Datasheet - AES 3075

Guard door monitors and Safety control modules for Emergency Stop applications / Micro Processor based safety controllers (Series AES) / AES 3075

☒ Preferred typ

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

- Monitoring of BNS range magnetic safety sensors
- 2 safety contacts, STOP 0
- 4 Signalling outputs

Ordering details

Product type description	AES 3075
Article number	101138576
EAN Code	4030661281360
eCl@ss	27-37-19-01

Approval

Approval	BG USA/CAN EAC

Classification

Standards	EN ISO 13849-1, IEC 61508
PL	up d
Control category	up 3
PFH value	1.0 x 10-7/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

Permanent light	AES 3075
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) CE	Yes

Mounting	snaps onto standard DIN rail to EN 60715
Materials	
- Material of the housings	Plastic, glass-fibre reinforced thermoplastic
Weight	300
Start input (Y/N)	Yes
Feedback circuit (Y/N)	Yes
Start-up test (Y/N)	No
Reset after disconnection of supply voltage (Y/N)	No
Automatic reset function (Y/N)	Yes
Reset with edge detection (Y/N)	No
Pull-in delay	
- ON delay with automatic start	adjustable 0,1 / 1.0 s
Drop-out delay	< 50

Mechanical data

Connection type	Screw connection
Cable section	
- Max. Cable section	4
Tightening torque for the terminals	0,4
Detachable terminals (Y/N)	No
notice	All indications about the cable section are including the conductor ferrules.
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
- 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}	0,5 kV
- 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	
- Max. rated DC voltage for controls	20.4
- Max. rated DC voltage for controls	27.6 VDC
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	-
Power consumption	< 8
Type of actuation	DC
Switch frequency	3
Rated insulation voltage U_i	50 V
Rated operating voltage U_e	24 VDC ± 15%
Thermal test current I_{the}	4 A
Operating current I_e	0,3 A without external contactors and additional outputs
Electronic protection (Y/N)	No

Inputs

Monitored inputs	
- Short-circuit recognition (Y/N)	Yes
- Wire breakage detection (Y/N)	Yes
- Earth connection detection (Y/N)	No
Number of shutters	4
Number of openers	4
Input resistance	approx. 2000 Ω at GND
Input signal "1"	10 … 30 VDC
Input signal "0"	0 … 2 VDC
Cable length	1000 m with 0,75 mm² (for Rated voltage)

Outputs

Stop category	0
Number of safety contacts	2
Number of auxiliary contacts	0
Number of signalling outputs	4
Switching capacity	
- Switching capacity of the safety contacts	max. 24 VDC 700 mA (short-circuit proof)
- Switching capacity of the signaling/diagnostic outputs	min. U_e −4V / Y1…Y5: max. 250 mA
Fuse rating	
- Protection of the safety contacts	4 A gG D-fuse
- Fuse rating for the signaling/diagnostic outputs	short-circuit proof
Signalling output	Y1: Guard system 1 off Y2: Guard system 2 off Y3: Guard system 3 off Y4: Guard system 4 off Y5: System in Classification
Number of undelayed semi-conductor outputs with signaling function	4
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

LED switching conditions display (Y/N)	Yes
Number of LED´s	1

Integral system diagnosis $missingShortName$

Integral system diagnosis ISD

- The following faults are registered by the safety monitoring modules and indicated by ISD
- Failure of door contacts to open or close
- Cross-wire or short-circuit monitoring of the switch connections
- Interruption of the switch connections
- Fault on the input circuits or the relay control circuits of the safety monitoring module

Miscellaneous data

Applications


Safety sensor


Guard system

Dimensions

Dimensions	
- Width	75 mm
- Height	100 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 4 guard doors up to PL d and Category 3

Monitoring 4 guard door(s), each with a magnetic safety sensor of the BNS range

The feedback circuit monitors the positions of the positive-guided NC contacts on the conactors K3 and K4.

Start push button A start push button (NO) can optionally be connected into the feedback circuit. With the guard door closed, the enabling paths are then not closed until the start push button has been operated.

The NC contacts of the external contactors must be wired in series to X1 (+) and X2.

If less than 4 switches are connected, those S21/S22 terminals which are not used for connection of an NC contact must be fitted with a shorting connection. This is based on the applicable jumper inside the safety monitoring unit being set for the NC-NO configuration.

The switch (H6) connected to terminals X3 and X4 switches the enabling outputs Y14 and Y24 on and off with the guard door closed. If no switch is connected, a jumper connection must be mounted between the terminals X3 and X4.

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

The ISD tables (Intergral System Diagnostics) for analysis of the fault indications and their causes are shown in the appendix.

Documents

Operating instructions and Declaration of conformity (da) 247 kB, 02.01.2018

Code: mrl_aes3075_da

Operating instructions and Declaration of conformity (pt) 250 kB, 02.01.2018

Code: mrl_aes3075_pt

Operating instructions and Declaration of conformity (en) 243 kB, 16.11.2017

Code: mrl_aes3075_en

Operating instructions and Declaration of conformity (nl) 243 kB, 02.01.2018
Code: mrl_aes3075_nl

Operating instructions and Declaration of conformity (fr) 247 kB, 02.01.2018
Code: mrl_aes3075_fr

Operating instructions and Declaration of conformity (es) 244 kB, 21.12.2017
Code: mrl_aes3075_es

Operating instructions and Declaration of conformity (de) 205 kB, 16.11.2017
Code: mrl_aes3075_de

Operating instructions and Declaration of conformity (jp) 617 kB, 11.11.2011
Code: mrl_aes3075_jp

Operating instructions and Declaration of conformity (it) 247 kB, 02.01.2018
Code: mrl_aes3075_it

Operating instructions and Declaration of conformity (pl) 261 kB, 02.01.2018
Code: mrl_aes3075_pl

Wiring example (99) 22 kB, 20.08.2008
Code: kaes3l12

ISD tables (Intergral System Diagnostics) (en) 29 kB, 29.07.2008
Code: i_ae1p02

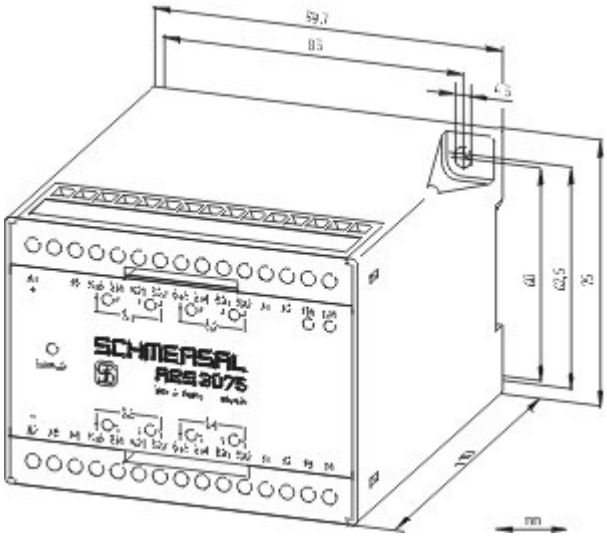
ISD tables (Intergral System Diagnostics) (de) 46 kB, 29.07.2008
Code: i_ae1p01

BG-test certificate (en) 1 MB, 27.08.2018
Code: z_307p02

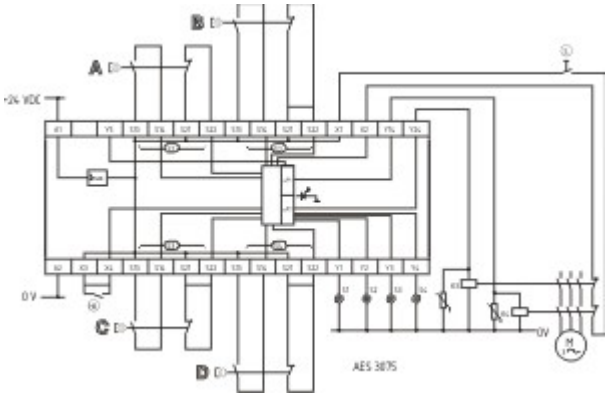
BG-test certificate (de) 1 MB, 16.12.2016
Code: z_307p01

EAC certification (ru) 1 MB, 15.03.2018
Code: q_aesp01

Images



Dimensional drawing (basic component)



Wiring example

K.A. Schmersal GmbH & Co. KG, Möddinghofe 30, D-42279 Wuppertal

Generiert am 13.02.2019 - 13:05:13h Kasbase 3.3.0.F.64I