SIEMENS

Data sheet 3SK1213-1AL20



SIRIUS SAFETY RELAY OUTPUT EXTENSION 3RO POWER, WITH RELAY ENABLING CIRCUITS 3 NO CONTACTS + RELAY FEEDBACK CIRCUIT 1 NC CONTACT US = 230 V AC SCREW CONNECTION

Figure similar

General technical data:		
product brand name		SIRIUS
Product designation		safety relays
Design of the product		Expansion unit
Protection class IP of the enclosure		IP20
Protection against electrical shock		finger-safe
Insulation voltage Rated value	V	300
Ambient temperature		
during storage	°C	-40 + 80
during operation	°C	-25 + 60
Air pressure acc. to SN 31205	kPa	90 106
Relative humidity during operation	%	10 95
Installation altitude at height above sea level	m	2 000
maximum		
Vibration resistance acc. to IEC 60068-2-6		5 500 Hz: 0,75 mm
Shock resistance		5 g / 10 ms
Surge voltage resistance Rated value	V	4 000
EMC emitted interference		IEC 60947-5-1, IEC 61000
Installation environment regarding EMC		This product is suitable for Class B environments and
		can also be used in domestic environments.
Overvoltage category		Installation category III
Degree of pollution		3
Equipment marking acc. to DIN EN 61346-2		F
Safety Integrity Level (SIL) acc. to IEC 61508		SIL3
Performance level (PL) acc. to EN ISO 13849-1		е
Category acc. to EN ISO 13849-1		4

PFHD with high demand rate acc. to EN 62061	1/h	0.00000001
Average probability of failure on demand (PFDavg) with low demand rate acc. to IEC 61508	1/y	0.000001
T1 value for proof test interval or service life acc. to IEC 61508	У	20
Hardware fault tolerance acc. to IEC 61508		1
Safety device type acc. to IEC 61508-2		Type A
Number of outputs as contact-affected switching element		
• as NC contact		
 for signaling function instantaneous contact 		0
 for signaling function delayed switching 		0
 — safety-related instantaneous contact 		0
 safety-related delayed switching 		0
• as NO contact		
 for signaling function instantaneous contact 		0
 for signaling function delayed switching 		0
— safety-related instantaneous contact		3
 — safety-related delayed switching 		0
Stop category acc. to DIN EN 60204-1		0

General technical data:		
Type of electrical connection Plug-in socket		No
Operating frequency maximum	1/h	360
Switching capacity current of the NO contacts of the		
relay outputs		
• at DC-13		
— at 24 V	Α	6
— at 115 V	Α	1.1
— at 230 V	Α	0.55
● at AC-15		
— at 24 V	Α	10
— at 115 V	Α	10
— at 230 V	Α	10
Thermal current of the switching element with	Α	10
contacts maximum		
Operating current at 17 V minimum	mA	5
Mechanical service life (switching cycles) typical		10 000 000
maximum permissible voltage for safe isolation	V	300
between electronic evaluation device and enabling		
circuit acc. to EN 60947-1		

Design of the fuse link for short-circuit protection of the NO contacts of the relay outputs required		gL/gG: 16 A or MCB type A: 6 A or MCB type B: 4 A or MCB type C: 4 A
Make time with automatic start		
• typical	ms	10
 with AC maximum 	ms	15
Make time with automatic start after power failure		
• typical	ms	10
• maximum	ms	15
Backslide delay time in the event of power failure		
• typical	ms	15
• maximum	ms	15
Recovery time after power failure typical	S	0

Control circuit/ Control:		
Type of voltage of the control supply voltage		AC
Control supply voltage frequency		
1 Rated value	Hz	50
• 2 Rated value	Hz	60
Control supply voltage		
• with AC		
— at 50 Hz		
— Rated value	V	230
— at 60 Hz		
— Rated value	V	230
Operating range factor control supply voltage rated		
value of the magnet coil		
• with AC		
— at 50 Hz		0.85 1.1
— at 60 Hz		0.85 1.1
Active power loss typical	W	3.5

Installation/ mounting/ dimensions:			
mounting position		on horizontal standard mounting rail	
Required spacing for grounded parts at the side	mm	5	
Required spacing with side-by-side mounting at the side	mm	0	
Mounting type		screw and snap-on mounting	
Width	mm	90	
Height	mm	100	
Depth	mm	121.6	

Connections/ Terminals:	
Type of electrical connection	screw-type terminals
Type of connectable conductor cross-section	
• solid	1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²)

 finely stranded 	
— with core end processing	1x (0.5 2.5 mm²), 2x (0.5 1.5 mm²)
Type of connectable conductor cross-section for AWG conductors	
• solid	1x (20 12), 2x (20 14)

Product Function:	
Suitability for operation Device connector 3ZY12	No
Suitability for use	
 safety-related circuits 	Yes

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Certificates/ approvals:				
Certificate of suitability				
 TÜV (German technical inspectorate) certificate 		Yes		
 UL approval 		Yes		
General Product Approval	EM	С	Functional Safety/Safety of Machinery	Declaration of Conformity
			Type Examination	









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Test	other
Certificates	

Type Test
Certificates/Test
Report

Confirmation

Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

http://www.siemens.com/industrial-controls/catalogs

Industry Mall (Online ordering system)

http://www.siemens.com/industrymall

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3SK12131AL20

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3SK12131AL20/all

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/index.aspx?attlD9=3SK12131AL20&lang=en



