

## Datasheet - AZM 200CC-T-1P2P



Solenoid interlock / AZM 200



Preferred typ



- thermoplastic enclosure
- Guard locking monitored
- Electronic contact-free, coded system
- Max. length of the sensor chain 200 m
- Self-monitoring series-wiring of 31 sensors
- 3 LEDs to show operating conditions
- Sensor technology permits an offset between actuator and interlock of  $\pm 5$  mm vertically and  $\pm 3$  mm horizontally
- Intelligent diagnosis
- Manual release

(Minor differences between the printed image and the original product may exist!)

### Ordering details

Product type description	AZM 200CC-T-1P2P
Article number	1179701
EAN code	4030661312699

### Approval


Approval



### Classification

Standards	EN ISO 13849-1, IEC 61508, IEC 60947-5-3
PL	bis e
Control category	bis 4
PFH	4.0 x 10 <sup>-9</sup> /h
SIL	bis 3
Mission time	20 Years
Classification	PDF-M

### Global Properties

Product name	AZM 200
Standards	EN 60947-5-1, IEC 61508, EN 954-1, EN ISO 13849-1
Compliance with the Directives (Y/N) 	Yes
Suitable for safety functions (Y/N)	Yes
Protection rating	II
Series-wiring	up to 31 components
Length of the sensor chain	max. 200 m
Active principle	inductive
Duty cycle	100 %
Materials	
- Material of the housings	Plastic, glass-fibre reinforced thermoplastic
Housing coating	None
Weight	536 g
Guard locking monitored (Y/N)	Yes
Actuator monitored (Y/N)	No
Idle assignable pushbutton and LED (Y/N)	No
Reaction time	≤ 60 ms
Duration of risk	> 120 ms
Time to readiness	4000 ms
Recommended actuator	AZ/AZM 200-B1

## Mechanical data

Design of electrical connection	Spring pulley connection
Cable section	
- Min. Cable section	0,25 mm <sup>2</sup>
- Max. Cable section	1.5 mm <sup>2</sup>
AWG-Number	23 - 15
Mechanical life	≥ 1.000.000 operations
resistance to shock	30 g / 11 ms
Resistance to vibration	10 ... 55 Hz, Amplitude 1 mm
Emergency unlocking device (Y/N)	No
Manual release (Y/N)	Yes
Emergency release (Y/N)	No
Latching force	30 N
Clamping force F <sub>max</sub>	2000 N
Max. Actuating speed	≤ 0,2 m/s
notice	All indications about the cable section are including the conductor ferrules.

## Ambient conditions

Ambient temperature	
- Min. environmental temperature	-25 °C
- Max. environmental temperature	+60 °C
Storage and transport temperature	
- Min. Storage and transport temperature	- 25°C
- Max. Storage and transport temperature	+ 85°C
Relative humidity	30% ... 95%
- non-condensing	
Protection class	IP67 to IEC/EN 60529
Air clearances and creepage distances To IEC/EN 60664-1	
- Rated impulse withstand voltage U <sub>imp</sub>	0,8 kV
- Overvoltage category	III

- Degree of pollution 3

## Electrical data

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Number of auxiliary contacts	0 piece
Number of safety contacts	2 piece
Cross circuit/short circuit recognition possible (Y/N)	Yes
Power to unlock	Yes
Power to lock	No
Supply voltage $U_B$	
- Min. supply voltage	20.4 VDC
- Max. supply voltage	26.4 VDC
Switch frequency	1 Hz
Rated insulation voltage $U_i$	32 VDC
Operating current $I_e$	1.2 A
Utilisation category	DC-12, DC-13
No-load current $I_0$	0,6 A
Device insulation	$\leq 4$ A if used in accordance with UL 508

## Electrical data - Safety inputs

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Safety inputs	X1 and X2
Rated operating voltage $U_e$	- 3 V ... 5 V (Low) 15 V ... 30 V (High)
Operating current $I_e$	> 2 mA / 24 V

## Electrical data - Safety outputs

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Safety outputs	Y1 and Y2
Fuse rating	short-circuit proof, p-type
Rated operating voltage	0 V ... 4 V under Supply voltage $U_B$
Residual current $I_r$	$\leq 0,5$ mA
Operating current $I_e$	0,25 A
Utilisation category	DC-12, DC-13

## Electrical data - Diagnostic output

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Serial diagnostics (Y/N)	No
Fuse rating	p-type, short-circuit proof
Operating current $I_e$	0,05 A
Utilisation category	DC-12, DC-13
Wiring capacitance for serial diagnostics	-
diagnostic signals	guard door closed
Operating principle of the diagnostic output	The short-circuit proof diagnostic output OUT can be used for central visualisation or control tasks, e.g. in a PLC.
notice	The diagnostic output is not a safety-relevant output!

## Electrical data - Solenoid control IN

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Rated operating voltage $U_e$	- 3 V ... 5 V (Low) 15 V ... 30 V (High)
Operating current $I_e$	typically 10 mA / 24 V, dynamically 20 mA

## LED switching conditions display

LED switching conditions display (Y/N)	Yes
LED switching conditions display	
- Supply voltage U <sub>B</sub>	green LED
- switching condition	yellow LED
- Error functional defect	red LED

## ATEX

Explosion protection categories for gases	None
Explosion protected category for dusts	None

## Dimensions

Dimensions of the sensor	
- Width of sensor	40 mm
- Height of sensor	220 mm
- Length of sensor	50 mm

## notice

As long as the actuating unit remains inserted in the solenoid interlock, the unlocked safety guard can be relocked. The safety outputs then will be enabled again; opening the safety guard therefore is not required.

## Included in delivery

Included in delivery	AZM 200 Triangular key
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Actuators must be ordered separately.

## Indication legend

see drawing: Wiring example

With the represented power-to-unlock principle, the solenoid is energised to enable the opening.

With the alternative power-to-lock principle (not represented), the solenoid must be energised to keep the device in closed condition.

## Ordering code

AZM 200(1)-T-(2)(3)(4)

(1)

*without* Guard locking monitored

**B** Actuator monitored

(2)

**SK** Screw connection

**CC** Spring pulley connection

**ST1** connector M23 x 1, (8+1-pole)

**ST2** connector M12 x 1, 8-pole

(3)

**1P2P** 1 Diagnostic output and 2 Safety outputs, p-type

**1P2PW** gleich - 1P2P, combined diagnostic signal: guard door closed and interlocking device locked

**SD2P** serial diagnostic output and 2 Safety outputs, p-type

(4)

*without* Power to unlock

## Documents

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**Operating instructions and Declaration of conformity (fr)** 967 kB, 28.10.2010

Code: mrl\_azm200t\_fr

**Operating instructions and Declaration of conformity (de)** 933 kB, 31.08.2010

Code: mrl\_azm200t\_de

**Operating instructions and Declaration of conformity (es)** 963 kB, 26.10.2010

Code: mrl\_azm200t\_es

**Operating instructions and Declaration of conformity (nl)** 955 kB, 26.10.2010

Code: mrl\_azm200t\_nl

**Operating instructions and Declaration of conformity (en)** 1 MB, 31.08.2010

Code: mrl\_azm200t\_en

**Operating instructions and Declaration of conformity (it)** 954 kB, 28.10.2010

Code: mrl\_azm200t\_it

**Operating instructions and Declaration of conformity (jp)** 1 MB, 02.12.2010

Code: mrl\_azm200t\_jp

**Wiring example (99)** 21 kB, 12.01.2009

Code: kazm2l26

**Diagnosis tables (de)** 135 kB, 12.01.2009

Code: b\_tabp01

**Diagnosis tables (en)** 136 kB, 12.01.2009

Code: b\_tabp02

**BG-test certificate (de, en)** 768 kB, 15.07.2010

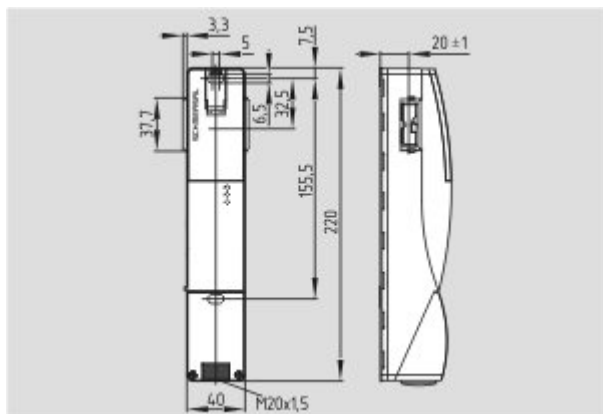
Code: z\_azmp04

**Gost certification (ru)** 1 MB, 21.06.2007

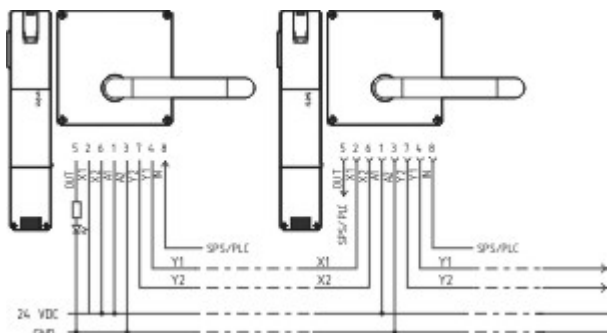
Code: q\_azmp01

## Images

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Dimensional drawing (miscellaneous)



Wiring example

## System components

### Actuator



#### 1183465 - AZ/AZM 200-B1-LT

- Actuators with return spring
- Actuator for sliding guards
- Tolerates up to max. 5 mm overtravel



#### 1183466 - AZ/AZM 200-B1-LTP0

- Actuators with return spring
- Actuator for sliding guards
- Tolerates up to max. 5 mm overtravel



#### 1183469 - AZ/AZM 200-B1-RT

- Actuators with return spring
- Actuator for sliding guards
- Tolerates up to max. 5 mm overtravel



#### 1183470 - AZ/AZM 200-B1-RTP0

- Actuators with return spring
- Actuator for sliding guards
- Tolerates up to max. 5 mm overtravel



#### 1178681 - AZ/AZM 200-B30-LTAG1

- Actuator for hinged guards
- With door detection sensor T
- Easy and intuitive operation
- No risk of injury from protruding actuator
- No supplementary door handles required
- Does not protrude into the door opening
- Various handles available

#### 1178668 - AZ/AZM 200-B30-LTAG1P1



- One-hand emergency exit, even in de-energised condition
- Actuator for hinged guards
- With door detection sensor T
- Easy and intuitive operation
- No risk of injury from protruding actuator
- No supplementary door handles required
- Does not protrude into the door opening
- Various handles available

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**1186150 - AZ/AZM 200-B30-LTAG1P20**



- One-hand emergency exit, even in de-energised condition
- Actuator for hinged guards
- With door detection sensor T
- Easy and intuitive operation
- No risk of injury from protruding actuator
- No supplementary door handles required
- Does not protrude into the door opening
- Various handles available

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**1192102 - AZ/AZM 200-B30-LTAG1P25**



- One-hand emergency exit, even in de-energised condition
- Actuator for hinged guards
- With door detection sensor T
- Easy and intuitive operation
- No risk of injury from protruding actuator
- No supplementary door handles required
- Does not protrude into the door opening
- Various handles available

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**1181137 - AZ/AZM 200-B30-LTAG2**



- Actuator for hinged guards
- With door detection sensor T
- Easy and intuitive operation
- No risk of injury from protruding actuator
- No supplementary door handles required
- Does not protrude into the door opening
- Various handles available

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**1181141 - AZ/AZM 200-B30-LTAG2P1**



- One-hand emergency exit, even in de-energised condition
- Actuator for hinged guards
- With door detection sensor T
- Easy and intuitive operation
- No risk of injury from protruding actuator
- No supplementary door handles required
- Does not protrude into the door opening
- Various handles available

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**1189020 - AZ/AZM 200-B30-LTAG2P20**



- One-hand emergency exit, even in de-energised condition
- Actuator for hinged guards
- With door detection sensor T
- Easy and intuitive operation
- No risk of injury from protruding actuator
- No supplementary door handles required
- Does not protrude into the door opening

- Various handles available
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**1192106 - AZ/AZM 200-B30-LTAG2P25**

- One-hand emergency exit, even in de-energised condition
  - Actuator for hinged guards
  - With door detection sensor T
  - Easy and intuitive operation
  - No risk of injury from protruding actuator
  - No supplementary door handles required
  - Does not protrude into the door opening
  - Various handles available
- 



**1178680 - AZ/AZM 200-B30-RTAG1**

- Actuator for hinged guards
  - With door detection sensor T
  - Easy and intuitive operation
  - No risk of injury from protruding actuator
  - No supplementary door handles required
  - Does not protrude into the door opening
  - Various handles available
- 



**1178738 - AZ/AZM 200-B30-RTAG1P1**

- One-hand emergency exit, even in de-energised condition
  - Actuator for hinged guards
  - With door detection sensor T
  - Easy and intuitive operation
  - No risk of injury from protruding actuator
  - No supplementary door handles required
  - Does not protrude into the door opening
  - Various handles available
- 



**1186144 - AZ/AZM 200-B30-RTAG1P20**

- One-hand emergency exit, even in de-energised condition
  - Actuator for hinged guards
  - With door detection sensor T
  - Easy and intuitive operation
  - No risk of injury from protruding actuator
  - No supplementary door handles required
  - Does not protrude into the door opening
  - Various handles available
- 



**1192103 - AZ/AZM 200-B30-RTAG1P25**

- One-hand emergency exit, even in de-energised condition
  - Actuator for hinged guards
  - With door detection sensor T
  - Easy and intuitive operation
  - No risk of injury from protruding actuator
  - No supplementary door handles required
  - Does not protrude into the door opening
  - Various handles available
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**1181139 - AZ/AZM 200-B30-RTAG2**

- Actuator for hinged guards
- With door detection sensor T
- Easy and intuitive operation
- No risk of injury from protruding actuator





- No supplementary door handles required
- Does not protrude into the door opening
- Various handles available



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**1181143 - AZ/AZM 200-B30-RTAG2P1**

- One-hand emergency exit, even in de-energised condition
- Actuator for hinged guards
- With door detection sensor T
- Easy and intuitive operation
- No risk of injury from protruding actuator
- No supplementary door handles required
- Does not protrude into the door opening
- Various handles available



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**1191659 - AZ/AZM 200-B30-RTAG2P20**

- One-hand emergency exit, even in de-energised condition
- Actuator for hinged guards
- With door detection sensor T
- Easy and intuitive operation
- No risk of injury from protruding actuator
- No supplementary door handles required
- Does not protrude into the door opening
- Various handles available



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**1192104 - AZ/AZM 200-B30-RTAG2P25**

- One-hand emergency exit, even in de-energised condition
- Actuator for hinged guards
- With door detection sensor T
- Easy and intuitive operation
- No risk of injury from protruding actuator
- No supplementary door handles required
- Does not protrude into the door opening
- Various handles available