

## Datasheet - AES 6112

Image: [LOGO]

Guard door monitors and Safety control modules for Emergency Stop applications / Monitoring of electromechanical and non-contact switchgear / AES 6112

- Monitoring of BNS range magnetic safety sensors
- 1 safety contact, STOP 0



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

### Ordering details

Product type description	AES 6112
Article number	1112461
EAN code	4030661058443

### Approval


Approval	 BG
	 USA/CAN

### Classification

Standards	EN ISO 13849-1, IEC 61508
PL	up d
Control category	up 3
PFH value	1.0 x 10 <sup>-7</sup> /h
- notice	up to max. 50.000 switching cycles/year and at max. 80% contact load
SIL	up 2
Mission time	20 Years

### Global Properties

Product name	AES 6112
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Standards	IEC/EN 60204-1, IEC 60947-5-3, EN 954-1, BG-GS-ET-14, BG-GS-ET-20
Compliance with the Directives (Y/N) 	Yes
Mounting	snaps onto standard DIN rail to EN 60715
Materials	
- Material of the housings	Plastic, glass-fibre reinforced thermoplastic
- Material of the contacts	AgCdO
Weight	125 g
Start conditions	Automatic
Start input (Y/N)	No
Feedback circuit (Y/N)	No
Start-up test (Y/N)	No
Reset after disconnection of supply voltage (Y/N)	Yes
Automatic reset function (Y/N)	Yes
Reset with edge detection (Y/N)	No
Drop-out delay	
- Drop-out delay in case of emergency stop	< 50 ms

### Mechanical data

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Connection type	Screw connection
Cable section	
- Max. Cable section	1.5 mm <sup>2</sup>
Pre-wired cable	rigid or flexible
Detachable terminals (Y/N)	No
Mechanical life	50.000.000 operations
resistance to shock	30 g / 11 ms
Resistance to vibration To EN 60068-2-6	10...55 Hz, Amplitude 0,35 mm, ± 15 %

### Ambient conditions

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Ambient temperature	
- Min. environmental temperature	0°C
- Max. environmental temperature	+ 55°C
Storage and transport temperature	
- Min. Storage and transport temperature	- 25°C
- Max. Storage and transport temperature	+ 70°C
Protection class	
- Protection class-Enclosure	IP40
- Protection class-Terminals	IP20
- Protection class-Clearance	IP54
Air clearances and creepage distances To IEC/EN 60664-1	
- Rated impulse withstand voltage U <sub>imp</sub>	4.8 kV
- Overvoltage category	III To VDE 0110
- Degree of pollution	2 To VDE 0110

### Electromagnetic compatibility (EMC)

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EMC rating	IEC/EN 61000-4-3, IEC/EN 61000-4-6, IEC 61000-6-2
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### Electrical data

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Rated DC voltage for controls	
- Min. rated DC voltage for controls	20.4 V
- Max. rated DC voltage for controls	27.6 V

Rated AC voltage for controls, 50 Hz	
- Min. rated AC voltage for controls, 50 Hz	-
- Max. rated AC voltage for controls, 50 Hz	-
Rated AC voltage for controls, 60 Hz	
- Min. rated AC voltage for controls, 60 Hz	-
- Max. rated AC voltage for controls, 60 Hz	-
Contact resistance	max. 100 mΩ
Power consumption	2.5 W
Type of actuation	DC
Switch frequency	10 Hz
Rated insulation voltage $U_i$	250 V
Rated operating voltage $U_e$	24 VDC ±15%
Thermal test current $I_{the}$	5 A
Operating current $I_e$	0,1 A
Electronic protection (Y/N)	No

## Inputs

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### Monitored inputs

- Short-circuit recognition (Y/N)	Yes
- Wire breakage detection (Y/N)	Yes
- Earth connection detection (Y/N)	No
Number of shutters	2 x 1 piece
Number of openers	2 x 2 piece
Cable length	100 m with 0,75 mm <sup>2</sup> (for Rated voltage)

## Outputs

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Stop category	0
Number of safety contacts	1 piece
Number of auxiliary contacts	0 piece
Number of signalling outputs	0 piece
Switching capacity	
- Switching capacity of the safety contacts	max. 250 VAC, max. 5 A ohmic, inductive min. > 10 mA
Fuse rating	
- Protection of the safety contacts	5 A gG D-fuse
Utilisation category To EN 60947-5-1	AC-15: 250 V / 2 A DC-13: 24 V / 2 A
Number of undelayed semi-conductor outputs with signaling function	0 piece
Number of undelayed outputs with signaling function (with contact)	0 piece
Number of delayed semi-conductor outputs with signaling function.	0 piece
Number of delayed outputs with signalling function (with contact).	0 piece
Number of secure undelayed semi-conductor outputs with signaling function	0 piece
Number of secure, undelayed outputs with signaling function, with contact.	0 piece
Number of secure, delayed semi-conductor outputs with signaling function	0 piece
Number of secure, delayed outputs with signaling function (with contact).	0 piece

## LED switching conditions display

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- Authorized operation	
LED switching conditions display (Y/N)	Yes

Number of LED's 1 piece

LED switching conditions display

- The integrated LEDs indicate the following operating states.

## Miscellaneous data

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Applications



Safety sensor



Guard system

## Dimensions

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Dimensions

- Width 48 mm
- Height 96 mm
- Depth 58 mm

## notice

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Inductive loads (e.g. contactors, relays, etc.) are to be suppressed by means of a suitable circuit.

## notice - Wiring example

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To secure one or a number of guard doors up to PL c and Category 1

Monitoring a number of guard doors using magnetic safety sensors BNS range

Monitoring further guard doors:

Further magnetic safety sensors can be connected to S2 in a similar way to those on S1.

The wiring diagram is shown with guard doors closed and in de-energised condition.

## Documents

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**Operating instructions and Declaration of conformity (de)** 775 kB, 05.03.2010

[http://127.0.0.1/Bilddata/Si\\_baust/Pdf/Aes6112/bedien/de/mrl\\_aes6112-7112\\_de.pdf](http://127.0.0.1/Bilddata/Si_baust/Pdf/Aes6112/bedien/de/mrl_aes6112-7112_de.pdf)

**Operating instructions and Declaration of conformity (en)** 744 kB, 05.03.2010

[http://127.0.0.1/Bilddata/Si\\_baust/Pdf/Aes6112/bedien/en/mrl\\_aes6112-7112\\_en.pdf](http://127.0.0.1/Bilddata/Si_baust/Pdf/Aes6112/bedien/en/mrl_aes6112-7112_en.pdf)

**Operating instructions and Declaration of conformity (nl)** 677 kB, 23.04.2010

[http://127.0.0.1/Bilddata/Si\\_baust/Pdf/Aes6112/bedien/nl/mrl\\_aes6112-7112\\_nl.pdf](http://127.0.0.1/Bilddata/Si_baust/Pdf/Aes6112/bedien/nl/mrl_aes6112-7112_nl.pdf)

**Operating instructions and Declaration of conformity (jp)** 811 kB, 12.08.2010

[http://127.0.0.1/Bilddata/Si\\_baust/Pdf/Aes6112/bedien/jp/mrl\\_aes6112-7112\\_jp.pdf](http://127.0.0.1/Bilddata/Si_baust/Pdf/Aes6112/bedien/jp/mrl_aes6112-7112_jp.pdf)

**Wiring example (99)** 16 kB, 20.08.2008

[http://127.0.0.1/Bilddata/Si\\_baust/Aes6112/Schaltun/kaes6102.pdf](http://127.0.0.1/Bilddata/Si_baust/Aes6112/Schaltun/kaes6102.pdf)

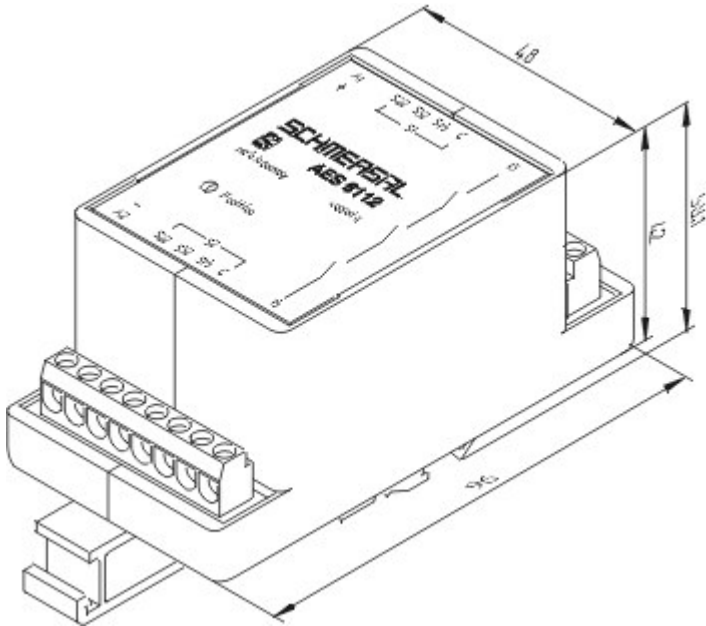
**BG-test certificate (en)** 574 kB, 05.01.2011

[http://127.0.0.1/Bilddata/Si\\_baust/Pdf/Aes6112/baumuste/z\\_611p02.pdf](http://127.0.0.1/Bilddata/Si_baust/Pdf/Aes6112/baumuste/z_611p02.pdf)

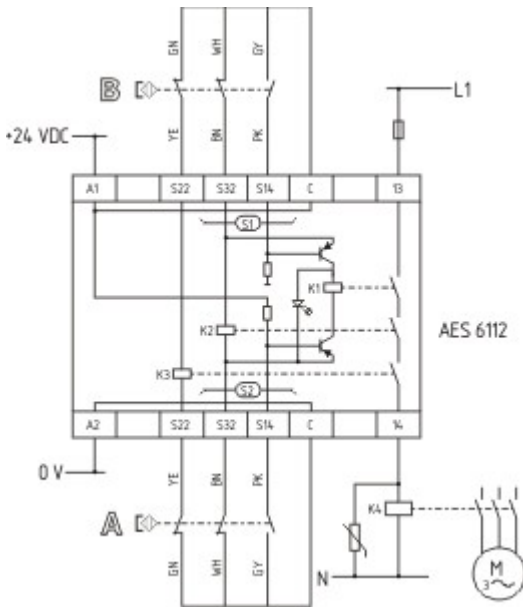
**BG-test certificate (de)** 585 kB, 05.01.2011

[http://127.0.0.1/Bilddata/Si\\_baust/Pdf/Aes6112/baumuste/z\\_611p01.pdf](http://127.0.0.1/Bilddata/Si_baust/Pdf/Aes6112/baumuste/z_611p01.pdf)

## Images



Dimensional drawing (basic component)



Wiring example