



AES 2285

- 6 Signalling outputs
- 2 safety contacts, STOP 0
- Multi-evaluation of up to 6 safety guards
- Individual signal outputs for each guard door
- Monitoring of BNS range magnetic safety sensors
- Additional contacts by means of output expander

Data

Ordering data

Note (Delivery capacity)	Phased-out product
	AES 2285
	101172211
EAN (European Article Number)	4250116201846
eCl@ss number, Version 9.0	27-37-18-19
Available until	31.12.2022

Approval - Standards

EAC

General data

	AES 2285
	IEC 61508
	IEC/EN 60204-1
	IEC 60947-5-3
	ISO 13849-1
	BG-GS-ET-14
	BG-GS-ET-20
	EN 60947-5-1
	EN 60068-2-78
Enclosure material	Glass-fibre reinforced thermoplastic, ventilated
Material of the contacts, electrical	AgCdO, self-cleaning, positive drive

Gross weight	430 g
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General data - Features

Stop-Category	0
Electronic Fuse	Yes
Wire breakage detection	Yes
Short-circuit recognition	Yes
Removable Terminals	Yes
Start input	Yes
Feedback circuit	Yes
Automatic reset function	Yes
Reset edge detection	Yes
Reset after disconnection of supply voltage	Yes
Earth connection detection	Yes
Integral System Diagnostics, status	Yes
Number of auxiliary contacts	2
Number of LEDs	3
Number of undelayed semiconductor outputs with signaling function	6
Number of safety contacts	2
Number of Snap-in contacts, maximum	6
Number of Snap-in contacts, minimum	1
Number of signalling outputs	6

Safety appraisal

EN 60947-5-1
IEC 61508

Safety appraisal - Relay outputs

Performance Level, up to	d
Control category to EN13849	3
Diagnostic Coverage (DC) Level	≥ 99 %
PFH-value	2.00×10^{-8} /h
Safety Integrity Level (SIL), applicable for	3
Mission time	20 Year(s)
Common Cause Failure (CCF), minimum	65

Mechanical data

Mounting	Snaps onto standard DIN rail to EN 60715
Mechanical life, minimum	10,000,000 Operations

Mechanical data - Connection technique

Terminal Connector	Screw connection rigid or flexible
Terminal designations	IEC/EN 60947-1 0.25 mm ² 2.5 mm ²
Tightening torque of Clips	0.6 Nm

Mechanical data - Dimensions

Width	45 mm
Height	100 mm
Depth	121 mm

Ambient conditions

	IP40 IP54 IP20
Ambient temperature, minimum	-25 °C
Ambient temperature, maximum	+45 °C
Storage and transport temperature, minimum	-40 °C
Storage and transport temperature, maximum	+85 °C
Resistance to vibrations to EN 60068-2-6	10 ... 55 Hz, Amplitude 0.35 mm 10 g / 11 ms

Ambient conditions - Insulation value

Rated impulse withstand voltage	4 kV III 2
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Electrical data

Frequency range	60 Hz
Thermal test current	6 A 24 VAC -15% / +10%

Rated AC voltage for controls, 50 Hz, minimum	20.4 VAC
Rated control voltage at AC 50 Hz, maximum	26.4 VAC
Rated AC voltage for controls, 60 Hz, minimum	20.4 VAC
Rated control voltage at AC 60 Hz, maximum	26.4 VAC
Rated AC voltage for controls at DC minimum	20.4 VDC
Rated control voltage at DC, maximum	28.8 VDC
Electrical power consumption	3.6 W
Electrical power consumption	6.6 VA
Contact resistance, maximum	0.1 Ω
Note (Contact resistance)	in new state
Drop-out delay in case of power failure, typically	80 ms
Drop-out delay in case of emergency, typically	20 ms
Pull-in delay at automatic start, maximum, typically	100 ms
Pull-in delay at RESET, typically	20 ms

Electrical data - Safe relay outputs

Voltage, Utilisation category AC15	230 VAC
Current, Utilisation category AC-15	6 A
Voltage, Utilisation category DC13	24 VDC
Current, Utilisation category DC13	6 A
Switching capacity, minimum	10 VDC
Switching capacity, minimum	10 mA
Switching capacity, maximum	250 VAC
Switching capacity, maximum	8 A

Electrical data - Digital inputs

Conduction resistance, maximum	40 Ω
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Electrical data - Digital Output

Voltage, Utilisation category DC12	24 VDC
Current, Utilisation category DC12	0.1 A

Electrical data - Relay outputs (auxiliary contacts)

Switching capacity, maximum	24 VDC
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Switching capacity, maximum 2 A

Electrical data - Electromagnetic compatibility (EMC)

EMC rating EMC-Directive

Status indication

Indicated operating states Position relay K2
Position relay K1
Internal operating voltage U_i

Other data

Note (applications) Safety sensor
Guard system

Notes

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

Circuit example

Note (Wiring diagram) The wiring diagram is shown with guard doors closed and in de-energised condition.
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.
To secure 6 guard doors up to PL d and Category 3
Monitoring 6 guard door(s), each with a magnetic safety sensor of the BNS range
Start button (S) with edge detection

Pictures

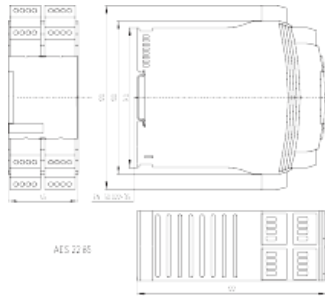
Photo/Product/Catalogue



ID: kaes2f08

| 103,0 kB | .png | 74.083 x 135.114 mm - 210 x 383
Pixel - 72 dpi
| 1,4 MB | .jpg | 342.547 x 625.122 mm - 971 x 1772
Pixel - 72 dpi

Dimension/Product/Basic



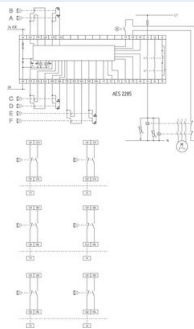
ID: kaes2g05

| 98,3 kB | .cdr |

| 3,7 kB | .png | 74.083 x 67.028 mm - 210 x 190 Pixel
- 72 dpi

| 163,5 kB | .jpg | 352.778 x 319.617 mm - 1000 x 906
Pixel - 72 dpi

Graphic/Product/Wiring



ID: kaes2l09

| 66,2 kB | .cdr |

| 215,5 kB | .jpg | 352.425 x 599.017 mm - 999 x 1698
Pixel - 72 dpi

Graphic/Product/Icon

K	n-op/y	t-cycle
20 %	525.600	1,0 min
40 %	210.240	2,5 min
60 %	75.087	7,0 min
80 %	30.918	17,0 min
100 %	12.223	43,0 min

ID: kformm02

| 191,1 kB | .jpg | 352.778 x 246.592 mm - 1000 x 699
Pixel - 72 dpi

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The details and data referred to have been carefully checked. Images may diverge from original. Further technical data can be found in the manual. Technical amendments and errors possible.

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