



SIRIUS safety relay Basic unit Standard series Relay enabling circuits 3 NO contacts plus Relay signaling circuit 1 NC contact  $U_s = 24\text{ V AC/DC}$  screw terminal

product brand name	SIRIUS
product category	Safety relays
product designation	safety relays
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	90 ... 106 kPa
relative humidity during operation	10 ... 95 %
installation altitude at height above sea level maximum	4 000 m; Derating, see Product Notification 109792701
vibration resistance according 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, 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 IEC 81346-2	F
power loss [W] maximum	2 W
number of sensor inputs 1-channel or 2-channel	1
design of the cascading	none
type of the safety-related wiring of the inputs	single-channel and two-channel
product feature cross-circuit-proof	Yes
Safety Integrity Level (SIL)	
• according to IEC 62061	3
• according to IEC 61508	3
performance level (PL)	
• according to ISO 13849-1	e
category according to EN ISO 13849-1	4
Safe failure fraction (SFF)	99 %
PFHD with high demand rate according to EN 62061	1.7E-9 1/h
PFDavg with low demand rate according to IEC 61508	1E-6
T1 value for proof test interval or service life according to IEC 61508	20 y

<b>hardware fault tolerance according to IEC 61508</b>	1
<b>safety device type according to IEC 61508-2</b>	Type A
<b>Inputs/ Outputs</b>	
<b>number of outputs as contact-affected switching element</b>	
• as NC contact	
— for signaling function instantaneous contact	1
• as NO contact	
— safety-related instantaneous contact	3
— safety-related delayed switching	0
<b>stop category according to EN 60204-1</b>	0
<b>design of input</b>	
• cascading input/functional switching	No
• feedback input	Yes
• start input	Yes
<b>type of electrical connection plug-in socket</b>	No
<b>operating frequency maximum</b>	360 1/h
<b>switching capacity current</b>	
• 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 115 V	5 A
— at 230 V	5 A
• of the NC contacts of the relay outputs	
— at DC-13	
— at 24 V	1 A
— at 115 V	0.2 A
— at 230 V	0.1 A
— at AC-15	
— at 115 V	1.5 A
— at 230 V	1.5 A
<b>thermal current of the switching element with contacts maximum</b>	5 A
<b>total current maximum</b>	12 A
<b>operational current at 17 V minimum</b>	5 mA
<b>mechanical service life (switching cycles) typical</b>	10 000 000
<b>design of the fuse link for short-circuit protection of the NO contacts of the relay outputs required</b>	gL/gG: 6A or circuit breaker type A: 3A or circuit breaker type B: 2A or circuit breaker type C: 1A
<b>design of the fuse link for short circuit protection of the NC contacts of the relay outputs required</b>	Diazed or Neozed fuses, operating class gL/gG: 6 A or MCB type A: 2 A or MCB type B: 2 A or MCB type C: 1 A
<b>wire length</b>	
• for total of all sensor circuits with Cu 1.5 mm <sup>2</sup> and 150 nF/km maximum	2 000 m
<b>make time with automatic start</b>	
• typical	200 ms
• at DC maximum	320 ms
• at AC maximum	320 ms
<b>make time with automatic start after power failure</b>	
• typical	200 ms
• maximum	320 ms
<b>make time with monitored start</b>	
• maximum	20 ms
• typical	15 ms
<b>backslide delay time after opening of the safety circuits typical</b>	10 ms
<b>backslide delay time in the event of power failure</b>	
• typical	65 ms
• maximum	75 ms

<b>recovery time after opening of the safety circuits typical</b>	10 ms
<b>recovery time after power failure typical</b>	0.09 s
<b>pulse duration</b>	
• of the sensor input minimum	150 ms
• of the ON pushbutton input minimum	0.015 s
<b>Control circuit/ Control</b>	
<b>type of voltage of the control supply voltage</b>	AC/DC
<b>control supply voltage frequency</b>	
• 1 rated value	50 Hz
• 2 rated value	60 Hz
<b>control supply voltage</b>	
• at DC	24 V
— rated value	
• at AC	24 V
— at 50 Hz	
— rated value	
— at 60 Hz	24 V
— rated value	
<b>operating range factor control supply voltage rated value of magnet coil</b>	
• at AC	0.85 ... 1.1
— at 50 Hz	
— at 60 Hz	0.85 ... 1.1
• at DC	0.85 ... 1.2
<b>Installation/ mounting/ dimensions</b>	
<b>mounting position</b>	any
<b>required spacing for grounded parts at the side</b>	5 mm
<b>fastening method</b>	screw and snap-on mounting
<b>width</b>	22.5 mm
<b>height</b>	100 mm
<b>depth</b>	121.6 mm
<b>Connections/ Terminals</b>	
<b>type of electrical connection</b>	screw-type terminals
<b>type of connectable conductor cross-sections</b>	
• solid	1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (1.0 ... 1.5 mm <sup>2</sup> )
• finely stranded	
— with core end processing	1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.0 mm <sup>2</sup> )
<b>type of connectable conductor cross-sections at AWG cables</b>	
• solid	1x (20 ... 14), 2x (18 ... 16)
• stranded	1x (20 ... 16), 2x (20 ... 16)
<b>Product Function</b>	
<b>product function parameterizable</b>	sensor floating / sensor non-floating, monitored start-up / automatic start
<b>suitability for operation device connector 3ZY12</b>	No
<b>suitability for interaction press control</b>	No
<b>suitability for use</b>	
• safety switch	Yes
• monitoring of floating sensors	Yes
• monitoring of non-floating sensors	Yes
• magnetically operated switch monitoring	Yes
• safety-related circuits	Yes
<b>Certificates/ approvals</b>	
<b>General Product Approval</b>	<b>EMC</b>



[Confirmation](#)



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



[Type Test Certificates/Test Report](#)



Marine / Shipping	other	Railway
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[Confirmation](#)

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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=3SK1111-1AB30>

Cax online generator

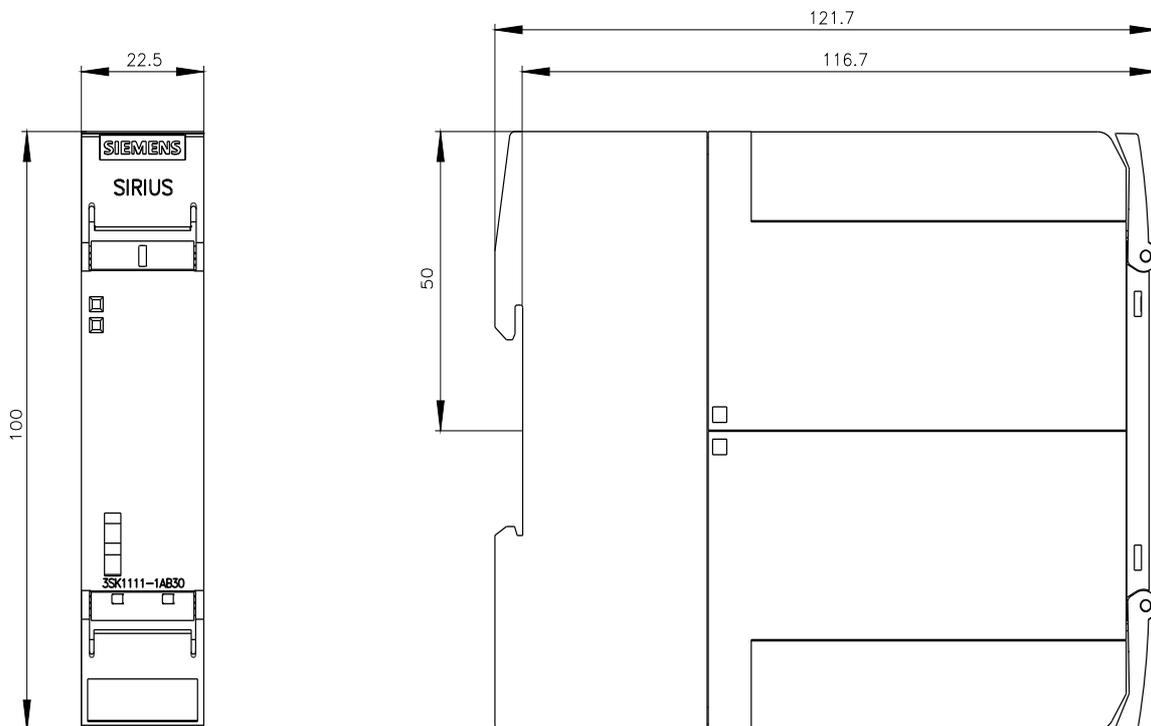
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3SK1111-1AB30>

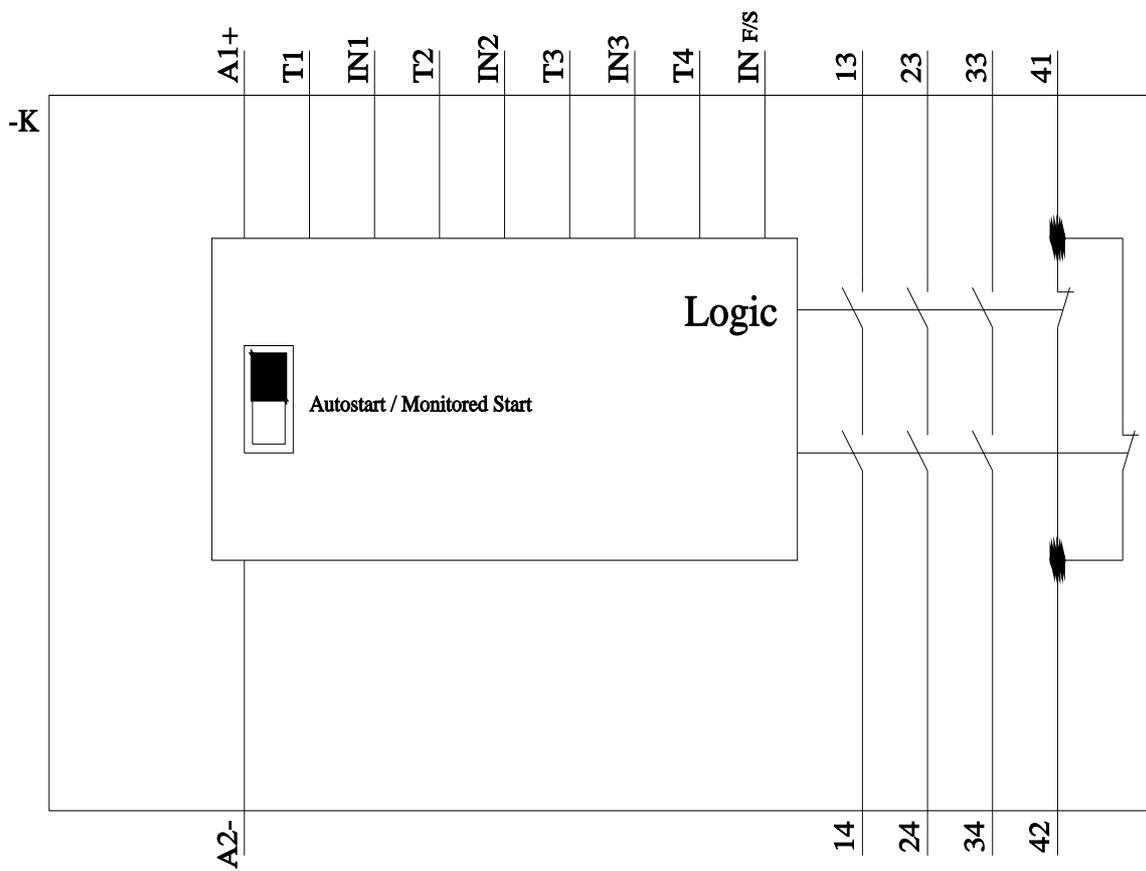
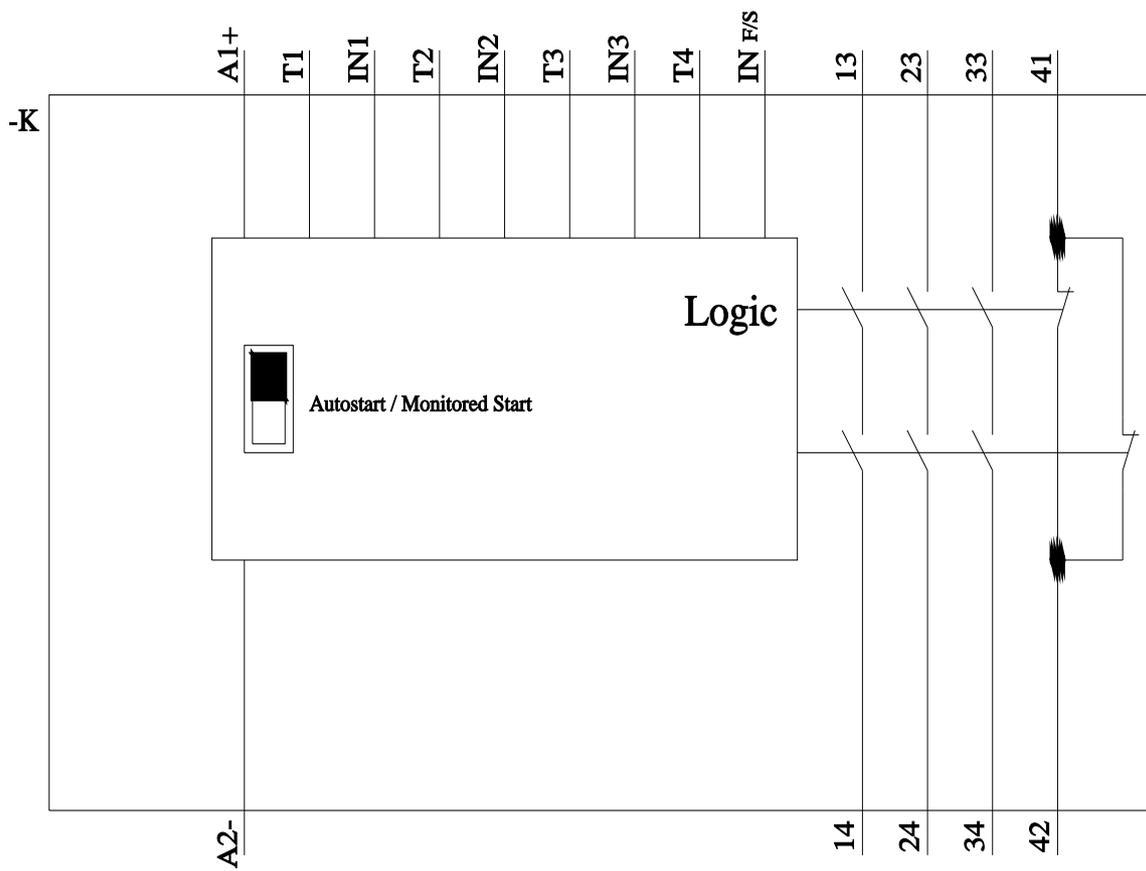
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3SK1111-1AB30>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3SK1111-1AB30&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3SK1111-1AB30&lang=en)





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