



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

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 a
hardware fault tolerance according to IEC 61508	1
safety device type according to IEC 61508-2	Type A

**Inputs/ Outputs**

<b>number of outputs as contact-affected switching element</b>	
<ul style="list-style-type: none"> <li>● as NC contact <ul style="list-style-type: none"> <li>— for signaling function instantaneous contact</li> </ul> </li> </ul>	1
<ul style="list-style-type: none"> <li>● as NO contact <ul style="list-style-type: none"> <li>— safety-related instantaneous contact</li> <li>— safety-related delayed switching</li> </ul> </li> </ul>	3 0
<b>stop category according to EN 60204-1</b>	0
<b>design of input</b>	
<ul style="list-style-type: none"> <li>● cascading input/functional switching</li> <li>● feedback input</li> <li>● start input</li> </ul>	No Yes Yes
<b>type of electrical connection plug-in socket</b>	No
<b>operating frequency maximum</b>	360 1/h
<b>switching capacity current</b>	
<ul style="list-style-type: none"> <li>● of the NO contacts of the relay outputs <ul style="list-style-type: none"> <li>— at DC-13 <ul style="list-style-type: none"> <li>— at 24 V</li> <li>— at 115 V</li> <li>— at 230 V</li> </ul> </li> <li>— at AC-15 <ul style="list-style-type: none"> <li>— at 115 V</li> <li>— at 230 V</li> </ul> </li> </ul> </li> <li>● of the NC contacts of the relay outputs <ul style="list-style-type: none"> <li>— at DC-13 <ul style="list-style-type: none"> <li>— at 24 V</li> <li>— at 115 V</li> <li>— at 230 V</li> </ul> </li> <li>— at AC-15 <ul style="list-style-type: none"> <li>— at 115 V</li> <li>— at 230 V</li> </ul> </li> </ul> </li> </ul>	5 A 0.2 A 0.1 A  5 A 5 A  1 A 0.2 A 0.1 A  1.5 A 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 (operating 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>	
<ul style="list-style-type: none"> <li>● for total of all sensor circuits with Cu 1.5 mm<sup>2</sup> and 150 nF/km maximum</li> </ul>	2 000 m
<b>make time with automatic start</b>	
<ul style="list-style-type: none"> <li>● typical</li> <li>● at DC maximum</li> <li>● at AC maximum</li> </ul>	200 ms 320 ms 320 ms
<b>make time with automatic start after power failure</b>	
<ul style="list-style-type: none"> <li>● typical</li> <li>● maximum</li> </ul>	200 ms 320 ms
<b>make time with monitored start</b>	
<ul style="list-style-type: none"> <li>● maximum</li> <li>● typical</li> </ul>	20 ms 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>	
<ul style="list-style-type: none"> <li>● typical</li> <li>● maximum</li> </ul>	65 ms 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>	
<ul style="list-style-type: none"> <li>● of the sensor input minimum</li> </ul>	150 ms

<ul style="list-style-type: none"> <li>of the ON pushbutton input minimum</li> </ul>	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>	
<ul style="list-style-type: none"> <li>1 rated value</li> <li>2 rated value</li> </ul>	50 Hz 60 Hz
<b>control supply voltage</b>	
<ul style="list-style-type: none"> <li>at DC <ul style="list-style-type: none"> <li>rated value</li> <li>rated value</li> </ul> </li> <li>at AC <ul style="list-style-type: none"> <li>at 50 Hz <ul style="list-style-type: none"> <li>rated value</li> <li>rated value</li> </ul> </li> <li>at 60 Hz <ul style="list-style-type: none"> <li>rated value</li> <li>rated value</li> </ul> </li> </ul> </li> </ul>	24 V 24 ... 24 V  24 V 24 ... 24 V  24 V 24 ... 24 V
<b>operating range factor control supply voltage rated value of magnet coil</b>	
<ul style="list-style-type: none"> <li>at AC <ul style="list-style-type: none"> <li>at 50 Hz</li> <li>at 60 Hz</li> </ul> </li> <li>at DC</li> </ul>	0.85 ... 1.1 0.85 ... 1.1 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>	spring-loaded terminal (push-in)
<b>type of connectable conductor cross-sections</b>	
<ul style="list-style-type: none"> <li>solid</li> <li>finely stranded <ul style="list-style-type: none"> <li>with core end processing</li> <li>without core end processing</li> </ul> </li> </ul>	1x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> )  1x (0.5 ... 1.0 mm <sup>2</sup> ), 2x (0.5 ... 1.0 mm <sup>2</sup> ) 1x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> )
<b>type of connectable conductor cross-sections for AWG cables</b>	
<ul style="list-style-type: none"> <li>solid</li> <li>stranded</li> </ul>	1x (20 ... 16), 2x (20 ... 16) 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>	
<ul style="list-style-type: none"> <li>safety switch</li> <li>monitoring of floating sensors</li> <li>monitoring of non-floating sensors</li> <li>magnetically operated switch monitoring</li> <li>safety-related circuits</li> </ul>	Yes Yes Yes Yes Yes
<b>Certificates/ approvals</b>	
<b>General Product Approval</b>	EMC



[Confirmation](#)



Functional Safety/Safety of Ma-

Declaration of Conformity

Test Certificates

Marine / Shipping

chinery

[Type Examination Certificate](#)



[Type Test Certificates/Test Report](#)



Marine / Shipping

other

Railway



[Confirmation](#)

[Confirmation](#)

#### Further information

Siemens has decided to exit the Russian market (see here).

<https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business>

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

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=3SK1111-2AB30>

Cax online generator

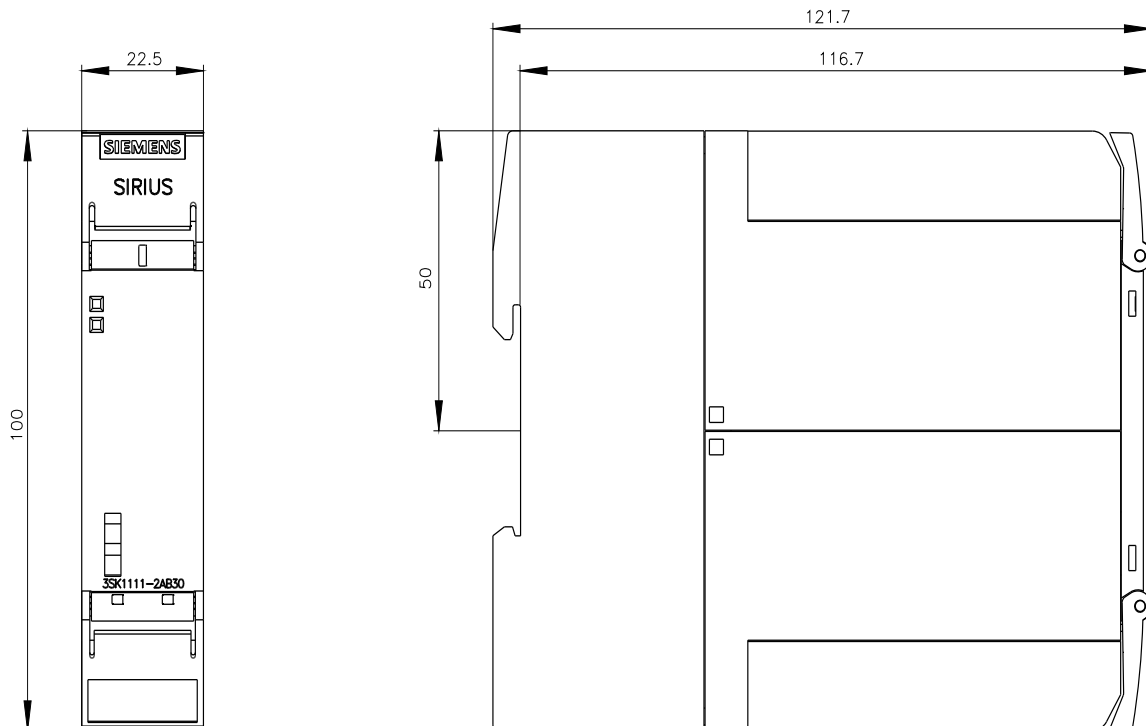
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3SK1111-2AB30>

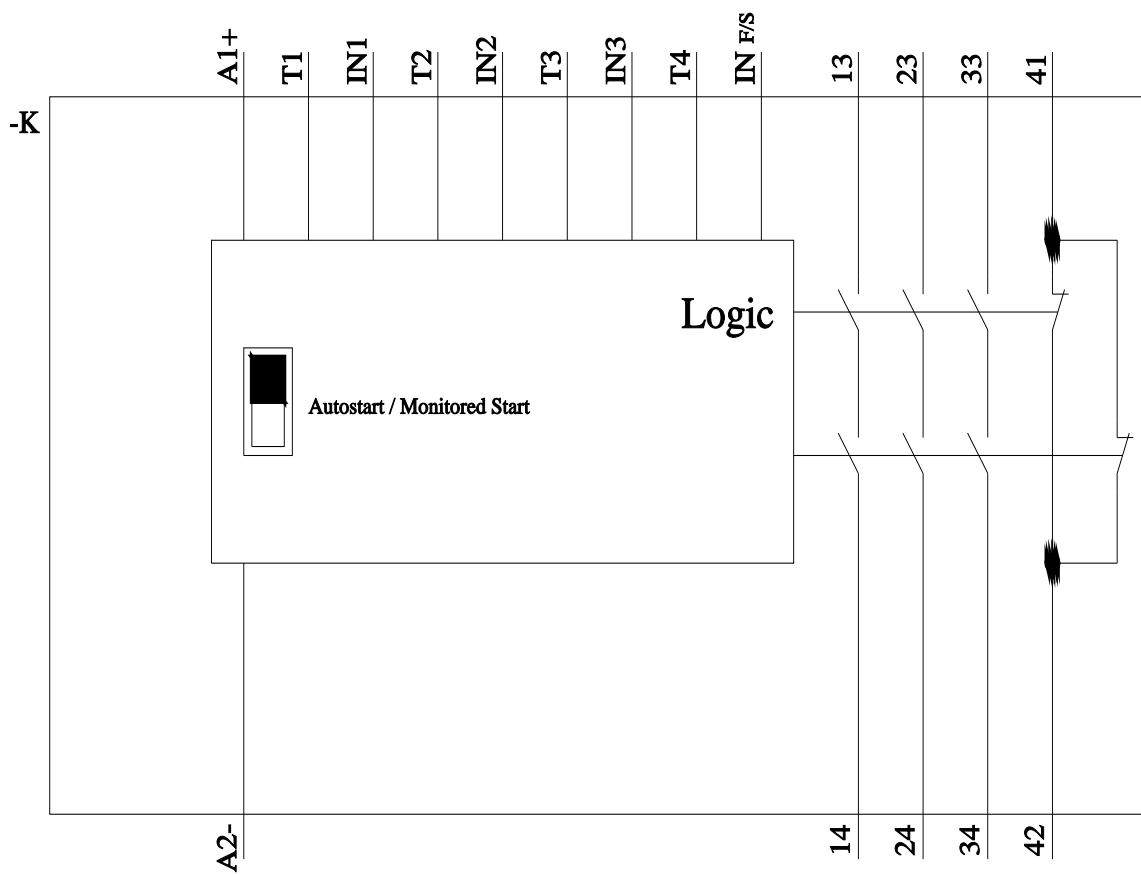
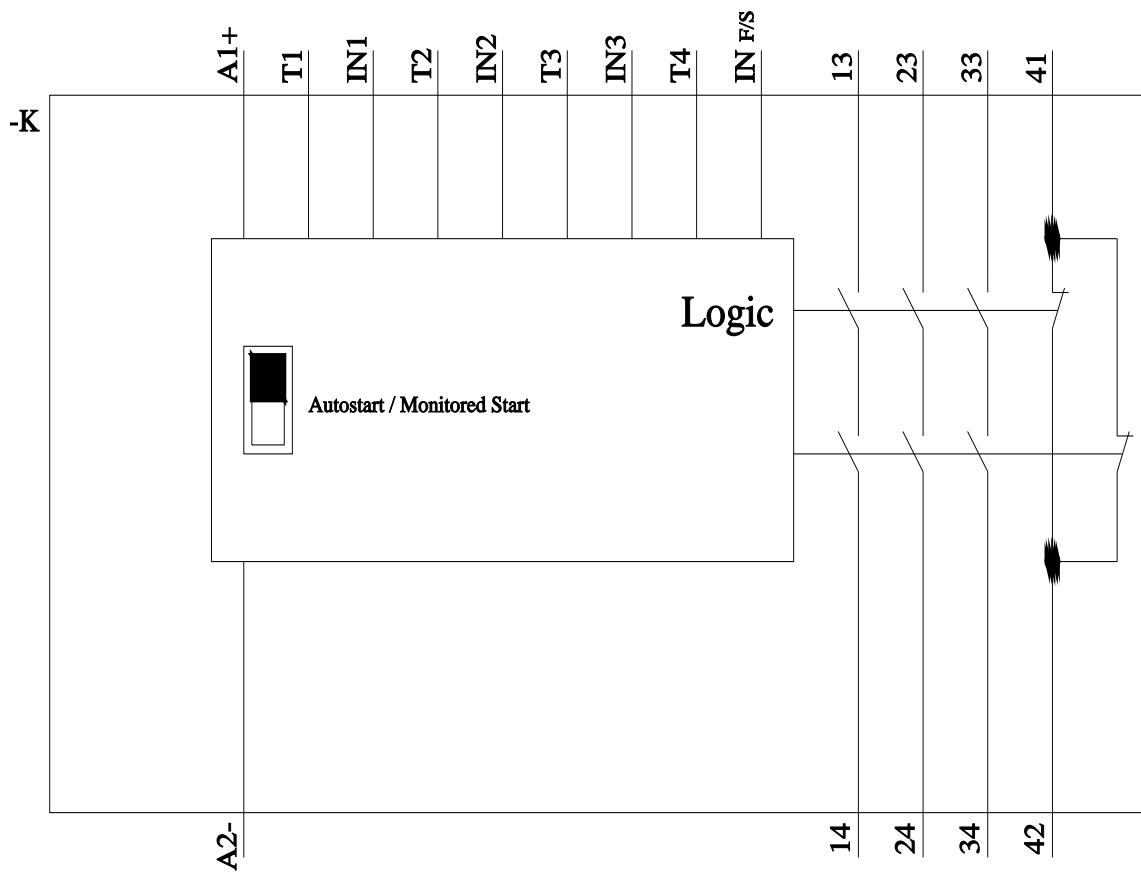
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/en/ps/3SK1111-2AB30>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3SK1111-2AB30&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3SK1111-2AB30&lang=en)





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