

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



Figure similar

General technical data	
product brandname	SIRIUS
Product category	Safety relays
Product designation	Output expansion
Protection class IP of the enclosure	IP20
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	90 kPa ... 106 kPa
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	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
Equipment marking acc. to DIN EN 61346-2	F
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	0.000000001 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
<ul style="list-style-type: none"> • Number of outputs <ul style="list-style-type: none"> — as contact-affected switching element as NC contact for signaling function delayed switching — as contact-based switch block as NC contact for feedback circuit instantaneous switching — as contact-affected switching element as NC contact safety-related instantaneous contact — as contact-affected switching element as NC contact safety-related delayed switching • Number of outputs as contact-affected switching element 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 1 0 0 0 0 3 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	
<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 	 6 A 1.1 A 0.55 A

— at 24 V	10 A
— at 115 V	10 A
— at 230 V	10 A
Thermal current of the switching element with contacts maximum	10 A
Operating current at 17 V minimum	5 mA
Mechanical service life (switching cycles) typical	10 000 000
maximum permissible voltage for safe isolation between electronic evaluation device and enabling circuit acc. to EN 60947-1	300 V
Design of the fuse link for short-circuit protection of the NO contacts of the relay outputs required	gL/gG: 16 A or MCB type A: 6 A or MCB type B: 4 A or MCB type C: 4 A
Make time with automatic start	
• typical	50 ms
• at DC maximum	70 ms
Make time with automatic start after power failure	
• typical	50 ms
• maximum	70 ms
Backslide delay time in the event of power failure	
• typical	20 ms
• maximum	20 ms
Recovery time after power failure typical	0 s

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	0.8 ... 1.2
Power loss [W] typical	5.5 W

Installation/ mounting/ dimensions

Mounting position	on horizontal standard mounting rail
Required spacing for grounded parts at the side	5 mm
Required spacing with side-by-side mounting at the side	0 mm
Mounting type	screw and snap-on mounting
Width	90 mm
Height	100 mm
Depth	121.6 mm

Connections/Terminals

Type of electrical connection	screw-type terminals
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Type of connectable conductor cross-sections	
<ul style="list-style-type: none"> • solid 	1x (0.5 ... 4.0 mm ²), 2x (0.5 ... 2.5 mm ²)
<ul style="list-style-type: none"> • finely stranded — with core end processing 	1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.5 mm ²)
Type of connectable conductor cross-sections at AWG conductors	
<ul style="list-style-type: none"> • solid 	1x (20 ... 12), 2x (20 ... 14)

Product Function	
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"> • 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
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[Type Examination](#)

Declaration of Conformity	Test Certificates	Shipping Approval	other
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[Type Test Certificates/Test Report](#)



[Confirmation](#)

Railway

[Confirmation](#)

Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

<http://www.siemens.com/industrial-controls/catalogs>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3SK1213-1AB40>

Cax online generator

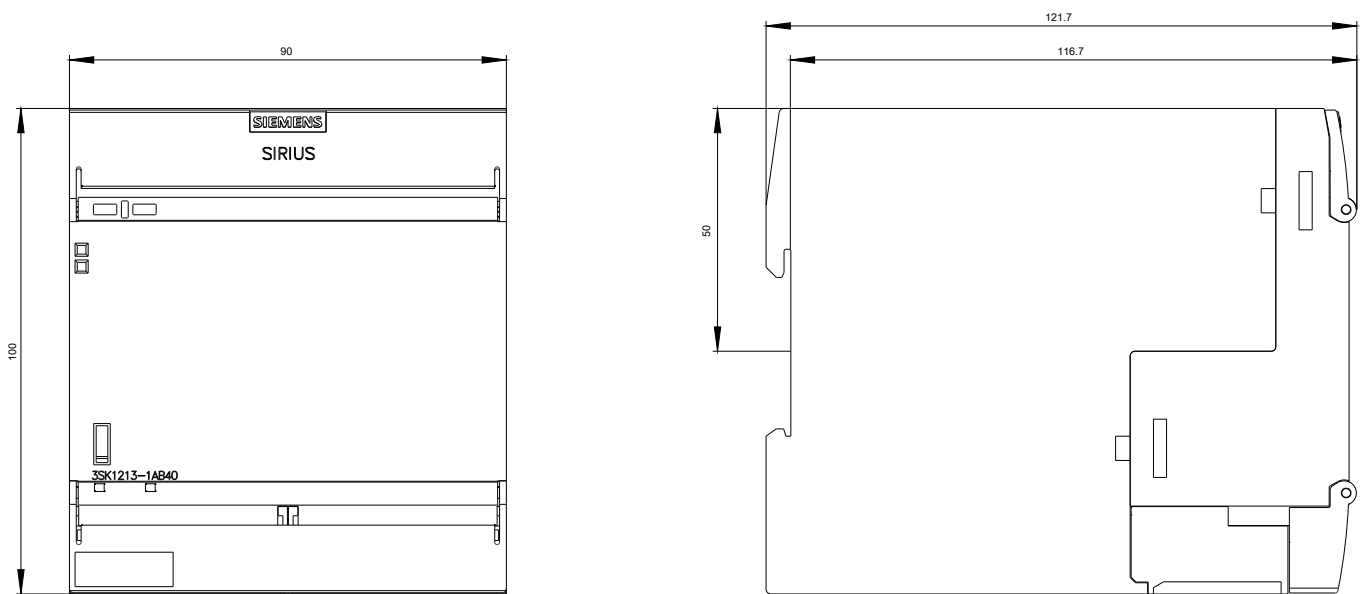
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3SK1213-1AB40>

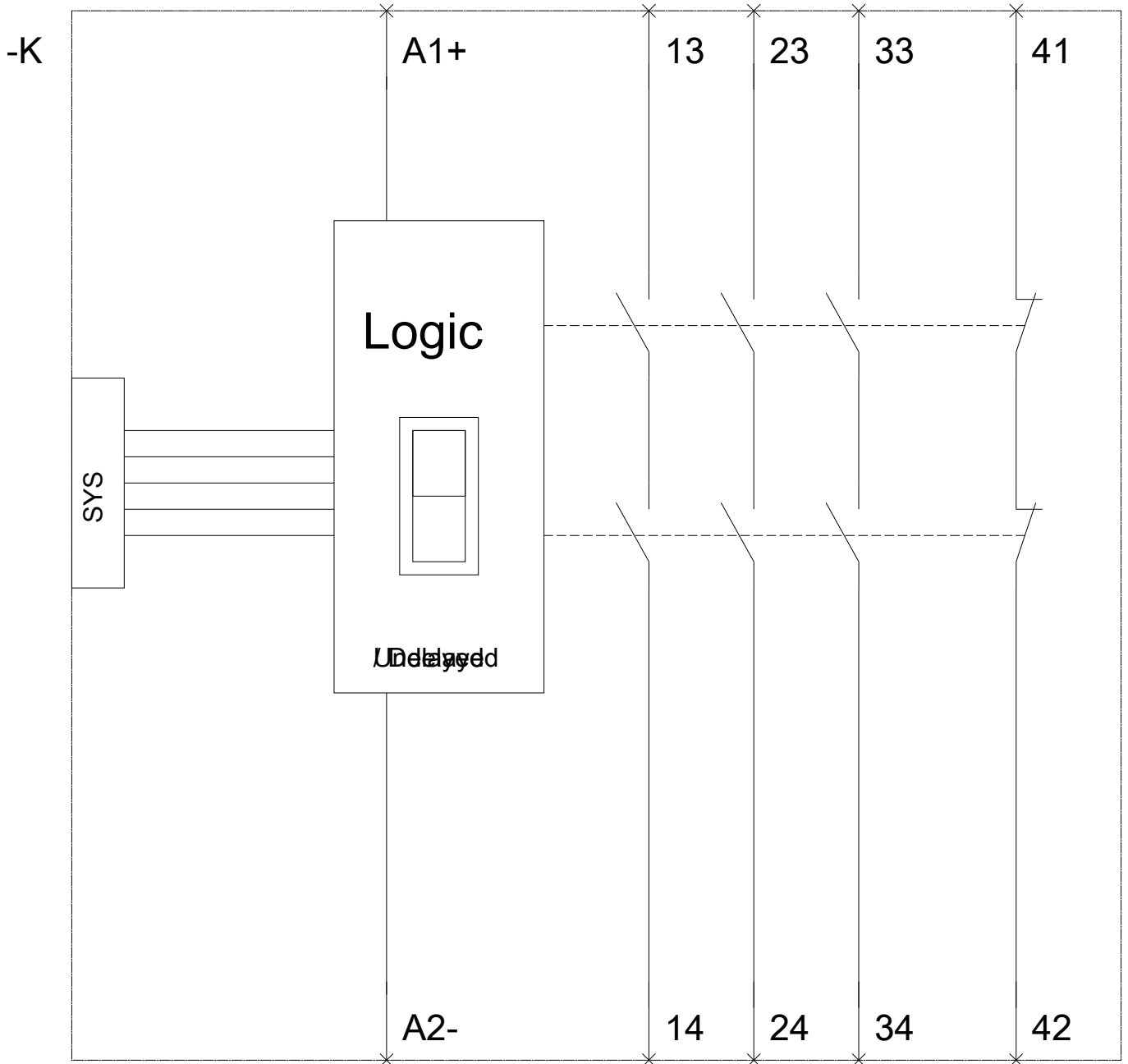
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

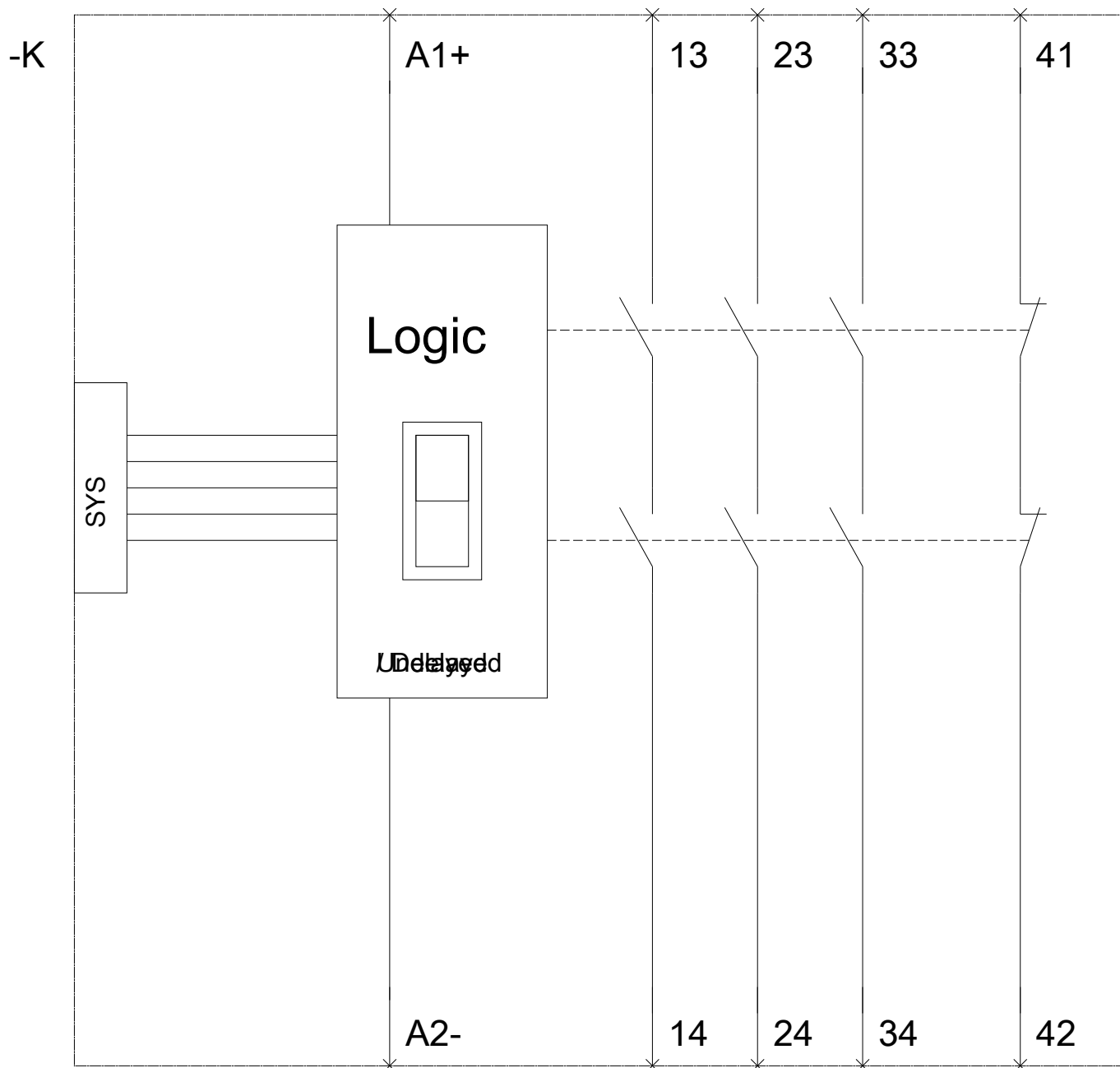
<https://support.industry.siemens.com/cs/ww/en/ps/3SK1213-1AB40>

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







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