



SIRIUS safety relay Basic unit Advanced series with time delay 0.05-3 s  
 electronic enabling circuits 2 NO instantaneous 2 NO delayed  $U_s = 24\text{ V}$   
 DC Spring-type terminal (push-in)

General technical data	
product brand name	SIRIUS
product category	Safety relays
product designation	safety relays
design of the product	Solid-state enabling circuits
protection class IP of the enclosure	IP20
touch protection against electrical shock	finger-safe
insulation voltage rated value	50 V
ambient temperature	
• during storage	-40 ... +80 °C
• during operation	-25 ... +60 °C
air pressure acc. 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 acc. to IEC 60068-2-6	5 ... 500 Hz: 0.75 mm
shock resistance	10g / 11 ms
surge voltage resistance rated value	800 V
EMC emitted interference	IEC 60947-5-1, Class A
installation environment regarding EMC	This product is suitable for Class A environments only. In household environments, this device can cause unwanted radio interference. The user is required to implement appropriate measures in this case.
overvoltage category	3
degree of pollution	3
reference code acc. 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	yes
type of the safety-related wiring of the inputs	single-channel and two-channel
product feature cross-circuit-proof	Yes
Safety Integrity Level (SIL)	
• acc. to IEC 61508	3
• for delayed release circuit acc. to IEC 61508	SIL3
performance level (PL)	
• acc. to EN ISO 13849-1	e
• for delayed release circuit acc. to EN ISO 13849-1	e
category acc. to EN ISO 13849-1	4
Safe failure fraction (SFF)	99 %
PFHD with high demand rate acc. to EN 62061	0.0000000015 1/h
PFDAvg with low demand rate acc. to IEC 61508	0.000007

<b>T1 value for proof test interval or service life acc. to IEC 61508</b>	20 y
<b>hardware fault tolerance acc. to IEC 61508</b>	1
<b>safety device type acc. to IEC 61508-2</b>	Type B
<b>number of outputs as contact-affected switching element</b>	
• as NO contact	
— safety-related instantaneous contact	0
— safety-related delayed switching	0
<b>number of outputs as contact-less semiconductor switching element</b>	
• safety-related	
— delayed switching	2
— instantaneous contact	2
<b>stop category acc. to DIN EN 60204-1</b>	0 / 1
<b>General technical data</b>	
<b>design of input</b>	
• cascading input/functional switching	Yes
• feedback input	Yes
• start input	Yes
<b>type of electrical connection plug-in socket</b>	No
<b>operating frequency maximum</b>	2 000 1/h
<b>switching capacity current</b>	
• of semiconductor outputs at DC-13 at 24 V	2 A
<b>design of the fuse link for short-circuit protection of the NO contacts of the relay outputs required</b>	not required
<b>wire length</b>	
• with Cu 1.5 mm <sup>2</sup> and 150 nF/km per sensor circuit maximum	4 000 m
<b>make time with automatic start</b>	
• at DC maximum	85 ms
<b>make time with automatic start after power failure</b>	
• typical	6 500 ms
• maximum	6 500 ms
<b>make time with monitored start</b>	
• maximum	85 ms
<b>backslide delay time after opening of the safety circuits typical</b>	40 ms
<b>adjustable OFF-delay time after opening of the safety circuits</b>	0.05 ... 3
<b>recovery time after opening of the safety circuits typical</b>	30 ms
<b>recovery time after power failure typical</b>	6.5 s
<b>pulse duration</b>	
• of the sensor input minimum	60 ms
• of the ON pushbutton input minimum	0.15 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>	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> </ul>	1x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>● finely stranded</li> <li>— with core end processing</li> <li>— without core end processing</li> </ul>	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 at 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)

### Product Function

<b>product function parameterizable</b>	sensor floating / sensor non-floating, monitored start-up / automatic start, 1-channel / 2-channel sensor connection, cross-circuit detection, startup testing, antivalent sensors, 2-hand switches, time delay
<b>suitability for operation device connector 3ZY12</b>	Yes
<b>suitability for interaction press control</b>	Yes
<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

### Certificates/ approvals

<b>General Product Approval</b>	<b>EMC</b>	<b>Functional Safety/Safety of Machinery</b>
---------------------------------	------------	--



[Type Examination Certificate](#)

<b>Declaration of Conformity</b>	<b>Test Certificates</b>	<b>Marine / Shipping</b>
----------------------------------	--------------------------	--------------------------



[Type Test Certificates/Test Report](#)



<b>other</b>	<b>Railway</b>
--------------	----------------

[Confirmation](#)

[Confirmation](#)

### 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=3SK1122-2CB41>

Cax online generator

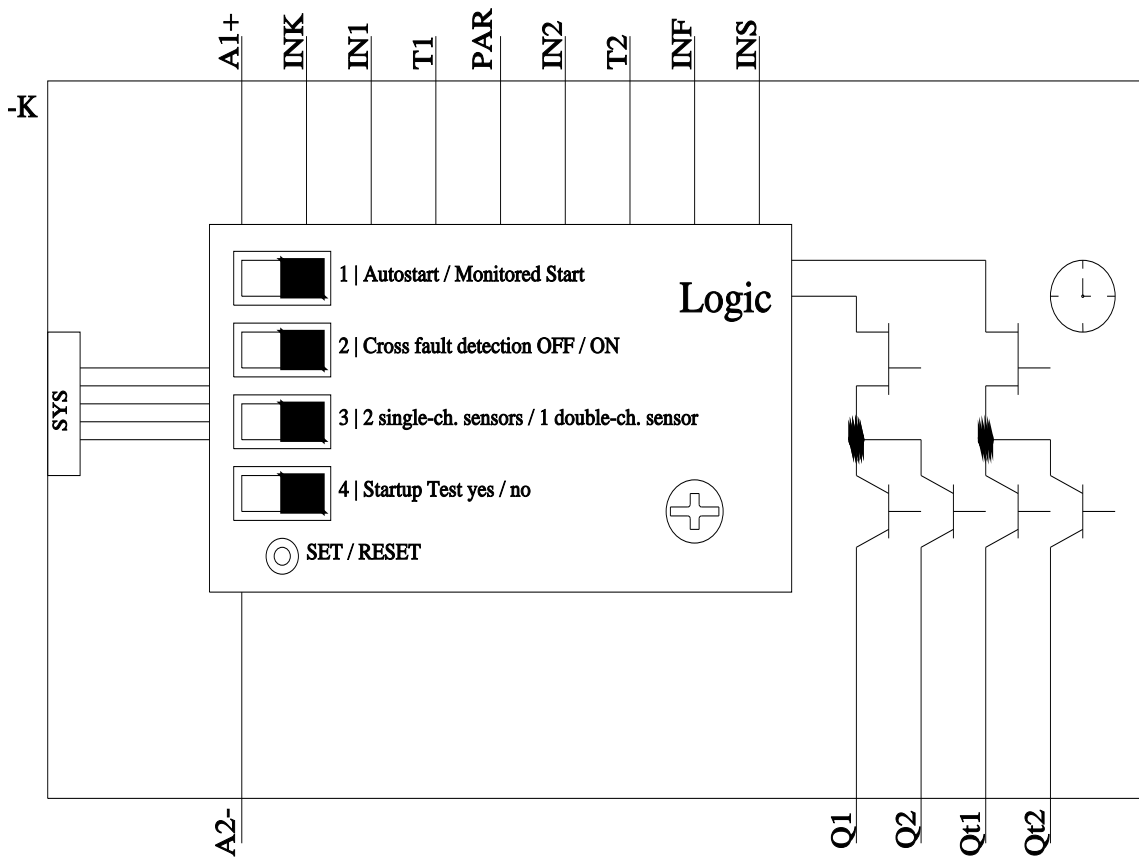
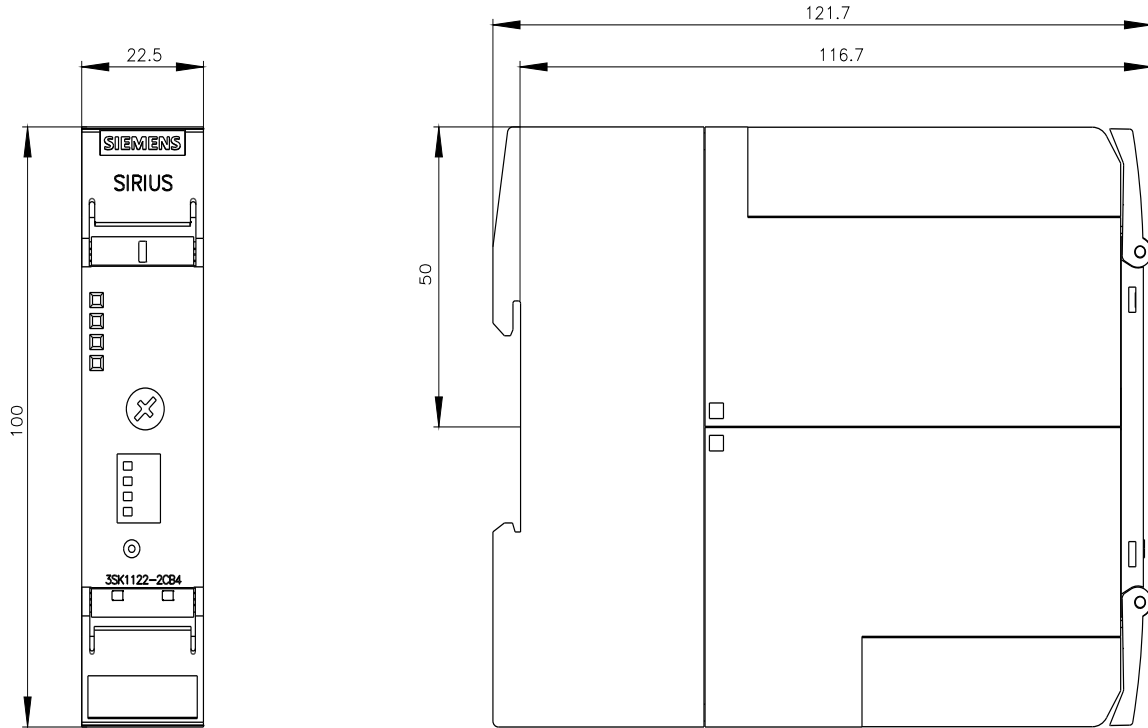
<http://support.automation.siemens.com/WWW/CAXorder/default.aspx?lang=en&mlfb=3SK1122-2CB41>

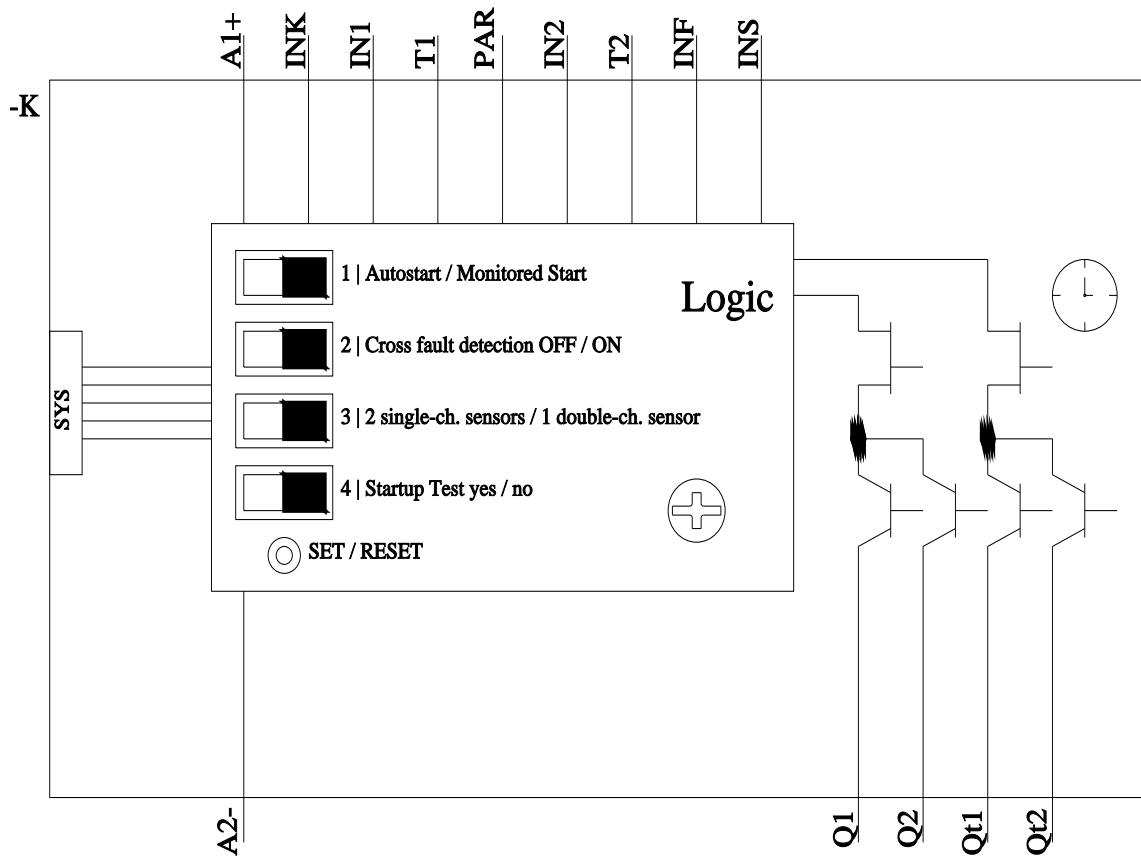
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3SK1122-2CB41>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3SK1122-2CB41&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3SK1122-2CB41&lang=en)





last modified:

1/27/2022 