

Datasheet - AES 1337



Guard door monitors and Safety control modules for Emergency Stop applications / Micro Processor based safety controllers (Series AES) / AES 1337



- Monitoring of BNS range magnetic safety sensors
- 3 safety contacts, STOP 0
- 1 Signalling output

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

Ordering details

Product type description	AES 1337
Article number	101172210
EAN Code	4250116201839
eCl@ss	27-37-19-01

Approval

Approval



Classification

Standards	EN ISO 13849-1, IEC 61508, EN 60947-5-1
PL	up e
Control category	up 4
DC	99%
CCF	> 65 points
PFH value	≤ 2, 0.0 x 10 ⁻⁸ /h
SIL	up 3
Mission time	20 Years
notice	The PFH value is applicable for the combinations listed in the table for


contact load (K) (current through enabling paths) and switching cycle number (n-op/y).

In case of 365 operating days per year and a 24-hour operation, this results in the specified switching cycle times (t-cycle) for the relay contacts.

Diverging applications on request.

K	n-op/y	t-cycle
20 %	525.600	1,0 min
40 %	210.240	2,5 min
60 %	75.067	7,0 min
80 %	30.918	17,0 min
100 %	12.223	43,0 min

Global Properties

Permanent light	AES 1337
Standards	IEC/EN 60204-1, IEC 60947-5-3, EN ISO 13849-1, IEC 61508, BG-GS-ET-14
Compliance with the Directives (Y/N) 	Yes
Climatic stress	EN 60068-2-78
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	AgSn0, self-cleaning, positive action
Weight	255
Start conditions	Automatic or Start button (Optional monitored)
Start input (Y/N)	Yes
Feedback circuit (Y/N)	Yes
Start-up test (Y/N)	No
Automatic reset function (Y/N)	Yes
Reset with edge detection (Y/N)	Yes
Pull-in delay	
- ON delay with automatic start	typ. 170 ms
- ON delay with reset button	typ. 25 ms
Drop-out delay	
- Drop-out delay in case of emergency stop	typ. 15 ms / max. 23 ms

Mechanical data

Connection type	Screw connection
Cable section	
- Min. Cable section	0,25
- 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	10.000.000 operations
Electrical lifetime	Derating curve available on request
resistance to shock	10 g / 11 ms
Resistance to vibration To EN 60068-2-6	10...55 HZ, Amplitude 0,35 mm

Ambient conditions

Ambient temperature	
- Min. environmental temperature	-25
- Max. environmental temperature	+45
Storage and transport temperature	

- Min. Storage and transport temperature	-40
- Max. Storage and transport temperature	+85
Protection class	
- Protection class-Enclosure	IP40
- Protection class-Terminals	IP20
- Protection class-Clearance	IP54
Air clearances and creepage distances To IEC/EN 60664-1	
Degree of pollution	2

Electromagnetic compatibility (EMC)

EMC rating	conforming to EMC Directive
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Electrical data

Rated DC voltage for controls	
- Max. rated DC voltage for controls	20.4
- Max. rated DC voltage for controls	28.8
Rated AC voltage for controls, 50 Hz	
- Min. rated AC voltage for controls, 50 Hz	20.4
- Max. rated AC voltage for controls, 50 Hz	26.4
Rated AC voltage for controls, 60 Hz	
- Min. rated AC voltage for controls, 60 Hz	20.4
- Max. rated AC voltage for controls, 60 Hz	26.4
Contact resistance	max. 100 mΩ
Power consumption	max. 2.1 W / 3.5 VA
Type of actuation	AC/DC
Switch frequency	max. 3 HZ
Rated insulation voltage U_i	250 V
Rated operating voltage U_e	24 VDC -10% / +20%, residual ripple max. 10% 24 VAC -15% / +10%
Thermal test current I_{the}	6 A
Operating current I_e	0,08 A
Frequency range	50 / 60
Electronic protection (Y/N)	Yes
Fuse rating for the operating voltage	Internal electronic trip, tripping current > 0,5 A, Reset after approximately 1 second/s
Bridging in case of voltage drops	typ. 15 ms

Inputs

Monitored inputs

- Short-circuit recognition (Y/N)	Yes
- Wire breakage detection (Y/N)	Yes
- Earth connection detection (Y/N)	Yes
Number of shutters	1
Number of openers	1
Cable length	1500 m with 1.5 mm ² ; 2500 m with 2.5 mm ² (for Rated voltage)
Conduction resistance	max. 40 Ω

Outputs

Stop category	0
Number of safety contacts	3

Number of auxiliary contacts	1
Number of signalling outputs	0
Switching capacity	
- Switching capacity of the safety contacts	max. 250 V, 6 A ohmic (inductive in case of appropriate protective wiring) min. 10 V / 10 mA
- Switching capacity of the auxiliary contacts	24 VDC, 100 mA
Fuse rating	
- Protection of the safety contacts	Safety fuse 8 A quick-blow, 6 A slow blow
- Fuse rating for the auxiliary contacts	Safety fuse 2.5 A quick-blow, 2 A slow blow
Signalling output	Y 1: Guard system on, safety contacts on
Utilisation category To EN 60947-5-1	AC-15: 230 V / 6 A DC-13: 24 V / 6 A
Number of undelayed semi-conductor outputs with signaling function	0
Number of undelayed outputs with signaling function (with contact)	1
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.	3
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

LED switching conditions display (Y/N)	Yes
Number of LED's	4
LED switching conditions display	
- The integrated LEDs indicate the following operating states.	
- Position relay K1	
- Position relay K2	
- Supply voltage U_B	
- Internal operating voltage U_i	

Miscellaneous data

Applications	 Guard system  Safety sensor
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Dimensions

Dimensions	
- Width	22.5 mm
- Height	100 mm
- Depth	121 mm

notice

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

notice - Wiring example

To secure a guard door up to PL 4 and Category #03#

Monitoring 1 guard door(s), each with a magnetic safety sensor of the BNS range

Start button (S) with edge detection

The feedback circuit monitors the position of the contactors K3 and K4.

Automatic start: The automatic start is programmed by connecting the feedback circuit to the terminals X1/X3. If the feedback circuit is not required, establish a bridge

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

Documents

Operating instructions and Declaration of conformity (de) 289 kB, 08.12.2017

Code: mrl_aes1337_de

Operating instructions and Declaration of conformity (nl) 325 kB, 02.01.2018

Code: mrl_aes1337_nl

Operating instructions and Declaration of conformity (pt) 329 kB, 02.01.2018

Code: mrl_aes1337_pt

Operating instructions and Declaration of conformity (jp) 566 kB, 06.07.2015

Code: mrl_aes1337_jp

Operating instructions and Declaration of conformity (es) 325 kB, 02.01.2018

Code: mrl_aes1337_es

Operating instructions and Declaration of conformity (da) 327 kB, 02.01.2018

Code: mrl_aes1337_da

Operating instructions and Declaration of conformity (it) 324 kB, 02.01.2018

Code: mrl_aes1337_it

Operating instructions and Declaration of conformity (pl) 338 kB, 02.01.2018

Code: mrl_aes1337_pl

Operating instructions and Declaration of conformity (en) 323 kB, 08.12.2017

Code: mrl_aes1337_en

Operating instructions and Declaration of conformity (fr) 328 kB, 02.01.2018

Code: mrl_aes1337_fr

Wiring example (99) 431 kB, 12.12.2013

Code: kaes1139

BG-test certificate (de) 3 MB, 27.07.2016

Code: z_aesp01

BG-test certificate (en) 3 MB, 27.07.2016

Code: z_aesp02

CCC certification (cn) 292 kB, 16.01.2017

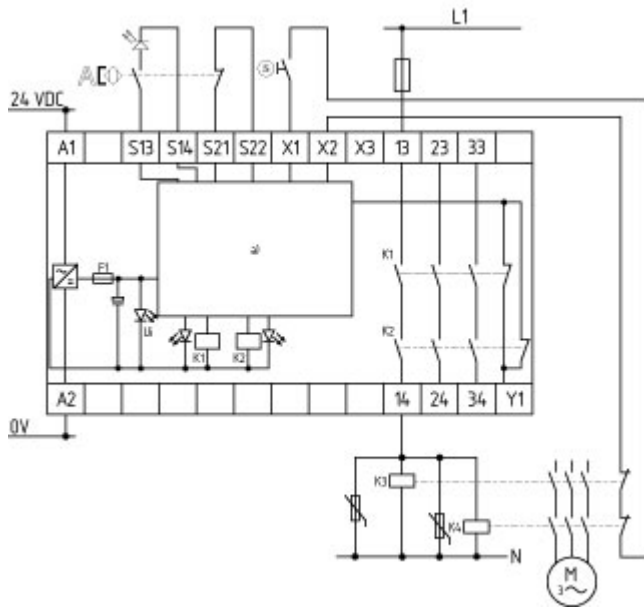
Code: q_srbp06

CCC certification (en) 310 kB, 16.01.2017

Code: q_srbp05

EAC certification (ru) 1 MB, 15.03.2018

Images



Wiring example

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

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