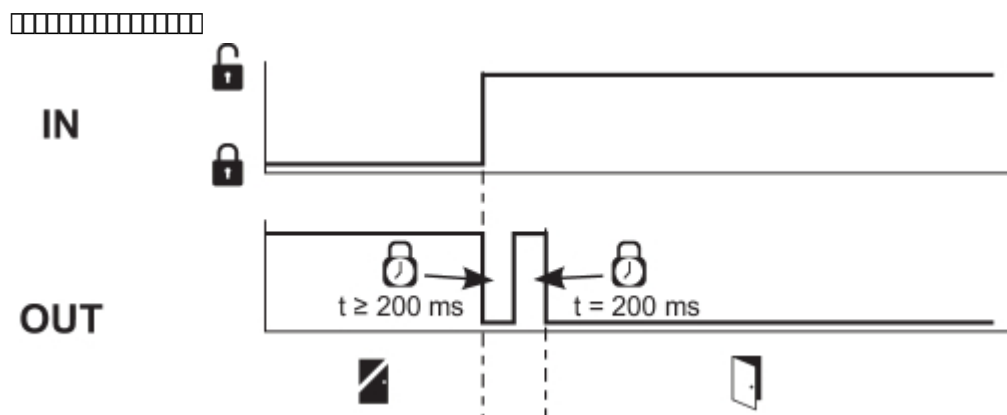
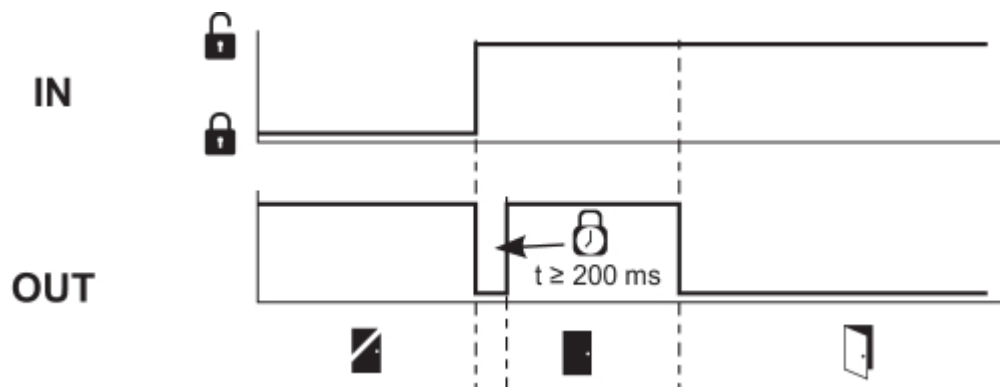
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6.5

1: 1							
1	24 V	LED	Y1, Y2	OUT			
IN							
					AZM40Z	AZM40B	
1	24 V	On	Off	Off	0 V	0 V	0 V
2	24 V	On	Off	1	0 V	24 V	24 V
3	0 V	On	2	1	0 V	24 V	0 V
4	0 V	On	Off	On	24 V	24 V	24 V
5) 1	0 V / 24 V	On	2	1	24 V / 0 V	24 V ¹⁾	0 V
6	0 V / 24 V		2		0 V	0 V	0 V
7) 1	0 V	1 1	1 1	1 1	0 V	0 V	0 V
8 X1 X2 1	0 V / 24 V	1	Off	S. 1 LED			
9 5	0 V / 24 V	1 1	1 1	1 / 1 / off			
10	0 V / 24 V	1 1	1 1	Off	0 V	0 V	0 V
11/12 1:							
11	24 V	Off	On	1	0 V	0 V	0 V
12 1: 1 (24 V)		1	Off	Off	0 V	0 V	0 V
1) 30 1: 1 2) s. 1 3) 1							

2: 1 / 1 LED 1			
1 (1)	1	OFF 1	1
1 1	Y1 1	30	1 Y1 1
2 1	Y2 1	30	1 Y2 1
3 1	1	30	1 Y1 Y2 1
4 1	1	30	1
5 1	1	0	1
6 1	1	0	1
7 1	1	0	1
8 1	1/1 (1)	30	1
LED 1	1	0	1

7 1

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3. 

7.2 | | | | | | | |--|--|--|--|--|--| | | | | | | | |--|--|--|--|--|--|

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1. • 
2. •  M4 
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