Datasheet - AZ 415-02/20ZPK

Safety switch with separate actuator / AZ 415

SCHMERSAL

- Metal enclosure
- Spring-loaded actuators
- Long life
- High level of contact reliability with low voltages and currents
- Adjustable ball latch to 400 N
- 2 cable entries M 20 x 1.5
- 2 switches with different actuating functions in one enclosure
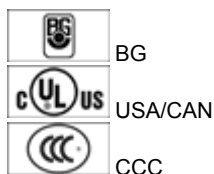- 84,6 mm x 103,6 mm x 46,5 mm

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

Ordering details

Product type description	AZ 415-02/20ZPK
Article number	101175181
EAN code	4030661357614
eCl@ss	27-27-26-02

Approval

Approval	BG
	USA/CAN
	CCC

Classification

Standards	EN ISO 13849-1
B_{10d} Opener (NC)	2.000.000
B_{10d} Normally open contact (NO)	1.000.000
- notice	at 10% I_e and ohmic load
Mission time	20 Years
notice	

$$MTTF_d = \frac{B_{10d}}{0,1 \times n_{op}}$$

$$n_{op} = \frac{d_{op} \times h_{op} \times 3600 \text{ s/h}}{t_{cycle}}$$

Global Properties

Product name	AZ 415
Standards	EN 60947-5-1, BG-GS-ET-15
Compliance with the Directives (Y/N) $C \epsilon$	Yes
Number of guard doors	1 piece
Materials	
- Material of the housings	Aluminium
- Material of the contacts	Silver
Housing coating	painted
Weight	510.5 g

Mechanical data

Design of electrical connection	Screw connection
Cable section	
- Min. Cable section	2 x 0,75 mm²
- Max. Cable section	2 x 1.5 mm²
Mechanical life	> 1.000.000 operations
notice	All indications about the cable section are including the conductor ferrules.
higher Latching force (Y/N)	Yes
Latching force	80 N ... 400 N
Positive break force	31 N min.
positive break travel	3.8 mm
Max. Actuating speed	0,2 m/s

Ambient conditions

Ambient temperature	
- Min. environmental temperature	−25 °C
- Max. environmental temperature	+70 °C
Protection class	IP67 to IEC/EN 60529

Electrical data

Design of control element	Normally open contact (NO), Opener (NC)
Switching principle	Creep circuit element
Number of auxiliary contacts	2 piece
Number of safety contacts	2 piece
Rated impulse withstand voltage U_{imp}	4 kV
Rated insulation voltage U_i	250 V
Thermal test current I_{the}	6 A
Utilisation category	AC-15: 230 V / 4 A; DC-13: 24 V / 4 A
Max. fuse rating	6 A gG D-fuse To DIN EN 60269-1

ATEX

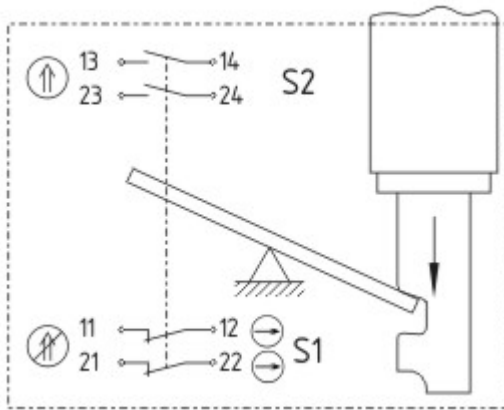|	
Explosion protection categories for gases	None
Explosion protected category for dusts	None

Dimensions

Dimensions of the sensor

- Width of sensor	84.6 mm
- Height of sensor	103.6 mm
- Length of sensor	46.5 mm

Included in delivery

Actuators must be ordered separately.

Diagram

Note Diagram

⊖→ positive break NC contact

⇑ active

⇑̸ no active

○──⌢──○ Normally-open contact

○──⌐──○ Normally-closed contact

Switch travel diagram

Notes Switch travel diagram

▉ Contact closed

☐ Contact open

▨ Setting range

Ⓛ Break point

Ⓟ Positive opening sequence/- angle
VS adjustable range of NO contact
VÖ adjustable range of NC contact
N after travel

Ordering suffix

The applicable ordering suffix is added at the end of the part number of the safety switch.
Order example: AZ 415-02/20ZPK **-1637**

...-**1637**   0,3 µm gold-plated contacts

Ordering code

AZ 415-**(1)**ZPK-**(2)**

(1)

02/11   2 Opener (NC) / 1 Normally open contact (NO), 1 Opener (NC)

02/02   2 Opener (NC) / 2 Opener (NC)

02/20   2 Opener (NC) / 2 Normally open contact (NO)

11/11   1 Normally open contact (NO), 1 Opener (NC) / 1 Normally open contact (NO), 1 Opener (NC)

(2)

1637   gold-plated contacts

Documents

Operating instructions and Declaration of conformity (es) 269 kB, 04.05.2011
Code: mrl_az415_es

Operating instructions and Declaration of conformity (nl) 291 kB, 18.08.2011
Code: mrl_az415_nl

Operating instructions and Declaration of conformity (en) 528 kB, 27.10.2010
Code: mrl_az415_en

Operating instructions and Declaration of conformity (de) 527 kB, 27.10.2010
Code: mrl_az415_de

Operating instructions and Declaration of conformity (pt) 283 kB, 24.04.2012
Code: mrl_az415_pt

Operating instructions and Declaration of conformity (it) 276 kB, 04.01.2012
Code: mrl_az415_it

Operating instructions and Declaration of conformity (da) 283 kB, 07.08.2012
Code: mrl_az415_da

Operating instructions and Declaration of conformity (pl) 292 kB, 04.03.2015
Code: mrl_az415_pl

Operating instructions and Declaration of conformity (jp) 766 kB, 18.11.2010
Code: mrl_az415_jp

Operating instructions and Declaration of conformity (fr) 271 kB, 04.05.2011
Code: mrl_az415_fr

BG-test certificate (de) 522 kB, 05.01.2011
Code: z_z41p01

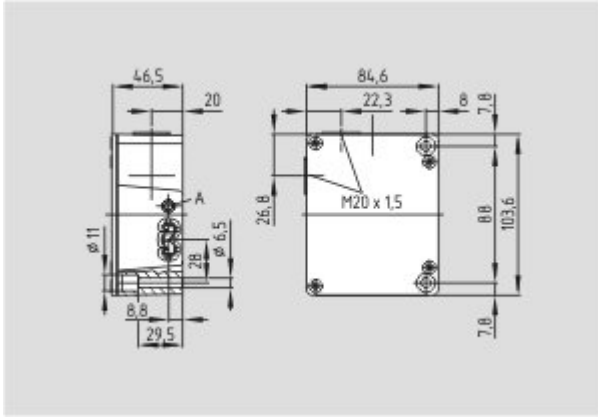**CCC certification** (cn) 408 kB, 24.06.2014
Code: q_175p03

CCC certification (en) 396 kB, 24.06.2014

Code: q_175p02

Gost certification (ru) 2 MB, 07.07.2011

Code: q_az1p01

Images

Dimensional drawing (basic component)

System components

Actuator

101128545 - AZ/AZM 415-B1

• For sliding doors
• Actuators with return spring
• Tolerates up to max. 6 mm overtravel

101144796 - AZ/AZM 415-B2

• Particularly suitable for hinged guards
• For very smal actuating radii in line with the plane of the actuator

101144797 - AZ/AZM 415-B3

• Particularly suitable for hinged guards
• For very smal actuating radii at 90° to the plane of the actuator

1142540 - AZ/AZM 415-B4PS

• For sliding doors
• with locking bolt and ball latch

Door-handle system

AZ 415-STS30

• Latching handle
• Suitable for all types of guard

Accessories

101160461 - SZ AZ 415-22-1

101160462 - SZ AZ 415-22-2

Mounting accessories

1135338 - TAMPERPROOF SCREWS
M 5 x 12

• To mount the actuator
• Higher protection against tampering with interlock
• Protects against unauthorised removal of actuator
• Various lengths available

101135339 - TAMPERPROOF SCREWS M 5 x 16

• To mount the actuator
• Higher protection against tampering with interlock
• Protects against unauthorised removal of actuator
• Various lengths available

101135340 - TAMPERPROOF SCREWS M 5 x 20

• To mount the actuator
• Higher protection against tampering with interlock
• Protects against unauthorised removal of actuator
• Various lengths available