SIEMENS

Data sheet 3SK1211-1BW20

SIRIUS safety relay Output expansion 4RO with relay enabling circuits 4 NO contacts plus Relay signaling circuit 1 NC contact Us = 110-240 V AC/DC screw terminal

General technical data	
product brand name	SIRIUS
product category	Safety relays
product designation	Output expansion
design of the product	Relay enabling circuits
protection class IP of the enclosure	IP20
touch protection against electrical shock	finger-safe
insulation voltage rated value	300 V
ambient temperature	
● during storage	-40 ... +80 °C
● during operation	-25 ... +60 °C
air pressure acc. to SN 31205	900 ... 1 060 hPa
relative humidity during operation	10 ... 95 %
installation altitude at height above sea level maximum	2 000 m
vibration resistance acc. to IEC 60068-2-6	5 ... 500 Hz: 0.75 mm
shock resistance	10g / 11 ms
surge voltage resistance rated value	4 000 V
EMC emitted interference	IEC 60947-5-1, Class A
installation environment regarding 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 category	3
degree of pollution	3
reference code acc. to DIN EN 61346-2	F
reference code acc. to IEC 81346-2	F
power loss [W] maximum	2 W
Safety Integrity Level (SIL) acc. to IEC 61508	3
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	0.0000000017 1/h
PFDavg with low demand rate acc. to IEC 61508	0.000001
T1 value for proof test interval or service life acc. to IEC 61508	20 y
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 delayed switching	0
— for feedback circuit instantaneous contact	1
— 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	4
— safety-related delayed switching	0
number of outputs as contact-less semiconductor switching element	
● for signaling function	
— 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	360 1/h
switching capacity current of the NO contacts of the relay outputs	
● at DC-13	
— at 24 V	5 A
— at 115 V	0.2 A
— at 230 V	0.1 A
● at AC-15	
— at 24 V	5 A
— at 115 V	5 A
— at 230 V	5 A
thermal current of the switching element with contacts maximum	5 A
operational current at 17 V minimum	5 mA
total current maximum	12 A
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	
● typical	35 ms
● at AC maximum	35 ms
make time with automatic start after power failure	
● typical	35 ms
● maximum	35 ms
backslide delay time in the event of power failure	
● typical	200 ms
● maximum	300 ms
recovery time after power failure typical	0.32 s
Control circuit/ Control	
type of voltage of the control supply voltage	AC/DC
control supply voltage frequency	
● 1 rated value	50 Hz
● 2 rated value	60 Hz
control supply voltage	
● at DC	
— rated value	110 ... 240 V
● at AC	
— at 50 Hz	
— rated value	110 ... 240 V
— at 60 Hz	
— rated value	110 ... 240 V
operating range factor control supply voltage rated value of magnet coil	

• at AC	
— at 50 Hz	0.85 ... 1.1
— at 60 Hz	0.85 ... 1.1
• at DC	0.85 ... 1.1
Installation/ mounting/ dimensions	
mounting position	any
required spacing for grounded parts at the side	5 mm
required spacing with side-by-side mounting at the side	0 mm
fastening method	screw and snap-on mounting
width	22.5 mm
height	100 mm
depth	121.6 mm
Connections/ Terminals	
type of electrical connection	screw-type terminals
type of connectable conductor cross-sections	
• solid	1x (0.5 ... 2.5 mm²), 2x (1.0 ... 1.5 mm²)
• finely stranded	
— with core end processing	1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.0 mm²)
type of connectable conductor cross-sections at AWG cables	
• solid	1x (20 ... 14), 2x (18 ... 16)
Product Function	
suitability for operation device connector 3ZY12	No
suitability for use	
• safety-related circuits	Yes
Certificates/ approvals	
certificate of suitability	
• TÜV (German technical inspectorate) certificate	Yes
• UL approval	Yes

General Product Approval	EMC

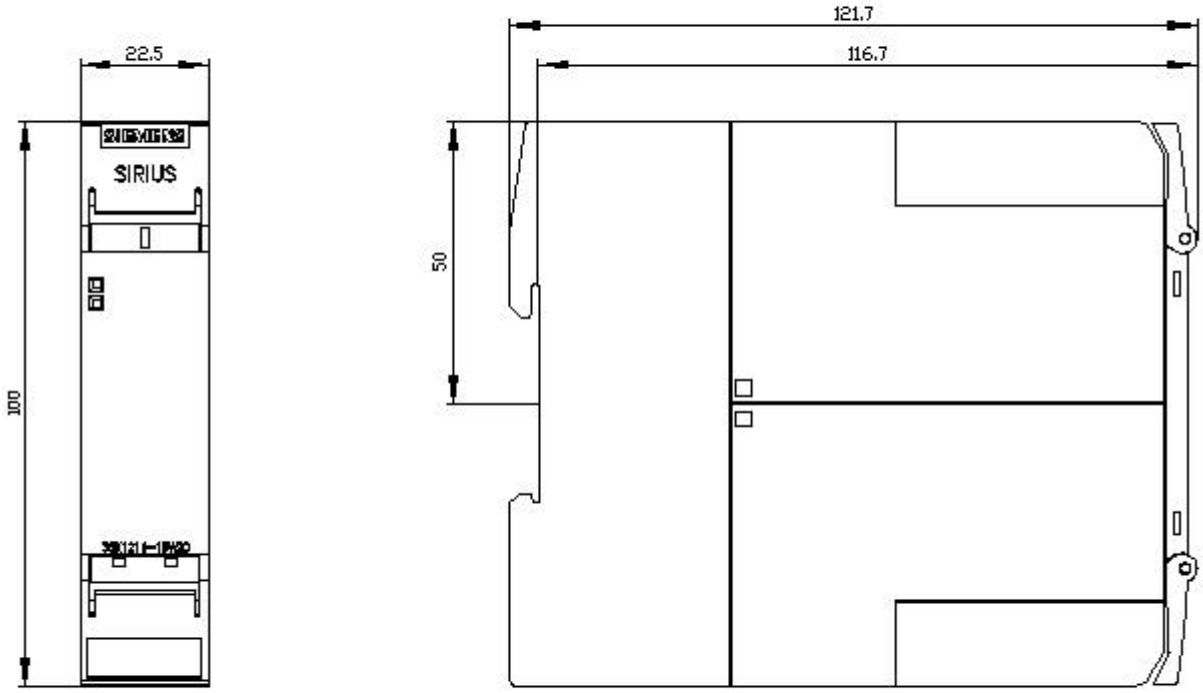

Functional Safety/Safety of Machinery	Declaration of Conformity		Test Certificates	Shipping Approval	
Type Examination Certificate	Miscellaneous		Type Test Certific-ates/Test Report		

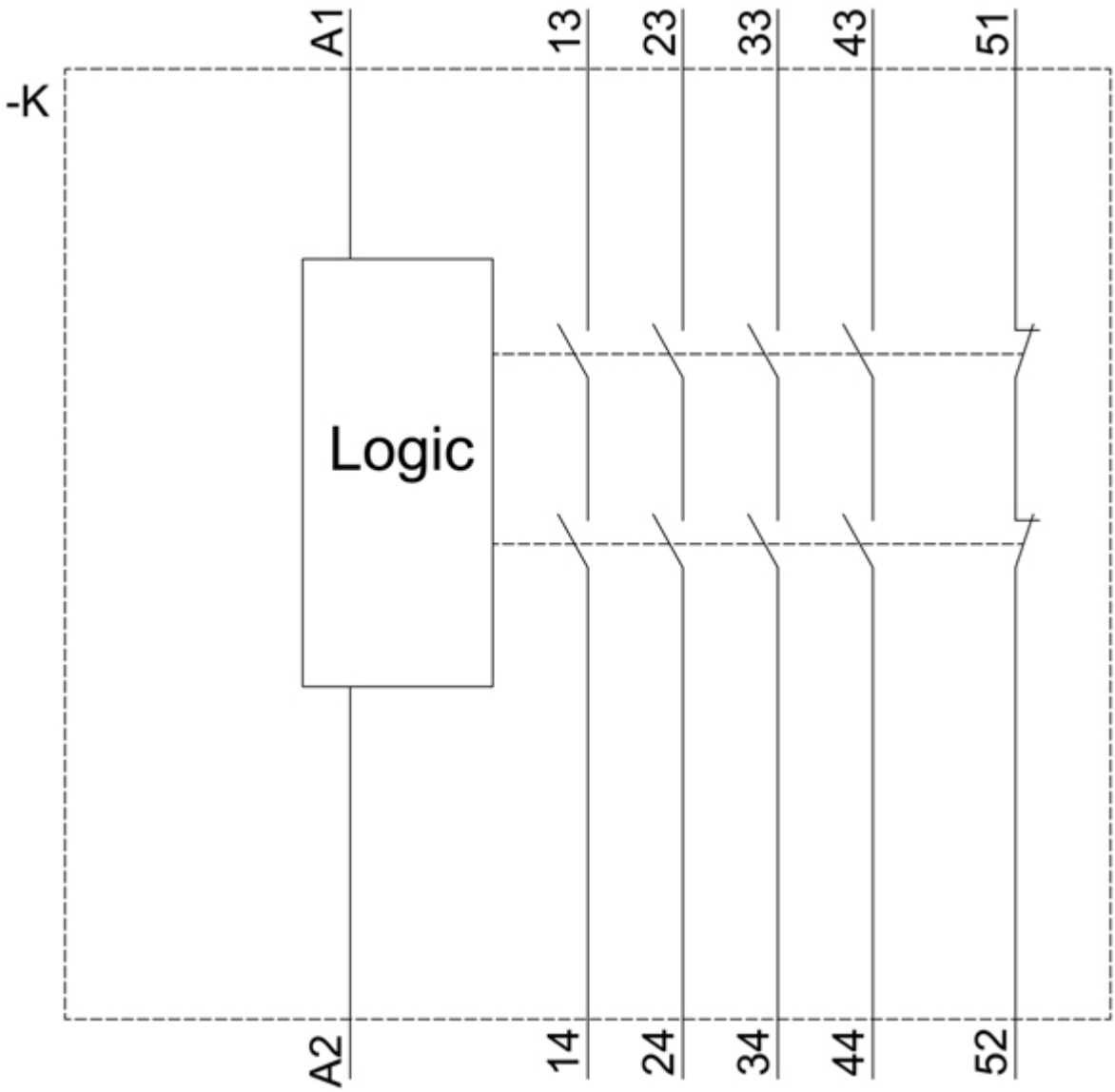
Shipping Ap-proval	other	Railway
	Confirmation	Confirmation

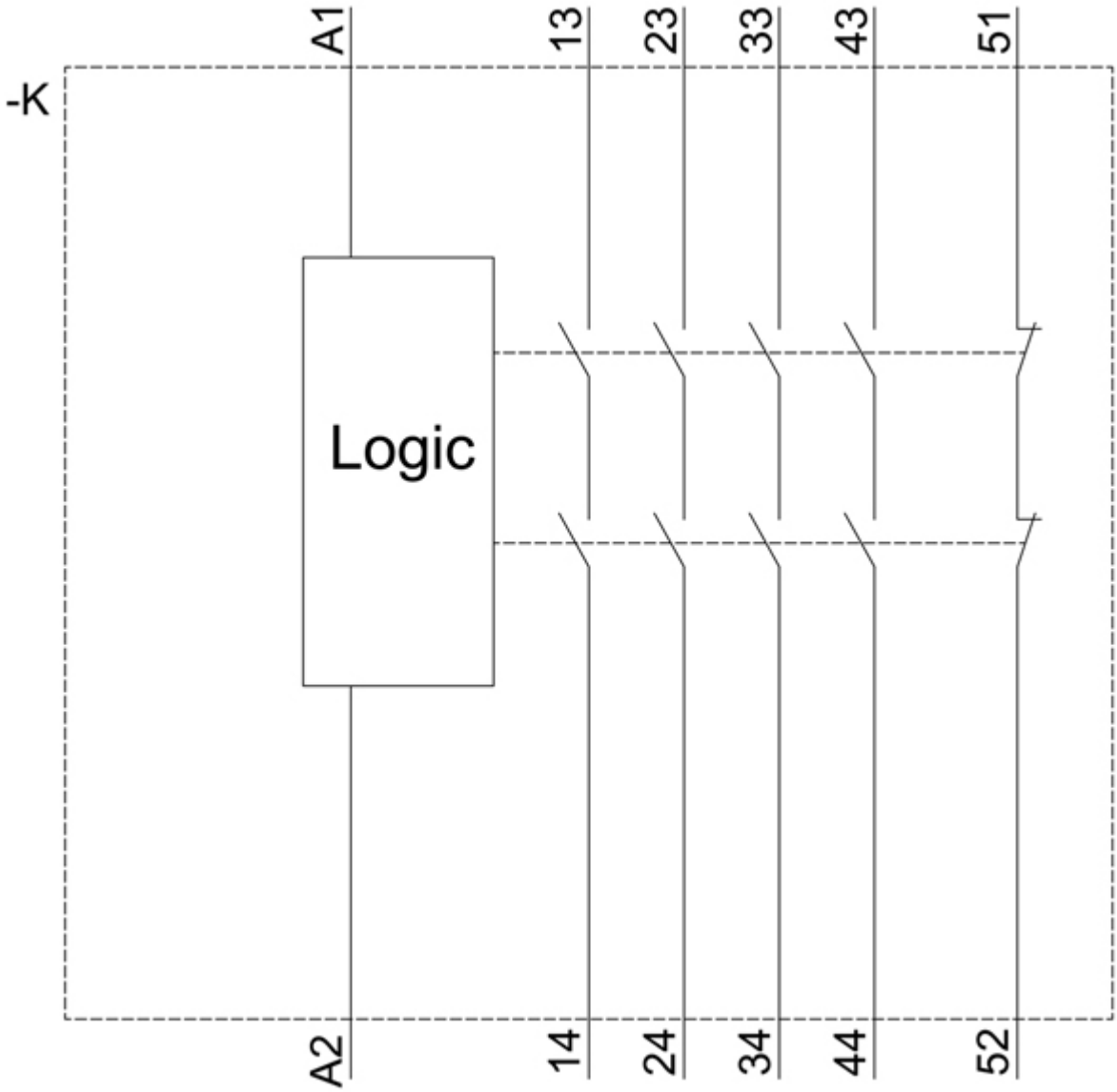
Further information

Information- and Downloadcenter (Catalogs, Brochures,…)
https://www.siemens.com/ic10

Industry Mall (Online ordering system)
https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3SK1211-1BW20
Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3SK1211-1BW20
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3SK1211-1BW20
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3SK1211-1BW20&lang=en







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