



## AZ201ST-T-1P2P-2965-1

- Thermoplastic enclosure
- RFID-technology for needs-based protection against tampering
- Max. length of the sensor chain 200 m
- Self-monitoring series-wiring
- 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
- Suitable for hinged and sliding guards
- Intelligent diagnosis

## Data

### Ordering data

Product type description	AZ201ST-T-1P2P-2965-1
Article number (order number)	103041827
EAN (European Article Number)	4030661558684
eCl@ss number, version 12.0	27-27-26-02
eCl@ss number, version 11.0	27-27-26-02
eCl@ss number, version 9.0	27-27-26-02
ETIM number, version 7.0	EC002592
ETIM number, version 6.0	EC002592

### 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	Universal coding
Coding level according to EN ISO 14119	Low
Working principle	RFID, 125 kHz
Transmitter output RFID, maximum	-6 dB/m
Housing material	Glass-fibre, reinforced thermoplastic
Duration of risk, maximum	200 ms
Reaction time, switching off safety outputs via actuator, maximum	100 ms
Reaction time, switching off safety outputs via safety inputs, maximum	0.5 ms

## General data - Features

Short circuit detection	Yes
Cross-circuit detection	Yes
Series-wiring	Yes
Idle assignable pushbutton	Yes
Freely assignable LED	Yes
Safety functions	Yes
Integral system diagnostics, status	Yes
Number of safety contacts	2

## Safety classification

Standards	EN ISO 13849-1 EN IEC 61508
Performance Level, up to	e
Category	4
PFH value	$1.90 \times 10^{-9}$ /h

PFD value	1.60 x 10 <sup>-4</sup>
Safety Integrity Level (SIL), suitable for applications in	3
Mission time	20 Year(s)

### Mechanical data

Mechanical life, minimum	1,000,000 Operations
Latching force	30 N
Actuating speed, maximum	0.2 m/s
Type of the fixing screws	2x M6
Tightening torque of the fastening screws for the housing cover, minimum	0.7 Nm
Tightening torque of the fastening screws for the housing cover, maximum	1 Nm
Note	Torx T10

### Mechanical data - Switching distances according EN IEC 60947-5-3

Assured switching distance "ON" S <sub>ao</sub>	4 mm
Assured switching distance "OFF" S <sub>ar</sub>	30 mm
Hysteresis (Switching distance), maximum	1.5 mm
Repeat accuracy R	0.5 mm

### Mechanical data - Connection technique

Length of sensor chain, maximum	200 m
Note (length of the sensor chain)	Cable length and cross-section change the voltage drop depending on the output current
Note (series-wiring)	Unlimited number of devices, observe external line fusing, max. 31 devices in case of serial diagnostic SD
Termination	Connector M23, 12-pole

### Mechanical data - Dimensions

Length of sensor	50 mm
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Width of sensor	40 mm
Height of sensor	220 mm

### Ambient conditions

Degree of protection	IP66 IP67
Ambient temperature	-25 ... +70 °C
Storage and transport temperature	-25 ... +85 °C
Relative humidity, maximum	93 %
Note (Relative humidity)	non-condensing non-icing
Resistance to vibrations	10 ... 150 Hz, amplitude 0.35 mm
Resistance to shock	30 g / 11 ms
Protection class	III
Permissible installation altitude above sea level, maximum	2,000 m

### Ambient conditions - Insulation values

Rated insulation voltage $U_i$	32 VDC
Rated impulse withstand voltage $U_{imp}$	0.8 kV
Overvoltage category	III
Degree of pollution	3

### Electrical data

Operating voltage	24 VDC -15 % / +10 %
No-load supply current $I_0$ , typical	50 mA
Rated operating voltage	24 VDC
Operating current	700 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	1 Hz

## 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	4 V
Leakage current $I_r$ , maximum	0.5 mA
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
Operating current	50 mA
Design of control elements	short-circuit proof, p-type
Voltage drop $U_d$ , maximum	4 V

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

## 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 OUT
PIN 6	X2 Safety input 2
PIN 7	Y2 Safety output 2
PIN 9	white LED
PIN 10	Key button
PIN 11	Key button
PIN 12	Not used

## Scope of delivery

Scope of delivery Actuator must be ordered separately.

## Accessory

Recommendation (actuator) AZ/AZM201-B1  
AZ/AZM201-B30

## Ordering code

Product type description:  
AZ201-(1)-(2)-T-(3)

**without**

Standard coding

**I1**

Individual coding

**I2**

Individual coding, re-teaching enabled

(2)

**SK**

Screw connection

**CC**

Cage clamps

**ST2**

Connector plug M12, 8-pole

(3)

**1P2P**

1 p-type diagnostic output and 2 p-type safety outputs

**SD2P**

serial diagnostic output and 2 p-type safety outputs

## Pictures

### Product picture (catalogue individual photo)



ID: kazm2f28

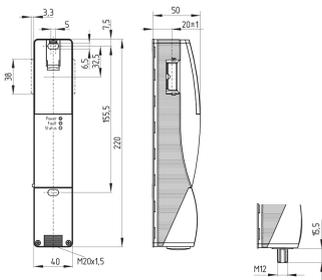
| 993.8 kB | .jpg | 177.447 x 833.261 mm - 503 x 2362 px - 72 dpi

| 276.4 kB | .png | 74.083 x 347.839 mm - 210 x 986 px - 72 dpi

| 10.6 kB | .jpg | 42.686 x 200.025 mm - 121 x 567 px - 72 dpi

| 20.5 kB | .jpg | 26.458 x 123.472 mm - 75 x 350 px - 72 dpi

### Dimensional drawing basic component



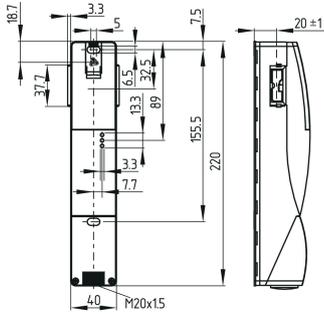
ID: 1azm2g12

| 146.3 kB | .jpg | 352.778 x 308.681 mm - 1000 x 875 px - 72 dpi

| 5.3 kB | .png | 74.083 x 64.911 mm - 210 x 184 px - 72 dpi

| 21.1 kB | .jpg | 169.686 x 148.519 mm - 481 x 421 px - 72 dpi

### Assembly example



ID: 1azm2m17

| 167.9 kB | .jpg | 352.778 x 346.428 mm - 1000 x 982 px - 72 dpi

Schmersal India Pvt. Ltd., Plot No - G-7/1, Ranjangaon MIDC, Tal. - Shirur, Dist.- Pune 412 220

The details and data referred to have been carefully checked. Images may diverge from original. Further technical data can be found in the manual. Technical amendments and errors possible.

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