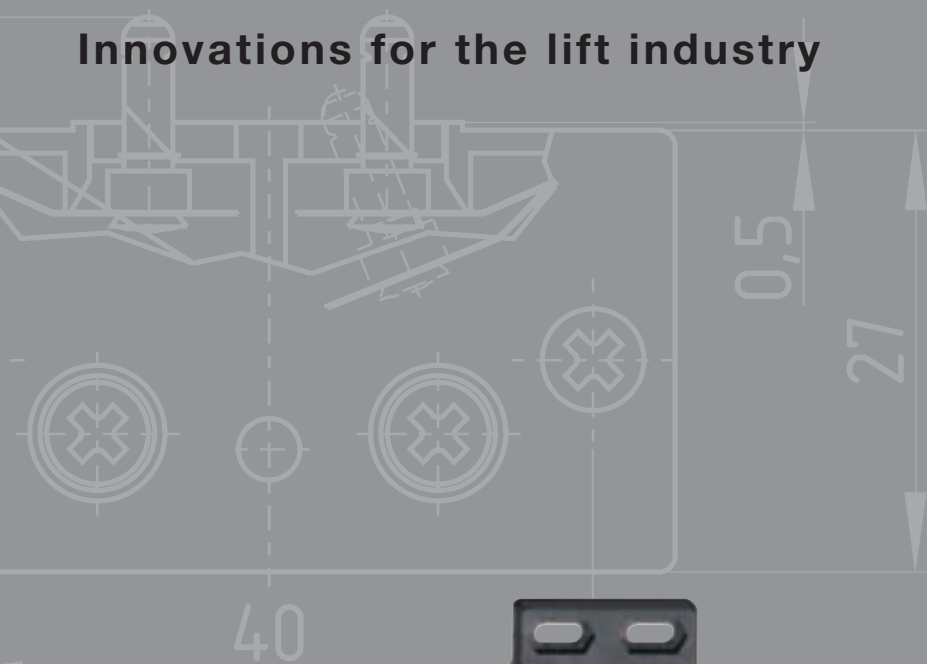
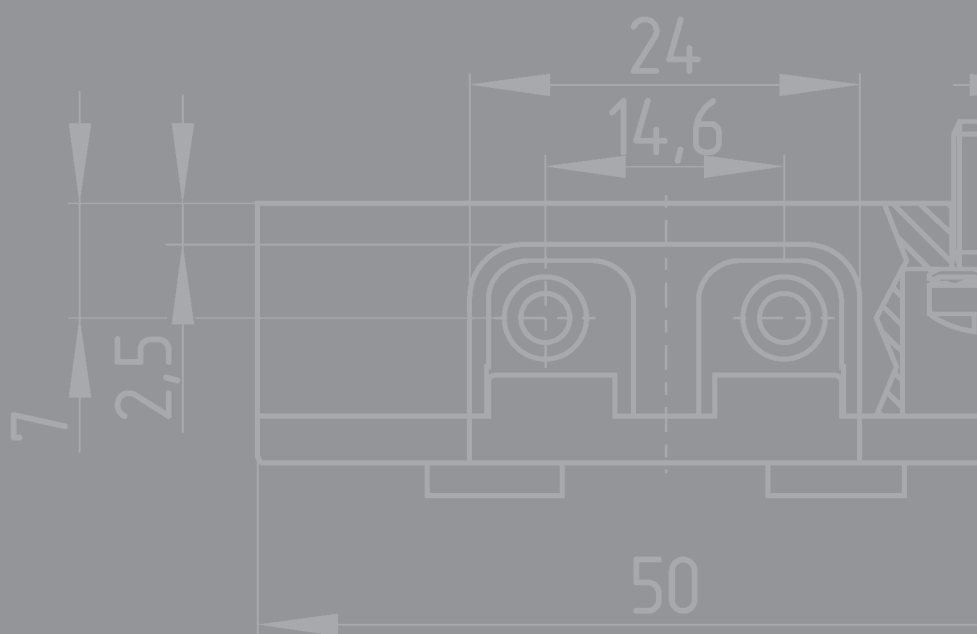


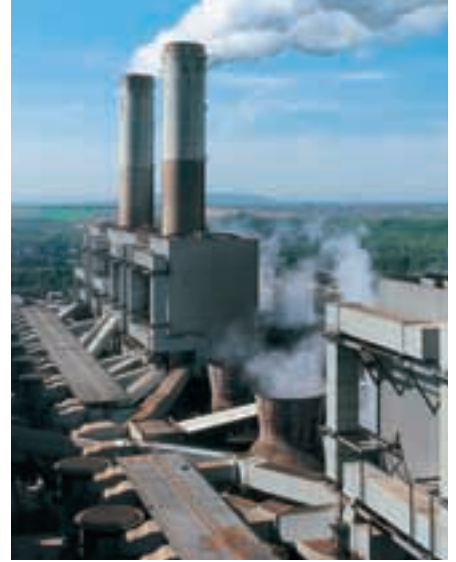
Innovations for the lift industry



40



SCHMERSAL



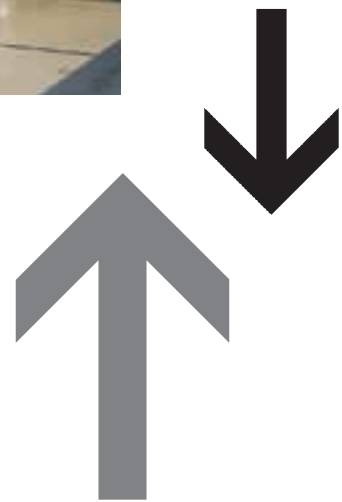
“Up and down. Safe and reliable.”

Lifts are one of the safest means of transport. The result of strict legislation has had an impact on all areas of safety technology. Even the concepts of control and safety technology undergo continuous development. An alternative to the classic door interlocks can now be found in non-contact safety devices with comparable high levels of safety.

Schmersal offers a wide range of products to suit different safety concepts – for new installations and for the modernisation of older lifts.



The applications of Schmersal lift switchgear are various. From residential and industrial buildings to material handling equipment.



Whatever the Schmersal switchgear applications may be, the highest requirements for safety and economical operation of overall installation are paramount.

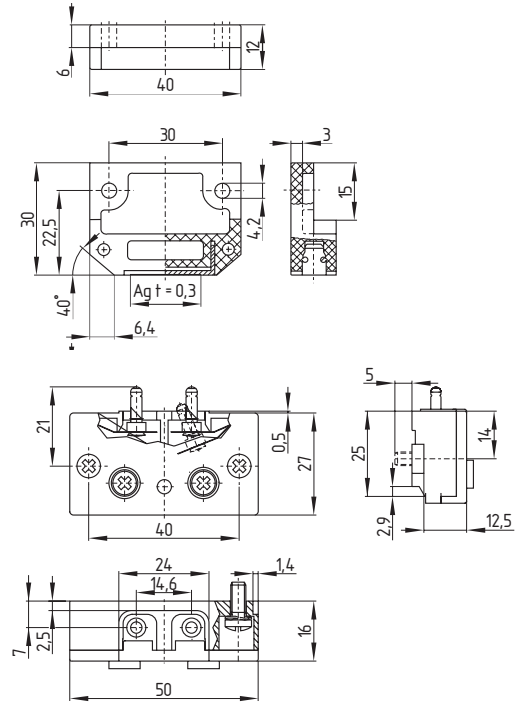
Increasing lift speeds and greater passenger comfort are market trends that are realised by Schmersal's design engineers. Furthermore, our lift switchgear is quick and easy to fit and to service.

As competitive supplier and business partner, Schmersal works with the global players of the lift industry as well as the local specialists of middle-sized companies. An ISO 9001 certified production facility, in which every working process is controlled and documented, guarantees the high quality level of our products.

New developments from Schmersal contribute that lifts work comfortably and on a high security level – and that they are cost-efficient and can be operated with smallest maintenance effort.

Positive break door contacts

Series AZ 051



Features

- Self-extinguishing, fibreglass reinforced thermoplastic enclosure, Ultramid
- Transparent, self-extinguishing cover, Polyamide
- Cover and enclosure are inseparable
- Silver-plated contact pins
- Self-cleaning contacts
- 2 mounting screws M4, captive
- Screw terminals, max. 2 cable entries per terminal
- Terminals accessible through cover
- Protection class IP 00

Application

The series AZ051 contact is a double actuated positive break contact with separated contact bridges. It is used to monitor the safety interlock at automatic lift doors.

Contacts/ Switch travel

1 NC contact 

Positive break door contact **AZ 051 K**

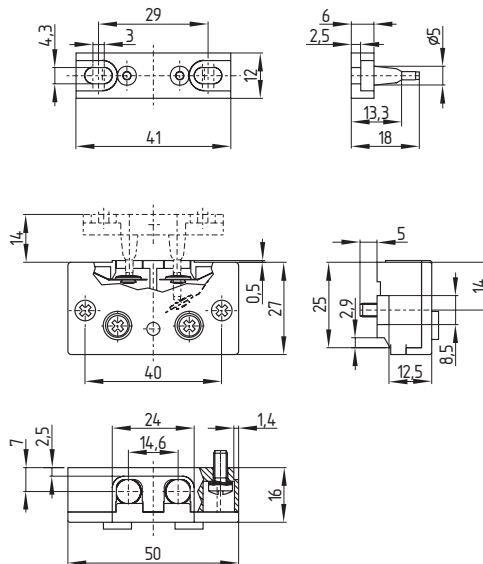
Actuator **AZ 05 B-1684**

Notice

Actuators must be ordered separately.

Positive break door contacts

Series AZ 061



Features

- Self-extinguishing, fibreglass reinforced thermoplastic enclosure, Ultramid
- Transparent, self-extinguishing cover, Polyamide
- Cover and enclosure inseparable
- Silver-plated contact rivets
- Self-cleaning contacts
- 2 mounting screws M4, captive
- Screw terminals, max. 2 cable entries per terminal
- Terminals accessible through cover
- Protection class IP 20

Application

The series AZ061 contact is a double actuated positive break contact with separated contact bridges. It is used to monitor the safety interlock at automatic lift doors and to monitor lift landing doors.

Contacts/ Switch travel

1 NC contact 

Positive break door contact **AZ 061 K**

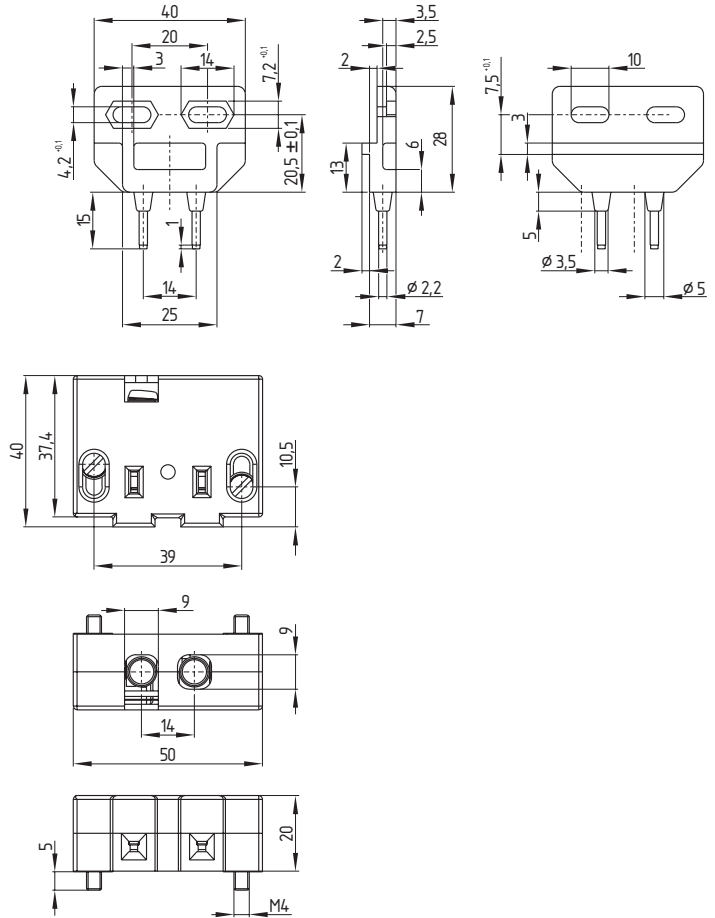
Actuator **AZ 06-13 B/18**

Notice

Actuators must be ordered separately.

Positive break door contacts

Series AZ 19



Features

- Self-extinguishing, fibreglass reinforced, thermoplastic enclosure, Ultramid
- Self-extinguishing, fibreglass reinforced thermoplastic cover, Ultramid
- Cover and enclosure inseparable
- Silver-plated copper rivets
- Self-cleaning contacts
- 2 mounting screws M4, captive
- Terminals with cage clamp*
- Screws accessible through cover
- Protection class IP 10

Application

The series AZ 19 contact is a double actuated positive break contact with separated contact bridges, used to monitor the safety interlock at automatic lift doors. A special actuator Spez. 2006-1 is available.

Contacts/ Switch travel

1 NC contact 

Positive break door contact **AZ 19 K**

Actuator **SPEZ 2006-1**

Notice

Actuators must be ordered separately.

* Cage clamp is a registered trademark of WAGO Kontakttechnik GmbH, Germany

Door contacts with positive break

Technical data

	AZ 051	AZ 061	AZ 19
Standards:	DIN EN 81; CAN/CSA-B44.1/ASME-A15.5		DIN EN 81
Test certificate:	test assessment from TÜV; UL/CSA		
Enclosure:	Ultramid, self-extinguishing, fibreglass reinforced		
Cover:	Polyamide, self-extinguishing, transparent		Ultramid, self-extinguishing, fibreglass reinforced
Actuator:	silver-plated brass, Ultramid, self-extinguishing		Brass with silver contacts, Noryl, self-extinguishing
Protection class:	IP 00	IP 20	IP 10
	to IEC 60529/EN 60529/DIN VDE 0470-1		
Contact material:	Cu-rivets with silver coating		
Switching element:	1 NC contact		
Switching system:	self-cleaning contacts		
Termination:	terminal screws, DIN 7984, with self-lifting clamps		Terminals with cage clamps
Wire cross-section:	single-wired, min. 0.75 mm ² , max. 2.5 mm ²		
External cable diameter:	max. 3.5 mm		
Actuating force			
at 5 mm travel	1,6 N ± 20 %,	1,6 N ± 20 %,	2 N ± 20 %,
	5 mm total travel	7 mm total travel	8 mm total travel
Rated insulation voltage:	500 V		
Thermal test current:	4 A		
Rated operating			
current/voltage:	2 A / 230 VAC; 1 A / 200 VDC	2 A / 230 VAC; 2 A / 200 VDC	2 A / 230 VAC; 2 A / 200 VDC
Short-circuit protection:	2 A gL/gG		
Operating temperature:	- 30 °C ... + 70 °C		
Mechanical life:	1 million operations		
Relative atmospheric humidity:	≤ 95 %, non-condensing		



Safety monitoring modules

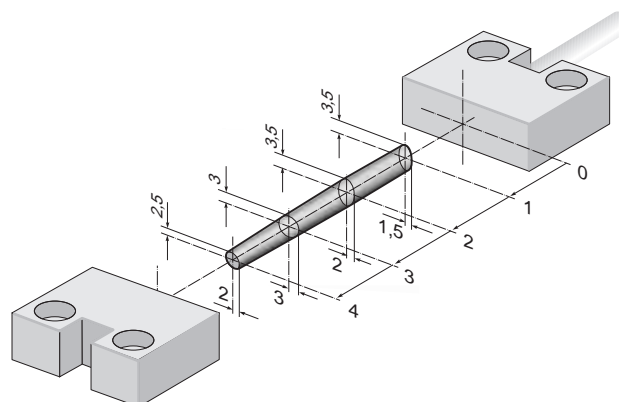
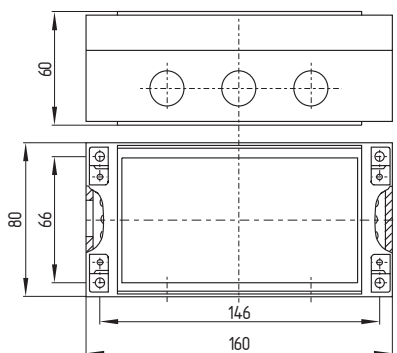
Series AES 9107 in conjunction with BNS 250 for contactless hook bar monitoring at landing doors



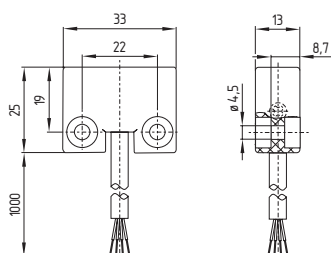
Features

- EC-Type Approval Certificate
- 1 enabling path
- Monitoring of a coded safety sensor BNS 250-11z
- Internal protection of the enabling path through 2 A fuse
- Enclosure-Protection class IP 65

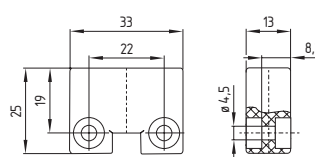
AES 9107



BNS 250-11z



BPS 250



Part numbers

Safety monitoring module

Magnetic safety sensor

Actuating magnet

AES 9107

BNS 250-11z

BPS 250

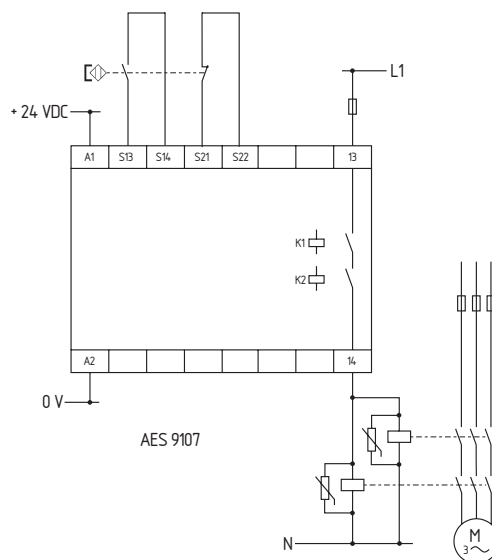
Safety monitoring modules

Technical data

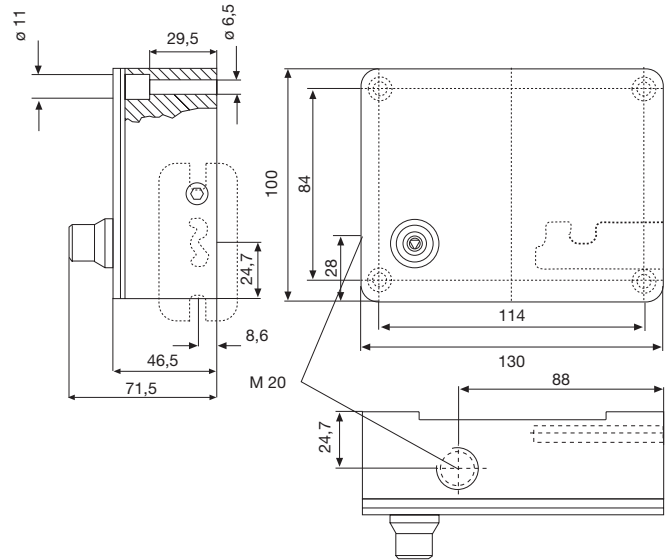
AES 9107	
Standards:	IEC/EN 60204-1/VDE 0113 part 1; EN 954-1; EN 1088; DIN EN 81-1/-2; Directive 95/16/EG
Enclosure:	ABS
Fixing:	4 mounting holes in enclosure
Protection class:	terminals IP 65 to IEC/EN 60529/DIN VDE 0470-1
Operating voltage:	24 VDC \pm 15% incl. 10% residual ripple
Operating current:	0,1 A
Power consumption:	2,8 VA
Inputs:	S13-14 / S21-22:
Input resistance:	S13: 3 k Ω ; S21: 1 k Ω
Max. cable length:	1000 m for 0.75 mm ² cables
Outputs:	1 enabling path with 2 NO contacts connected in series, fuse 2 A
Utilisation category:	AC-15; DC-13
Rated operating current/voltage:	2 A / 250 VAC; 2 A / 24 VDC
Switching voltage:	max. 250 VAC
Output current:	max. 2 A
Switching capacity:	max. 500 VA
EMC rating:	conform to EMC directive
Max. switching frequency:	1 Hz
Vibrations:	10 ... 55 Hz/amplitude 0,35 mm \pm 15 % at control position
Shock resistance:	30 g/11 ms
Operating temperature:	0 °C ... + 55 °C
Storage and transport temperature:	- 25 °C ... + 70 °C



Wiring diagram



Door locking device Series AV 415



Features

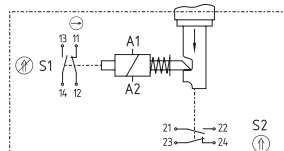
- EG-type approval
- Metal enclosure
- 4 contacts to control the door and locking position
- Holding force 3500 N
- Triangle release on the cover side

Application

The AV 415 is a type approved door locking device with integrated un-locking magnet. Because of its heavy duty design it is particularly suitable for construction and service lifts.

Actuation on de-energisation

2 NO
2 NC



Door locking
device actuator

AV 415-22zpkFE
AZ/AZM 415-B1

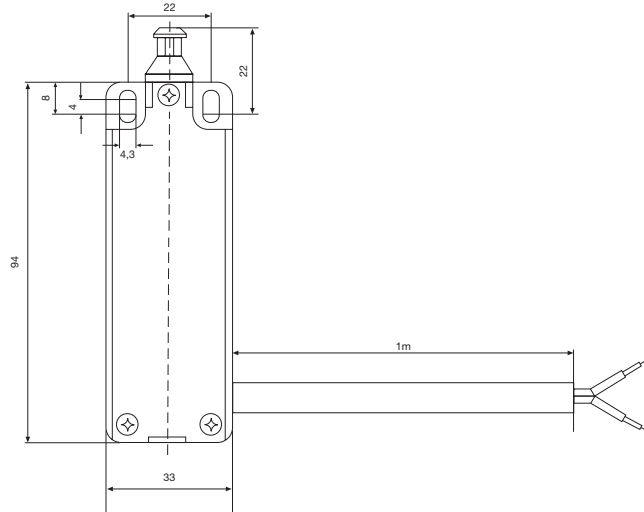
Door locking device

Technical data

AV 415	
Standards:	IEC/EN 60947-5-1/DIN VDE 0660-200; EN 1088; BG-GS-ET-19, EN 81-1/2
Enclosure:	Light-alloy diecasting, paint finish
Actuator and latching bolt:	Zinc-plated/aluminium
Protection class:	IP 54 bzw. IP 67, nach IEC/EN 60529/DIN VDE 0470-1
Contact material:	Silver
Switching element:	Changeover with double break galvanically separated contact bridges
Switching system:	⊖ IEC 60947-5-1; BG-GS-ET-19; slow action, NC contacts with positiv break
Termination:	screw terminals
Wire cross-section:	max. 2,5 mm ² (including conductor ferrules)
Rated impulse	
withstand voltage U_{imp} :	4 kV
Rated insulation voltage:	250 V
Thermal test current:	6 A
Utilisation category:	AC-15 / DC-13
Rated operating current/voltage:	2 A / 250 V AC; 1 A / 24 V DC
Short-circuit protection:	
Positive break travel:	10 mm
Positive break force:	min. 15 N
Magnet:	100% ED
Rated control	12 V DC; 24 V AC/DC;
voltage U_g :	110 V AC; 230 V AC
Power consumption:	max. 10 W
Operating temperature:	- 25 °C ... + 50 °C
Mechanical life:	> 1 Million operations
Holding force F_{max} :	3500 N



Position switch with safety function Series ZSM 241

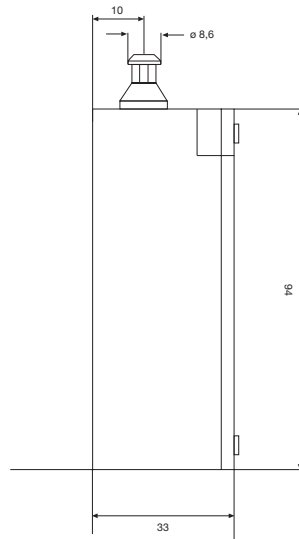


Features

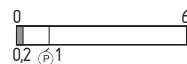
- Thermoplastic enclosure
- Electromagnetic reset
- Magnetic snap action system
- Actuating force 6 N (± 2 N)
- Lead wire 1 m
- Cable entry right or left

Application

The ZSM 241 is a position switch with safety function and an electromagnetic reset. It can particularly be used for overspeed governors at machine roomless lifts.



Contacts/ switch travel



Leadwire right
Leadwire left

ZSM 241-01xr-R
ZSM 241-01xr-L

Position switch with safety function

Technical data

ZSM 241	
Standards:	IEC/EN 60947-1/DIN VDE 0660 Teil 200; BG-GS-ET-15; DIN EN 81-1/2
Enclosure:	aluminium diecasting, enamelled
Protection class:	IP 54 to IEC/EN 60529/DIN VDE 0470-1
Contact material:	Silver
Switching system:	A IEC 60947-5-1; snap action system, positive break NC contact
Rated impulse	
withstand voltage U_{imp} :	4 kV
Rated insulation	
Voltage U_i :	250 V
Utilisation category:	AC-15 / DC-13
Rated operation	
current/voltage I_e/U_e :	4 A / 230 V AC, 4 A / 24 V DC,
Short-circuit protection:	4 A GL-gI
Operating temperature:	- 25 °C ... + 40 °C
Contact opening width:	2 x 2 mm
Mechanical life:	5 x 10 ⁴ operations
Actuating force:	6 N (± 2 N)
Rated control	
supply voltage U_S :	230 VAC / 50 Hz
Magnet:	3 % ED



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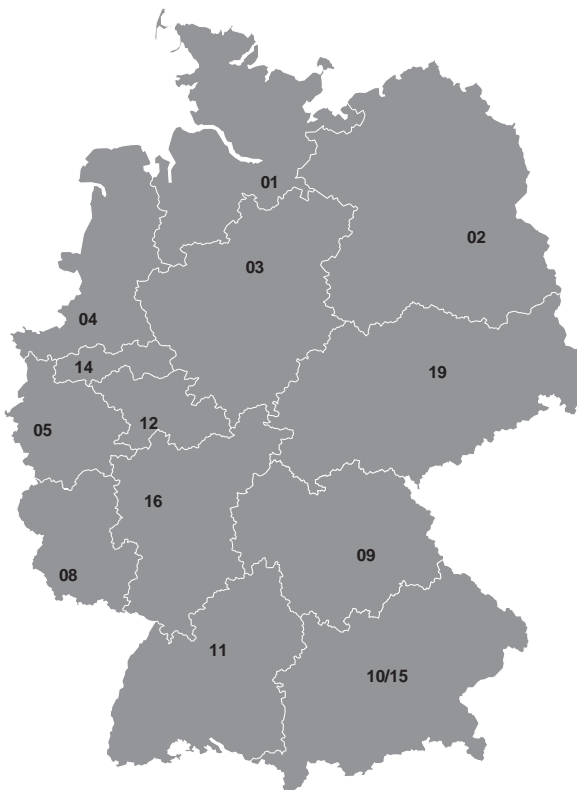
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