



SIRIUS SAFETY RELAY OUTPUT EXTENSION 4RO
WITH RELAY ENABLING CIRCUITS 4 NO CONTACTS
+ RELAY FEEDBACK CIRCUIT 1 NC CONTACT US =
24 V AC SPRING-LOADED 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 maximum	m	2 000
Vibration resistance acc. to IEC 60068-2-6		5 ... 500 Hz: 0,75 mm
Shock resistance		10g / 11 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		e
Category acc. to EN ISO 13849-1		4

PFHD with high demand rate acc. to EN 62061	1/h	0.0000000017
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	y	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		
<ul style="list-style-type: none"> • as NC contact <ul style="list-style-type: none"> — for signaling function instantaneous contact — for signaling function delayed switching — safety-related instantaneous contact — safety-related delayed switching • as NO contact <ul style="list-style-type: none"> — for signaling function instantaneous contact — for signaling function delayed switching — safety-related instantaneous contact — safety-related delayed switching 		0 0 0 0 0 0 4 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		
<ul style="list-style-type: none"> • at DC-13 <ul style="list-style-type: none"> — at 24 V — at 115 V — at 230 V • at AC-15 <ul style="list-style-type: none"> — at 24 V — at 115 V — at 230 V 	A A A A A A	5 0.2 0.1 5 5 5
Thermal current of the switching element with contacts maximum	A	5
Operating current at 17 V minimum	mA	5
Mechanical service life (switching cycles) 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		
<ul style="list-style-type: none"> • typical 	ms	25

<ul style="list-style-type: none"> • with AC maximum 	ms	40
Make time with automatic start after power failure		
<ul style="list-style-type: none"> • typical 	ms	25
<ul style="list-style-type: none"> • maximum 	ms	40
Backslide delay time in the event of power failure		
<ul style="list-style-type: none"> • typical 	ms	45
<ul style="list-style-type: none"> • maximum 	ms	50
Recovery time after power failure typical	s	0.06

Control circuit/ Control:

Type of voltage of the control supply voltage		AC
Control supply voltage frequency		
<ul style="list-style-type: none"> • 1 Rated value 	Hz	50
<ul style="list-style-type: none"> • 2 Rated value 	Hz	60
Control supply voltage		
<ul style="list-style-type: none"> • with AC <ul style="list-style-type: none"> — at 50 Hz <ul style="list-style-type: none"> — Rated value — at 60 Hz <ul style="list-style-type: none"> — Rated value 	V	24
	V	24
Operating range factor control supply voltage rated value of the magnet coil		
<ul style="list-style-type: none"> • with AC <ul style="list-style-type: none"> — at 50 Hz — at 60 Hz 		0.85 ... 1.1
		0.85 ... 1.1
Active power loss typical	W	2.5

Installation/ mounting/ dimensions:

mounting position		any
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	22.5
Height	mm	100
Depth	mm	121.6

Connections/ Terminals:

Type of electrical connection		spring-loaded terminals
Type of connectable conductor cross-section		
<ul style="list-style-type: none"> • solid 		1x (0.5 ... 1.5 mm ²), 2x (0.5 ... 1.5 mm ²)
<ul style="list-style-type: none"> • finely stranded <ul style="list-style-type: none"> — with core end processing — without core end processing 		1x (0.5 ... 1.0 mm ²), 2x (0.5 ... 1.0 mm ²)
		1x (0.5 ... 1.5 mm ²), 2x (0.5 ... 1.5 mm ²)

Type of connectable conductor cross-section for AWG conductors		
<ul style="list-style-type: none"> • solid 		1x (20 ... 16), 2x (20 ... 16)
<ul style="list-style-type: none"> • stranded 		1x (20 ... 16), 2x (20 ... 16)

Product Function:

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

Certificates/ approvals:

Certificate of suitability		
<ul style="list-style-type: none"> • TÜV (German technical inspectorate) certificate 		Yes
<ul style="list-style-type: none"> • UL approval 		Yes

General Product Approval	EMC	Functional Safety/Safety of Machinery	Declaration of Conformity
---------------------------------	------------	--	----------------------------------



[Type Examination](#)



Test Certificates	other
--------------------------	--------------

[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

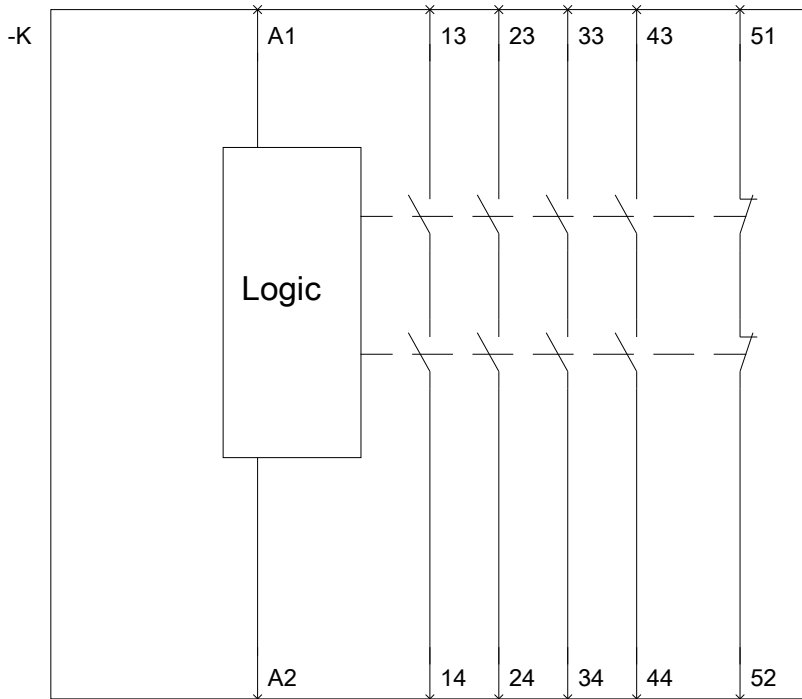
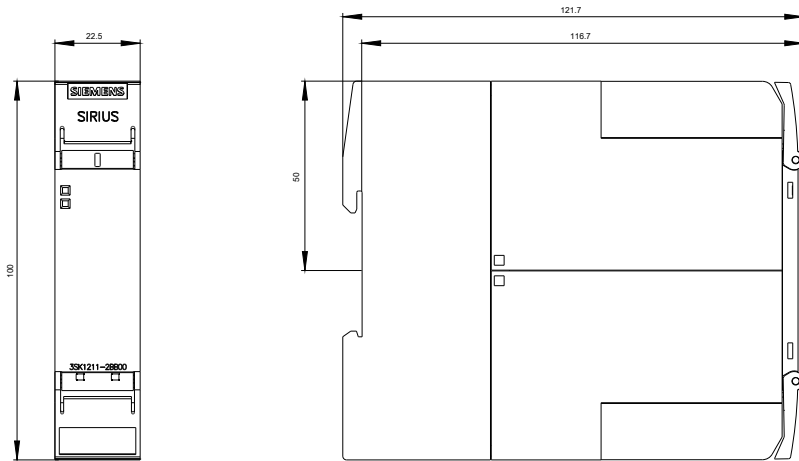
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3SK12112BB00>

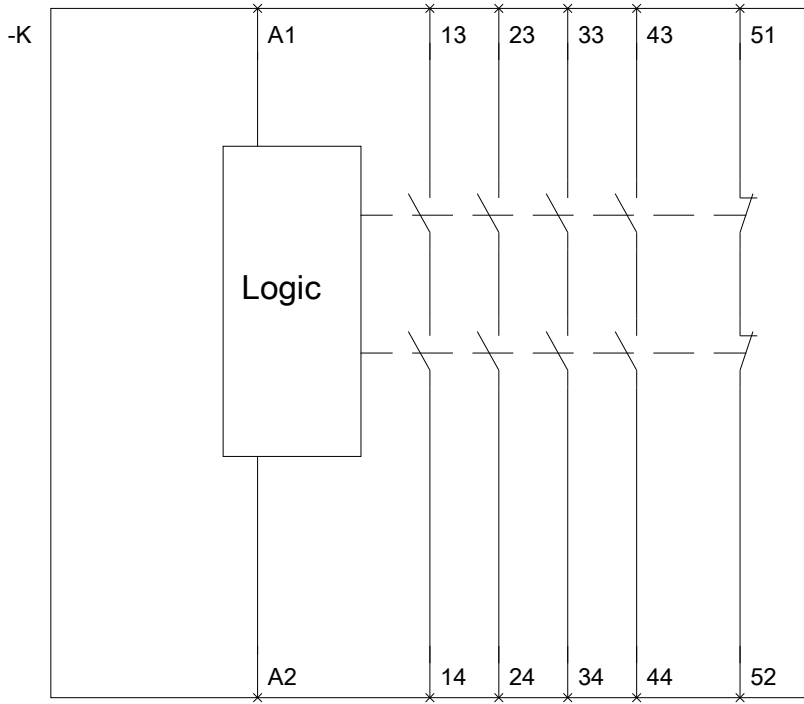
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<http://support.automation.siemens.com/WW/view/en/3SK12112BB00/all>

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

<http://www.automation.siemens.com/bilddb/index.aspx?attID9=3SK12112BB00&lang=en>





last modified:

09.03.2015