



SIRIUS safety relay Output expansion 4RO with relay enabling circuits 4 NO contacts plus Relay signaling circuit 1 NC contact $U_s = 24\text{ V DC}$ Spring-type terminal (push-in)

product brand name	SIRIUS
product category	Safety relays
product designation	Output expansion
design of the product	Relay enabling circuits
product type designation	3SK1
Product Function	
product function parameterizable	undelayed/delayed (only with system connector)
suitability for use	
<ul style="list-style-type: none"> safety-related circuits 	Yes
General technical data	
certificate of suitability UL approval	Yes
power loss [W] maximum	2.5 W
insulation voltage rated value	300 V
degree of pollution	3
overvoltage category	3
surge voltage resistance rated value	4 000 V
protection class IP of the enclosure	IP20
shock resistance	10g / 11 ms
operating frequency maximum	360 1/h
mechanical service life (operating cycles) typical	10 000 000
thermal current of the switching element with contacts maximum	5 A
make time with automatic start	
<ul style="list-style-type: none"> typical at DC maximum after power failure typical after power failure maximum 	15 ms 30 ms 15 ms 30 ms
backslide delay time in the event of power failure	
<ul style="list-style-type: none"> typical maximum 	10 ms 15 ms
reference code according to IEC 81346-2	F
Substance Prohibition (Date)	11/05/2012
SVHC substance name	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 4,4'-isopropylidenediphenol (Bisphenol A, BPA) - 80-05-7
Ambient conditions	
installation altitude at height above sea level maximum	4 000 m; Derating, see Product Notification 109792701
ambient temperature	
<ul style="list-style-type: none"> during operation during storage 	-25 ... +60 °C -40 ... +80 °C
relative humidity during operation	10 ... 95 %

air pressure according to SN 31205	900 ... 1 060 hPa
Electromagnetic compatibility	
installation environment regarding EMC	This product is suitable for Class B environments and can also be used in domestic environments.
EMC emitted interference	IEC 60947-5-1, IEC 61000
Safety related data	
stop category according to IEC 60204-1	0
IEC 62061	
SIL Claim Limit (subsystem) according to EN 62061	3
PFHD with high demand rate according to IEC 62061	1.7E-9 1/h
ISO 13849	
category according to EN ISO 13849-1	4
performance level (PL) according to ISO 13849-1	e
IEC 61508	
safety device type according to IEC 61508-2	Type A
Average probability of failure on demand (PFDavg) with low demand rate acc. to IEC 61508	1E-6 1/y
PFDavg with low demand rate according to IEC 61508	1E-6
hardware fault tolerance according to IEC 61508	1
T1 value for proof test interval or service life according to IEC 61508	20 a
Electrical Safety	
touch protection against electrical shock	finger-safe
Short-circuit protection	
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
Inputs	
design of input	
• feedback input	No
Outputs	
number of outputs as contact-affected switching element	
• as NC contact	
— 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	4
— safety-related delayed switching	0
number of outputs as contact-less semiconductor switching element	
• for signaling function	
— delayed switching	0
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
switching capacity current of the NO contacts of the relay outputs at AC-15	
• at 24 V	5 A
• at 115 V	5 A
• at 230 V	5 A
total current maximum	12 A
Control circuit/ Control	
type of voltage of the control supply voltage	DC
control supply voltage at DC rated value	
•	24 V
operating range factor control supply voltage rated value of magnet coil at DC	
• initial value	0.8
• full-scale value	1.2

recovery time after power failure typical	0.015 s
Installation/ mounting/ dimensions	
mounting position	any
fastening method	screw and snap-on mounting
height	100 mm
width	22.5 mm
depth	121.6 mm
required spacing	
• with side-by-side mounting at the side	0 mm
• for grounded parts at the side	5 mm

Connections/ Terminals	
type of electrical connection	spring-loaded terminal (push-in)
type of connectable conductor cross-sections	
• solid	1x (0.5 ... 1.5 mm ²), 2x (0.5 ... 1.5 mm ²)
• finely stranded with core end processing	1x (0.5 ... 1.0 mm ²), 2x (0.5 ... 1.0 mm ²)
• finely stranded without core end processing	1x (0.5 ... 1.5 mm ²), 2x (0.5 ... 1.5 mm ²)
• for AWG cables solid	1x (20 ... 16), 2x (20 ... 16)
• for AWG cables stranded	1x (20 ... 16), 2x (20 ... 16)
type of electrical connection plug-in socket	No

Approvals Certificates

General Product Approval

[Confirmation](#)



EMV	Functional Safety	Test Certificates	Marine / Shipping
-----	-------------------	-------------------	-------------------



[Type Examination Certificate](#)

[Type Test Certificates/Test Report](#)



Marine / Shipping	other	Railway	Environment
-------------------	-------	---------	-------------



[Confirmation](#)

[Confirmation](#)

[Environmental Confirmations](#)

Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

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=3SK1211-2BB40>

Cax online generator

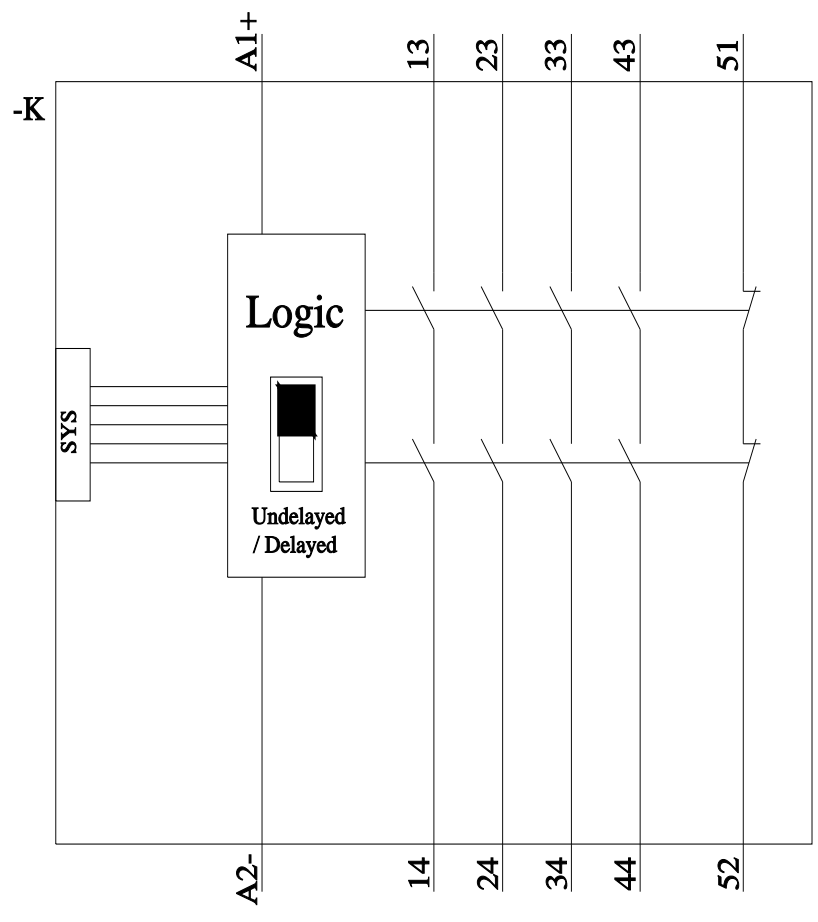
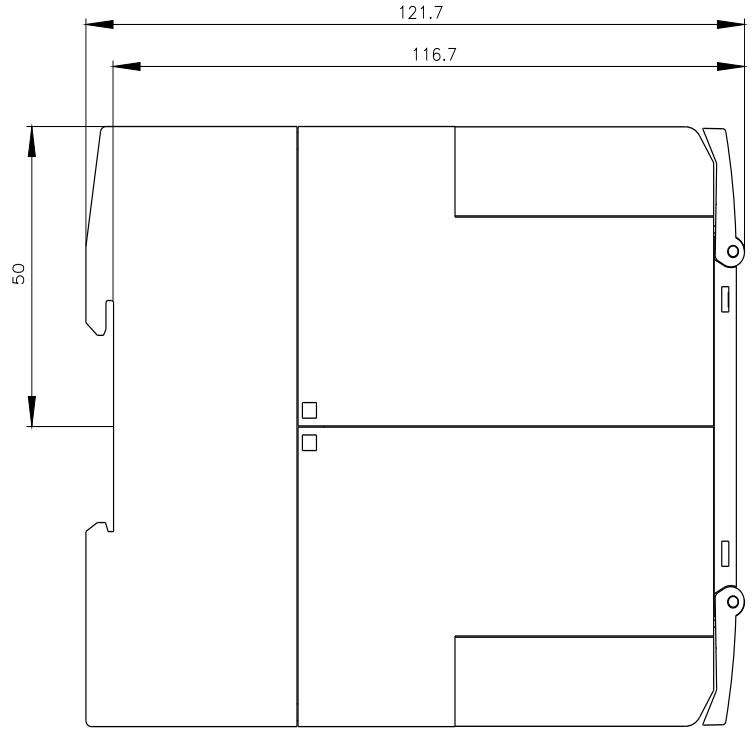
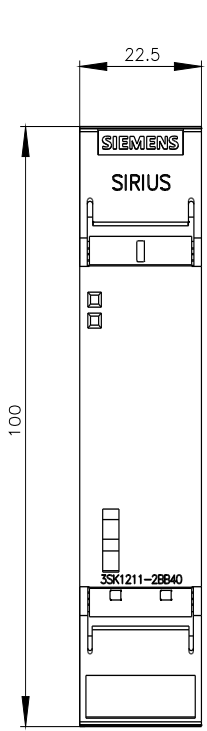
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3SK1211-2BB40>

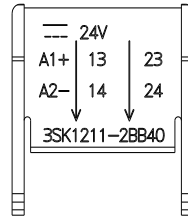
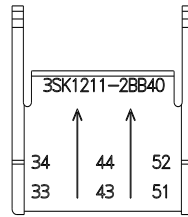
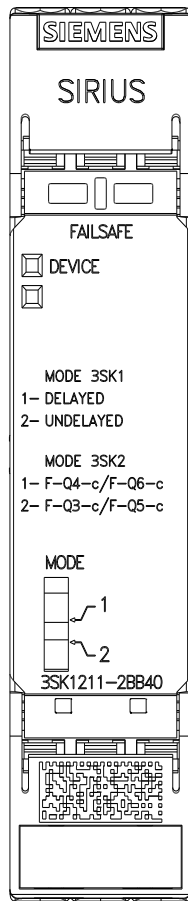
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3SK1211-2BB40>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3SK1211-2BB40&lang=en





last modified:

3/11/2024