Datasheet - AES 1112.1

Guard door monitors and Safety control modules for Emergency Stop applications / Micro Processor based safety controllers (Series AES) / AES 1112

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

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

Ordering details

Product type description	AES 1112.1
Article number	101128798
EAN code	4030661059174
eCl@ss	27-37-19-01

Approval

Approval	BG USA/CAN

Classification

Standards	EN ISO 13849-1, IEC 61508
PL	up c
Control category	up 1
PFH value	1.14 x 10-6/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

Product name	AES 1112
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) CE	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 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

Connection type	Screw connection
Cable section	
- Max. Cable section	2.5 mm²
Pre-wired cable	rigid or flexible
Tightening torque for the terminals	0,6 Nm
Detachable terminals (Y/N)	No
Mechanical life	10.000.000 operations
Electrical lifetime	100.000 operations for 230 VAC, 5 A (cos φ = 1)
restistance to shock	30 g / 11 ms
Resistance to vibration To EN 60068-2-6	10...55 Hz, Amplitude 0,35 mm, ± 15 %

Ambient conditions

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_{imp}	4
- Overvoltage category	III To VDE 0110
- Degree of pollution	2 To VDE 0110

Electromagnetic compatibility (EMC)

EMC rating	conforming to EMC Directive

Electrical data

Rated DC voltage for controls	
- Min. 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	93.5 V
- Max. rated AC voltage for controls, 50 Hz	121 V
Rated AC voltage for controls, 60 Hz	
- Min. rated AC voltage for controls, 60 Hz	93.5 V
- Max. rated AC voltage for controls, 60 Hz	121 V
Contact resistance	max. 100 mΩ
Power consumption	2.4 W
Type of actuation	AC
Switch frequency	10 Hz
Rated insulation voltage U_i	250 V
Rated operating voltage U_e	110 VAC
Thermal test current I_{the}	4 A
Operating current I_e	0,03 A
Electronic protection (Y/N)	No

Inputs

Monitored inputs	
- Short-circuit recognition (Y/N)	No
- Wire breakage detection (Y/N)	Yes
- Earth connection detection (Y/N)	No
Number of shutters	1 piece
Number of openers	2 piece
Input resistance	-
Input signal "1"	-
Input signal "0"	-
Cable length	1000 m with 0,75 mm² (for Rated voltage)

Outputs

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. 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: 230 V / 3 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

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.
- Authorized operation

Miscellaneous data

Applications


Safety sensor


Guard system

Dimensions

Dimensions

- Width	22.5 mm
- Height	75 mm
- Depth	110 mm

notice

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

notice - Wiring example

To secure 2 guard doors up to PL c and Category 1

Monitoring 2 guard door(s), each with a magnetic safety sensor of the BNS range

Monitoring one guard door
If only one magnetic safety sensor is connected to S1, the terminals S22, S32 and C of S2 must be bridged.

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

Documents

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) 228 kB, 18.06.2012
Code: mrl_aes_1102_1112_de

Operating instructions and Declaration of conformity (en) 224 kB, 18.06.2012
Code: mrl_aes_1102_1112_en

Operating instructions and Declaration of conformity (it) 225 kB, 15.08.2012
Code: mrl_aes_1102_1112_it

Operating instructions and Declaration of conformity (nl) 203 kB, 26.02.2013
Code: mrl_aes_1102_1112_nl

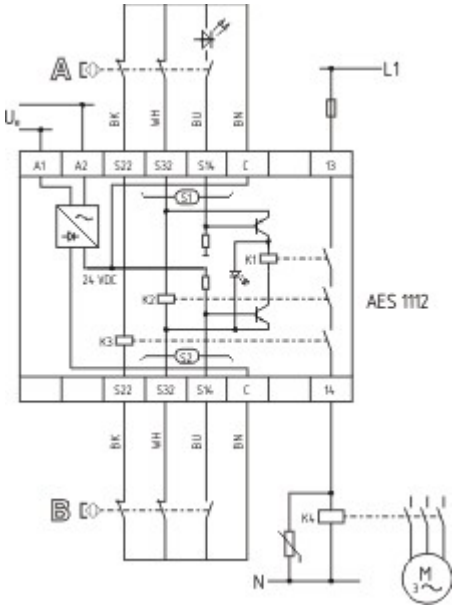
Operating instructions and Declaration of conformity (fr) 260 kB, 20.09.2012
Code: mrl_aes_1102_1112_fr

Operating instructions and Declaration of conformity (es) 225 kB, 03.09.2012
Code: mrl_aes_1102_1112_es

Wiring example (99) 17 kB, 20.08.2008
Code: kaes1l06

EAC certification (ru) 833 kB, 05.10.2015
Code: q_6042p17_ru

Images



Wiring example