



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

General technical details:

product brand name		SIRIUS
product designation		safety relays
Design of the product		Expansion unit
protection class IP / of the housing		IP20
Protection against electrical shock		finger-safe
Insulation voltage / rated value	V	300
Ambient temperature		
• during storage	°C	-40 ... +80
• during operating	°C	-25 ... +60
Air pressure		
• according to SN 31205	kPa	90 ... 106
Relative humidity		
• during operating phase	%	10 ... 95
Installation altitude / at a height over sea level / maximum	m	2,000
Resistance against vibration / according to IEC 60068-2-6		5 ... 500 Hz: 0,75 mm
Resistance against shock		5 g / 10 ms
Impulse voltage resistance / rated value	V	4,000
EMC emitted interference		IEC 60947-5-1, IEC 61000

Installation environment relating to EMC		This product is suitable for Class B environments and can also be used in domestic environments.
Overvoltage class		Installation category III
Degree of pollution		3
Item designation • according to DIN EN 61346-2		F
Safety Integrity Level (SIL) / according to IEC 61508		SIL3
Performance level (PL) / according to ISO 13849-1		e
Category / according to ISO 13849-1		4
Probability of dangerous failure per hour (PFHD) / with high demand rate / according to EN 62061	1/h	0.1E-8
Average probability of failure on demand (PFDavg) / with low demand rate / according to IEC 61508	1/y	0.1E-5
T1 value / for proof test interval or service life / according to IEC 61508	a	20
Hardware fault tolerance / according to IEC 61508		1
Safety device type / according to IEC 61508-2		Type A
Number of outputs / as contact-affected switching element • as NC contact / for reporting function / instantaneous switching • as NO contact / for reporting function / instantaneous switching • as NC contact / for reporting function / delayed switching • as NO contact / for reporting function / delayed switching • as NC contact / safety-related / instantaneous switching • as NO contact / safety-related / instantaneous switching • as NC contact / safety-related / delayed switching • as NO contact / safety-related / delayed switching		0 0 0 0 0 3 0 0
Stop category / according to DIN EN 60204-1		0

General technical details:

Design of the electrical connection / jumper socket		No
Operating cycles / maximum	1/h	360
Switching capacity current / of the NO contacts of the relay outputs • at DC-13 • at 24 V • at 115 V • at 230 V • at AC-15 • at 24 V • at 115 V • at 230 V	A A A A A A A A	6 1.1 0.55 10 10 10

Thermal current / of the contact-affected switching element / maximum	A	10
Mechanical operating cycles as operating time / typical		10,000,000
Max. permissible voltage for safe isolation / between electronic evaluation device and enabling circuit / according to EN 60947-1	V	300
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
• for AC / maximum	ms	15
Make time / with automatic start / after mains power cut		
• typical	ms	10
• maximum	ms	15
Backslide delay time / at mains power cut		
• typical	ms	15
• maximum	ms	15
Recovery time / after mains power cut / typical	s	0

Control circuit:

Type of voltage / of the controlled supply voltage		AC
Control supply voltage frequency		
• 1 / rated value	Hz	50
• 2 / rated value	Hz	60
Control supply voltage		
• at 50 Hz / at AC / rated value	V	230
• at 60 Hz / at AC / rated value	V	230
operating range factor control supply voltage rated value / of the magnet coil		
• at 50 Hz		
• for AC		0.85 ... 1.1
• at 60 Hz		
• for AC		0.85 ... 1.1
Active power loss / typical	W	3.5

Installation/mounting/dimensions:

mounting position		on horizontal standard mounting rail
Distance, to be maintained, to earthed part / sideways	mm	5
Distance, to be maintained, to the ranks assembly / sideways	mm	0
Type of mounting		screw and snap-on mounting
Width	mm	90
Height	mm	100

Depth	mm	121.6
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Connections:

Design of the electrical connection	spring-loaded terminals
Type of the connectable conductor cross-section <ul style="list-style-type: none"> solid finely stranded <ul style="list-style-type: none"> with wire end processing without wire end processing 	1x (0.5 ... 1.5 mm ²), 2x (0.5 ... 1.5 mm ²) 1x (0.5 ... 1.5 mm ²), 2x (0.5 ... 1.5 mm ²) 1x (0.5 ... 1.5 mm ²), 2x (0.5 ... 1.5 mm ²)
Type of the connectable conductor cross-section / for AWG conductors <ul style="list-style-type: none"> solid stranded 	1x (20 ... 16), 2x (20 ... 16) 1x (20 ... 16), 2x (20 ... 16)

Product Function:

Suitability for use / device connector 3ZY12	No
Suitability for use <ul style="list-style-type: none"> safety-related circuits 	Yes

Certificates/approvals:

Verification of suitability			
• TÜV (German technical inspectorate) certificate		Yes	
• UL-registration		Yes	
General Product Approval	EMC	Declaration of Conformity	Test Certificates
 CSA	 UL	 C-TICK	 EG-Konf.
Type Test Certificates/Test Report			

[Type Test Certificates/Test Report](#)

Further information:

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

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

Industry Mall (Online ordering system)

<http://www.siemens.com/industrial-controls/mall>

Cax online generator:

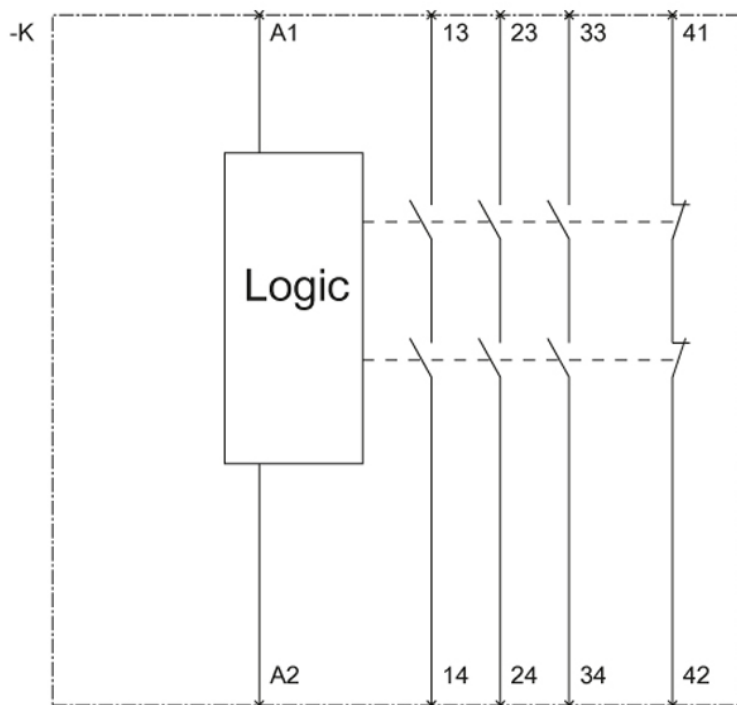
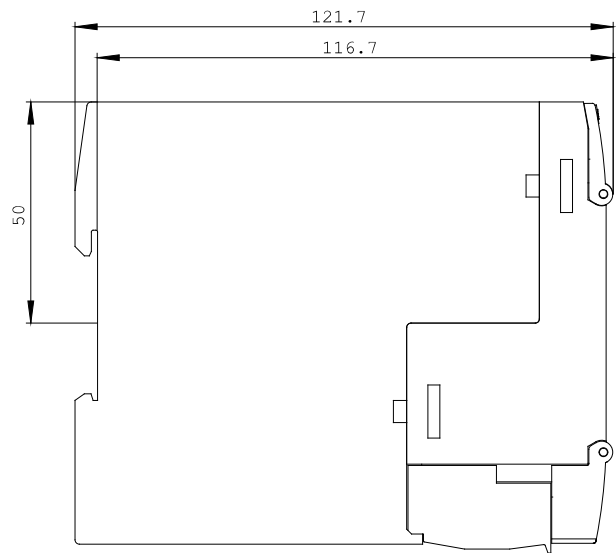
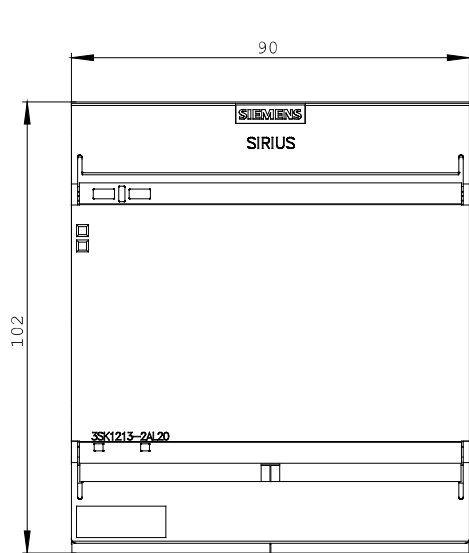
<http://www.siemens.com/cax>

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<http://support.automation.siemens.com/WW/view/en/3SK1213-2AL20/all>

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3SK1213-2AL20



last change:

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