



SIRIUS safety relay Output expansion 3RO Power, with Relay enabling circuits 3 NO contacts plus Relay signaling circuit 1 NC contact  $U_s = 24\text{ V}$  DC screw terminal

product brand name	SIRIUS
product category	Safety relays
product designation	Output expansion
design of the product	Relay enabling circuits
<b>General technical data</b>	
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 according 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 according to IEC 60068-2-6	5 ... 500 Hz: 0.75 mm
shock resistance	5 g / 10 ms
surge voltage resistance rated value	4 000 V
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	3
degree of pollution	3
reference code according to EN 61346-2	F
reference code according to IEC 81346-2	F
power loss [W] maximum	5.5 W
Safety Integrity Level (SIL) according to IEC 62061	3
Safety Integrity Level (SIL) according to IEC 61508	3
performance level (PL) according to ISO 13849-1	e
category according to EN ISO 13849-1	4
PFHD with high demand rate according to EN 62061	0.000000001 1/h
PFDAvg with low demand rate according to IEC 61508	0.000001
T1 value for proof test interval or service life according to IEC 61508	20 y
hardware fault tolerance according to IEC 61508	1
safety device type according to IEC 61508-2	Type A
<b>Inputs/ Outputs</b>	
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	3
— safety-related delayed switching	0
<b>number of outputs as contact-less semiconductor switching element</b>	
● for signaling function	
— delayed switching	0
<b>stop category according to EN 60204-1</b>	0
<b>type of electrical connection plug-in socket</b>	No
<b>operating frequency maximum</b>	360 1/h
<b>switching capacity current of the NO contacts of the relay outputs</b>	
● at DC-13	
— at 24 V	6 A
— at 115 V	1.1 A
— at 230 V	0.55 A
● at AC-15	
— at 24 V	10 A
— at 115 V	10 A
— at 230 V	10 A
<b>thermal current of the switching element with contacts maximum</b>	10 A
<b>total current maximum</b>	30 A
<b>operational current at 17 V minimum</b>	5 mA
<b>mechanical service life (switching cycles) typical</b>	10 000 000
<b>maximum permissible voltage for safe isolation between electronics evaluation device and enabling circuit according to EN 60947-1</b>	300 V
<b>design of the fuse link for short-circuit protection of the NO contacts of the relay outputs required</b>	gL/gG: 16 A or MCB type A: 6 A or MCB type B: 4 A or MCB type C: 4 A
<b>make time with automatic start</b>	
● typical	50 ms
● at DC maximum	70 ms
<b>make time with automatic start after power failure</b>	
● typical	50 ms
● maximum	70 ms
<b>backslide delay time in the event of power failure</b>	
● typical	20 ms
● maximum	20 ms
<b>recovery time after power failure typical</b>	0 s
<b>Control circuit/ Control</b>	
<b>type of voltage of the control supply voltage</b>	DC
<b>control supply voltage</b>	
● at DC	
— rated value	24 V
<b>operating range factor control supply voltage rated value of magnet coil</b>	
● at DC	0.8 ... 1.2
<b>Installation/ mounting/ dimensions</b>	
<b>mounting position</b>	on horizontal standard mounting rail
<b>required spacing for grounded parts at the side</b>	5 mm
<b>required spacing with side-by-side mounting at the side</b>	0 mm
<b>fastening method</b>	screw and snap-on mounting
<b>width</b>	90 mm
<b>height</b>	100 mm

depth	121.6 mm
<b>Connections/ Terminals</b>	
type of electrical connection	screw-type terminals
type of connectable conductor cross-sections	1x (0.5 ... 4.0 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>• solid</li> <li>• finely stranded</li> <li>— with core end processing</li> </ul>	1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> )
type of connectable conductor cross-sections at AWG cables	
<ul style="list-style-type: none"> <li>• solid</li> </ul>	1x (20 ... 12), 2x (20 ... 14)
<b>Product Function</b>	
product function parameterizable	undelayed/delayed (only with system connector)
suitability for operation device connector 3ZY12	Yes
suitability for use	
<ul style="list-style-type: none"> <li>• safety-related circuits</li> </ul>	Yes
<b>Certificates/ approvals</b>	
certificate of suitability	
<ul style="list-style-type: none"> <li>• TÜV (German technical inspectorate) certificate</li> <li>• UL approval</li> </ul>	Yes Yes
<b>General Product Approval</b>	
EMC	



[Confirmation](#)



Functional Safety/Safety of Machinery	Declaration of Conformity	Test Certificates	Marine / Shipping
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[Type Examination Certificate](#)



EG-Konf.

[Type Test Certificates/Test Report](#)



DNV



LRS



RINA

Marine / Shipping	other	Railway
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RMRS

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### 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=3SK1213-1AB40>

Cax online generator

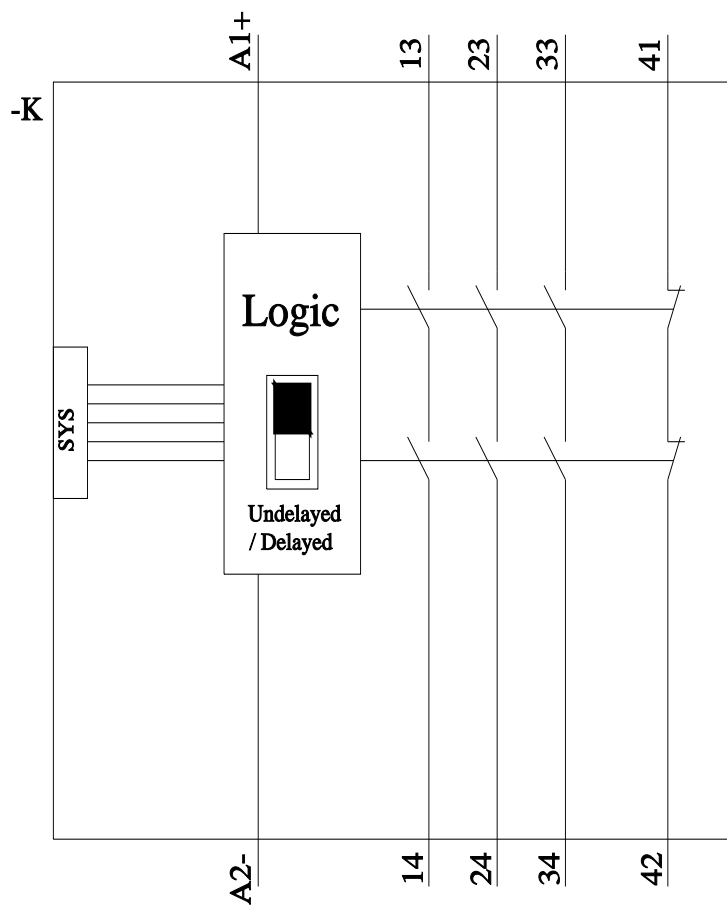
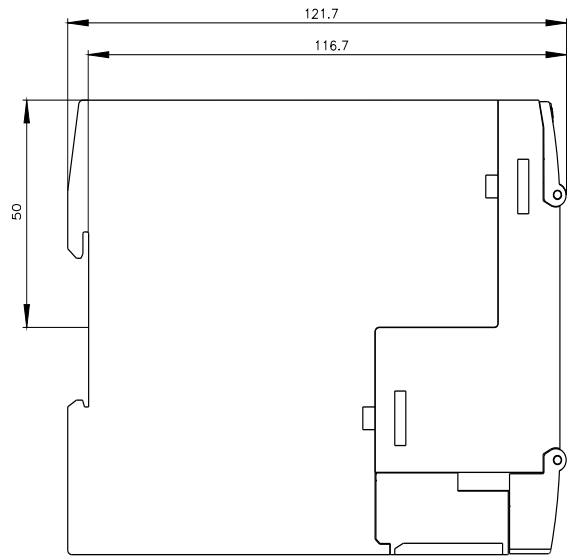
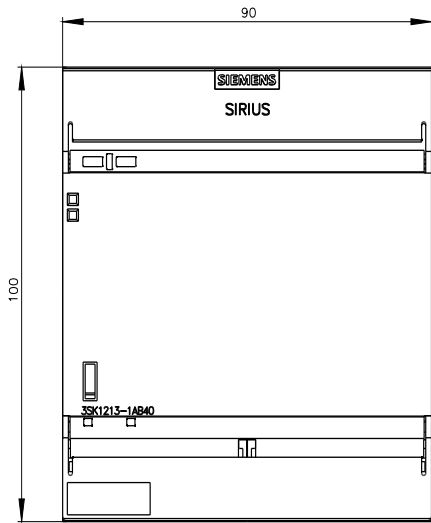
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3SK1213-1AB40>

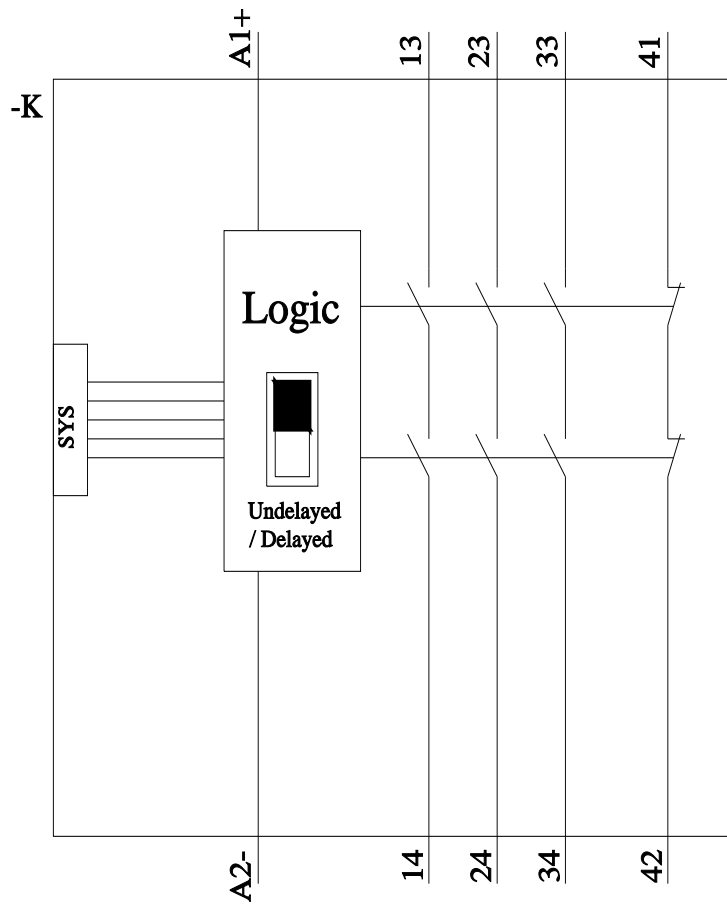
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3SK1213-1AB40>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3SK1213-1AB40&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3SK1213-1AB40&lang=en)





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