

## Datasheet - AES 1102.4



Guard door monitors and Safety control modules for Emergency Stop applications / Micro Processor based safety controllers (Series AES) / AES 1102



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

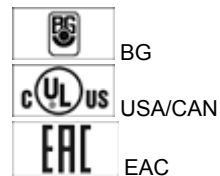
(Minor differences between the printed image and the original product may exist!)

### Ordering details

Product type description	AES 1102.4
Article number	101126152
EAN Code	4030661058962
eCl@ss	27-37-19-01

### Approval

Approval




### Classification

Standards	EN ISO 13849-1, IEC 61508
PL	up c
Control category	up 1
PFH value	1.14 x 10 <sup>-6</sup> /h
- notice	up to max. 50.000 switching cycles/year and at max. 80% contact load
SIL	up 1
Mission time	20 Years

## Global Properties

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Permanent light	AES 1102
Standards	IEC/EN 60204-1, IEC 60947-5-3, IEC 61508, BG-GS-ET-14, BG-GS-ET-20
Compliance with the Directives (Y/N) 	Yes
Climatic stress	EN 60068-2-3, BG-GS-ET-14
Mounting	snaps onto standard DIN rail to EN 60715
Terminal designations	IEC/EN 60947-1
Materials	
- Material of the housings	Plastic, glass-fibre reinforced thermoplastic, ventilated
- Material of the contacts	AgCdO
Weight	160
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

## Mechanical data

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Connection type	Screw connection
Cable section	
- Max. Cable section	2.5
Pre-wired cable	rigid or flexible
Tightening torque for the terminals	0,6
Detachable terminals (Y/N)	No
Mechanical life	3.000.000 operations
Electrical lifetime	100.000 operations for 230 VAC, 5 A (cos $\varphi$ = 1)
resistance to shock	30 g / 11 ms
Resistance to vibration To EN 60068-2-6	10...55 HZ, Amplitude 0,35 mm, $\pm$ 15 %

## Ambient conditions

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Ambient temperature	
- Min. environmental temperature	0
- Max. environmental temperature	+55
Storage and transport temperature	
- Min. Storage and transport temperature	-25
- Max. Storage and transport temperature	+70
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 $U_{imp}$	4 kV
- Overvoltage category	III To VDE 0110
- Degree of pollution	2 To VDE 0110

## Electromagnetic compatibility (EMC)

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EMC rating conforming to EMC Directive

## Electrical data

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Rated DC voltage for controls	
- Max. rated DC voltage for controls	-
- Max. rated DC voltage for controls	-
Rated AC voltage for controls, 50 Hz	
- Min. rated AC voltage for controls, 50 Hz	35.7
- Max. rated AC voltage for controls, 50 Hz	46.2
Rated AC voltage for controls, 60 Hz	
- Min. rated AC voltage for controls, 60 Hz	35.7
- Max. rated AC voltage for controls, 60 Hz	46.2
Contact resistance	max. 100 mΩ
Power consumption	2.4
Type of actuation	AC
Switch frequency	10
Rated insulation voltage $U_i$	250 V
Rated operating voltage $U_e$	42 V
Thermal test current $I_{the}$	4 A
Operating current $I_e$	0,1 A
Electronic protection (Y/N)	No

## Inputs

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<b>Monitored inputs</b>	
- Wire breakage detection (Y/N)	Yes
- Short-circuit recognition (Y/N)	No
- Earth connection detection (Y/N)	No
Number of shutters	2
Number of openers	4
Input resistance	-
Input signal "1"	-
Input signal "0"	-
Cable length	1000 m with 0,75 mm <sup>2</sup> (for Rated voltage)

## Outputs

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Stop category	0
Number of safety contacts	1
Number of auxiliary contacts	0
Number of signalling outputs	0
Switching capacity	
- Switching capacity of the safety contacts	max. 4 A / 6 A
Fuse rating	
- Protection of the safety contacts	4 A gG D-fuse / 6 A
Utilisation category To EN 60947-5-1	AC-15: 250 V / 1,5 A DC-13: 24 V / 1 A
Number of undelayed semi-conductor outputs with signaling function	0
Number of undelayed outputs with signaling function (with contact)	0
Number of delayed semi-conductor outputs with signaling function.	0
Number of delayed outputs with signalling function (with contact).	0

Number of secure undelayed semi-conductor outputs with signaling function	0
Number of secure, undelayed outputs with signaling function, with contact.	0
Number of secure, delayed semi-conductor outputs with signaling function	0
Number of secure, delayed outputs with signaling function (with contact).	0

## LED switching conditions display

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LED switching conditions display (Y/N)	Yes
Number of LED's	1
LED switching conditions display	
- The integrated LEDs indicate the following operating states.	
- Authorized operation	

## Miscellaneous data

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Applications



Safety sensor



Guard system

## Dimensions

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Dimensions	
- Width	22.5 mm
- Height	75 mm
- Depth	110 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  
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 (jp)** 306 kB, 27.08.2012

Code: mrl\_aes\_1102\_1112\_jp

**Operating instructions and Declaration of conformity (de)** 205 kB, 22.11.2017

Code: mrl\_aes\_1102\_1112\_de

**Operating instructions and Declaration of conformity (pt)** 240 kB, 03.01.2018

Code: mrl\_aes\_1102\_1112\_pt

**Operating instructions and Declaration of conformity (en)** 236 kB, 22.11.2017

Code: mrl\_aes\_1102\_1112\_en

**Operating instructions and Declaration of conformity (it)** 236 kB, 03.01.2018

Code: mrl\_aes\_1102\_1112\_it

**Operating instructions and Declaration of conformity (pl)** 250 kB, 03.01.2018

Code: mrl\_aes\_1102\_1112\_pl

**Operating instructions and Declaration of conformity (nl)** 235 kB, 03.01.2018

Code: mrl\_aes\_1102\_1112\_nl

**Operating instructions and Declaration of conformity (fr)** 238 kB, 03.01.2018

Code: mrl\_aes\_1102\_1112\_fr

**Operating instructions and Declaration of conformity (es)** 237 kB, 03.01.2018

Code: mrl\_aes\_1102\_1112\_es

**Wiring example (99)** 17 kB, 20.08.2008

Code: kaes1107

**BG-test certificate (de)** 273 kB, 27.08.2018

Code: z\_110p01

**BG-test certificate (en)** 272 kB, 27.08.2018

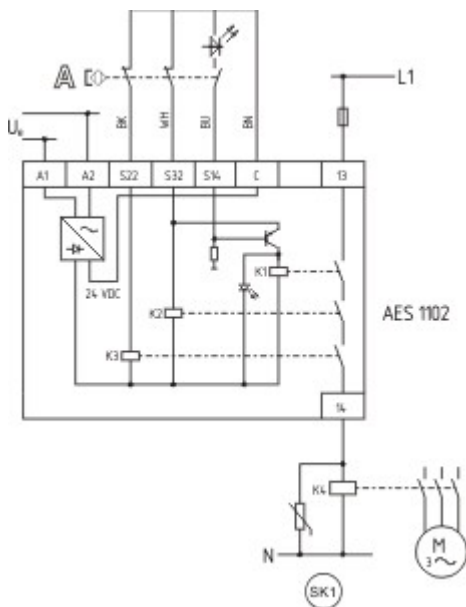
Code: z\_110p02

**EAC certification (ru)** 1 MB, 15.03.2018

Code: q\_aes01

## Images

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Wiring example

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The data and values have been checked thoroughly. Technical modifications and errors excepted.

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