



SIRIUS SAFETY RELAY OUTPUT EXTENSION 4RO WITH
RELAY ENABLING CIRCUITS 4 NO CONTACTS + RELAY
SIGNALING CIRCUIT 1 NC CONTACT US = 115-230 V AC
SCREW 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		10g / 11 ms
Impulse voltage resistance / rated value	V	4,000
EMC emitted interference		IEC 60947-5-1, Class A

Installation environment relating to EMC		This product is suitable for Class A environments only. It can cause undesired radio-frequency interference in residential environments. If this is the case, the user must take appropriate measures.
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	0.17000000000000004E-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 4 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	A A A A A A	5 0.2 0.1 4 4

• at 230 V	A	4
Thermal current / of the contact-affected switching element / maximum	A	5
Mechanical operating cycles as operating time / typical		10,000,000
Design of the fuse link / for short-circuit protection of the NO contacts of the relay outputs / required		gL/gG: 6A or circuit breaker type A: 3A or circuit breaker type B: 2A or circuit breaker type C: 1A
Make time / with automatic start		
• typical	ms	35
• for AC / maximum	ms	35
Make time / with automatic start / after mains power cut		
• typical	ms	35
• maximum	ms	35
Backslide delay time / at mains power cut		
• typical	ms	200
• maximum	ms	300
Recovery time / after mains power cut / typical	s	0.32

Control circuit:

Type of voltage / of the controlled supply voltage		AC/DC
Control supply voltage frequency		
• 1 / rated value	Hz	50
• 2 / rated value	Hz	60
Control supply voltage		
• for DC		
• rated value	V	110 ... 240
• at 50 Hz / at AC		
• rated value	V	110 ... 240
• at 60 Hz / at AC		
• rated value	V	110 ... 240
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
• for DC		0.85 ... 1.1
Active power loss / typical	W	2

Installation/mounting/dimensions:

mounting position		any
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	22.5
Height	mm	100
Depth	mm	121.6





Connections:

Design of the electrical connection		screw-type terminals
Type of the connectable conductor cross-section <ul style="list-style-type: none"> • solid • finely stranded • with wire end processing 		1x (0.5 ... 2.5 mm²), 2x (1.0 ... 1.5 mm²) 1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.0 mm²)
Type of the connectable conductor cross-section / for AWG conductors <ul style="list-style-type: none"> • solid 		1x (20 ... 14), 2x (18 ... 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

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:

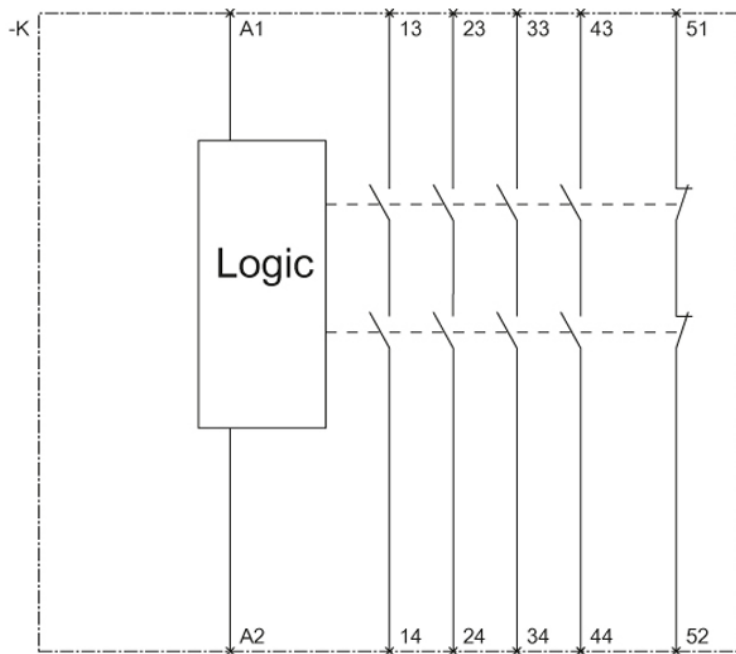
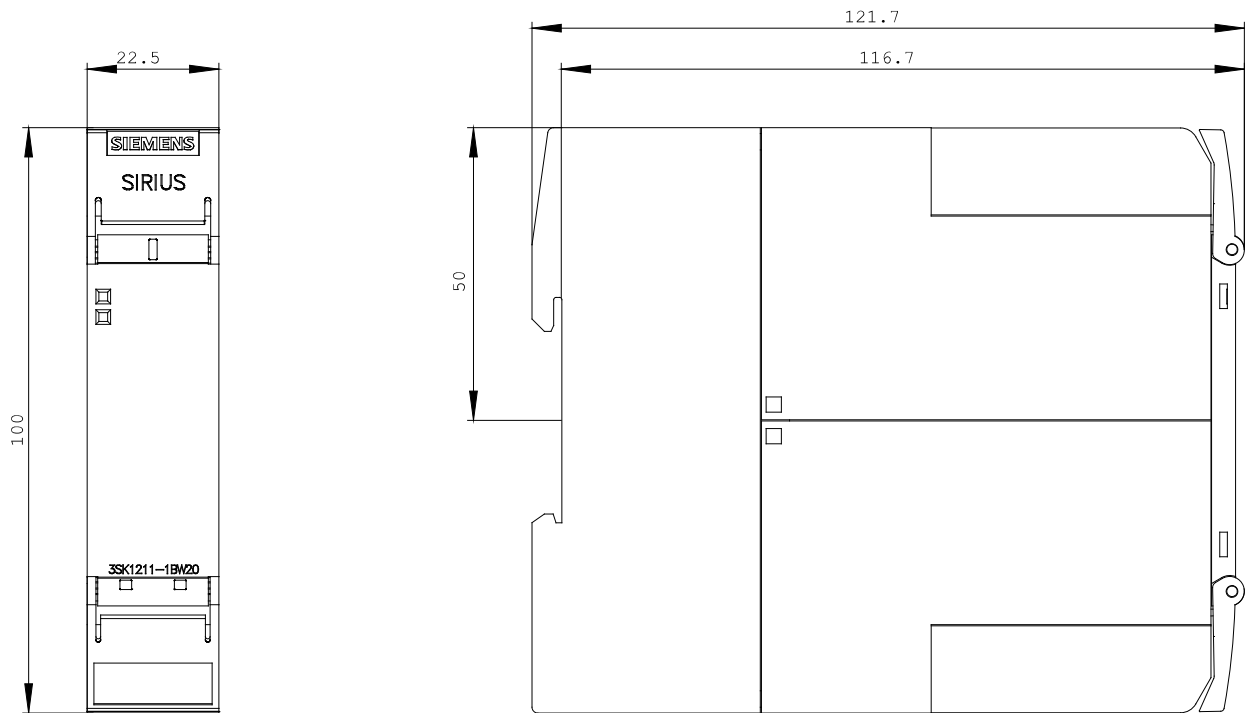
<http://www.siemens.com/cax>

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

<http://support.automation.siemens.com/WW/view/en/3SK1211-1BW20/all>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3SK1211-1BW20



last change:

Mar 11, 2013