



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 screw terminal

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. It can cause undesired radio-frequency interference in residential environments. If this is the case, the user must take appropriate measures.
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
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 B
number of outputs as contact-affected switching element	
• as NO contact	
— safety-related instantaneous contact	0
— safety-related delayed switching	0
number of outputs as contact-less semiconductor switching element	
• safety-related	
— delayed switching	2
— instantaneous contact	2
stop category acc. to DIN EN 60204-1	0 / 1
General technical data	
design of input	
• cascading input/functional switching	Yes
• feedback input	Yes
• start input	Yes
type of electrical connection plug-in socket	No
operating frequency maximum	2 000 1/h
switching capacity current	
• of semiconductor outputs at DC-13 at 24 V	2 A
design of the fuse link for short-circuit protection of the NO contacts of the relay outputs required	not required
wire length	
• with Cu 1.5 mm ² and 150 nF/km per sensor circuit maximum	4 000 m
make time with automatic start	
• at DC maximum	85 ms
make time with automatic start after power failure	
• typical	6 500 ms
• maximum	6 500 ms
make time with monitored start	
• maximum	85 ms
backslide delay time after opening of the safety circuits typical	40 ms
adjustable OFF-delay time after opening of the safety circuits	0.05 ... 3
recovery time after opening of the safety circuits typical	30 ms
recovery time after power failure typical	6.5 s
pulse duration	
• of the sensor input minimum	60 ms
• of the ON pushbutton input minimum	0.15 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
Installation/ mounting/ dimensions	
mounting position	any
required spacing for grounded parts at the side	5 mm
fastening method	screw and snap-on mounting
width	22.5 mm

height	100 mm
depth	121.6 mm
Connections/ Terminals	
type of electrical connection	screw-type terminals
type of connectable conductor cross-sections	1x (0.5 ... 2.5 mm ²), 2x (1.0 ... 1.5 mm ²)
<ul style="list-style-type: none"> • solid • finely stranded — with core end processing 	1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.0 mm ²)
type of connectable conductor cross-sections at AWG cables	1x (20 ... 14), 2x (18 ... 16)
<ul style="list-style-type: none"> • solid • stranded 	1x (20 ... 16), 2x (20 ... 16)

Product Function	
product function parameterizable	Sensor floating / sensor non-floating, monitored start / autostart, 1-channel / 2-channel sensor connection, cross-circuit detection, startup testing, antivalent sensors, 2-hand switches, time delay
suitability for operation device connector 3ZY12	Yes
suitability for interaction press control	Yes
suitability for use	
<ul style="list-style-type: none"> • safety switch • monitoring of floating sensors • monitoring of non-floating sensors • magnetically operated switch monitoring • safety-related circuits 	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>

Certificates/ approvals	
General Product Approval	EMC



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

[Miscellaneous](#)



[Type Test Certificates/Test Report](#)



Shipping Approval	other	Railway
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[Confirmation](#)

[Confirmation](#)

Further information

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

<https://www.siemens.com/ic10>

Industry Mall (Online ordering system)

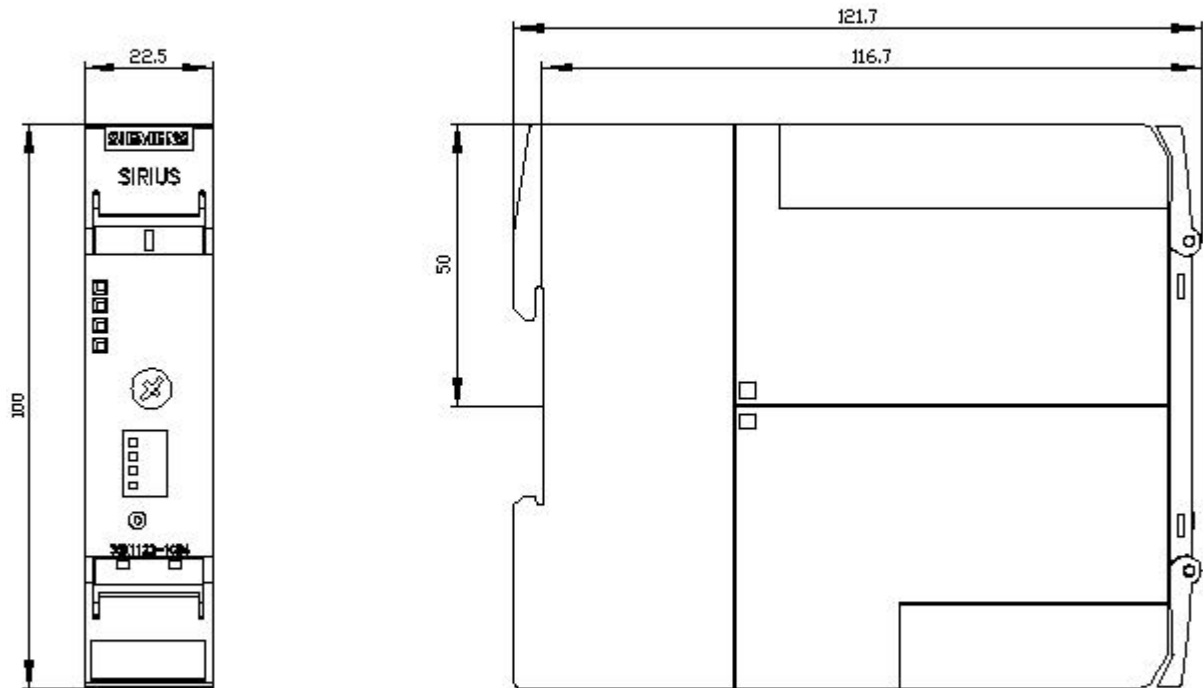
<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3SK1122-1CB41>

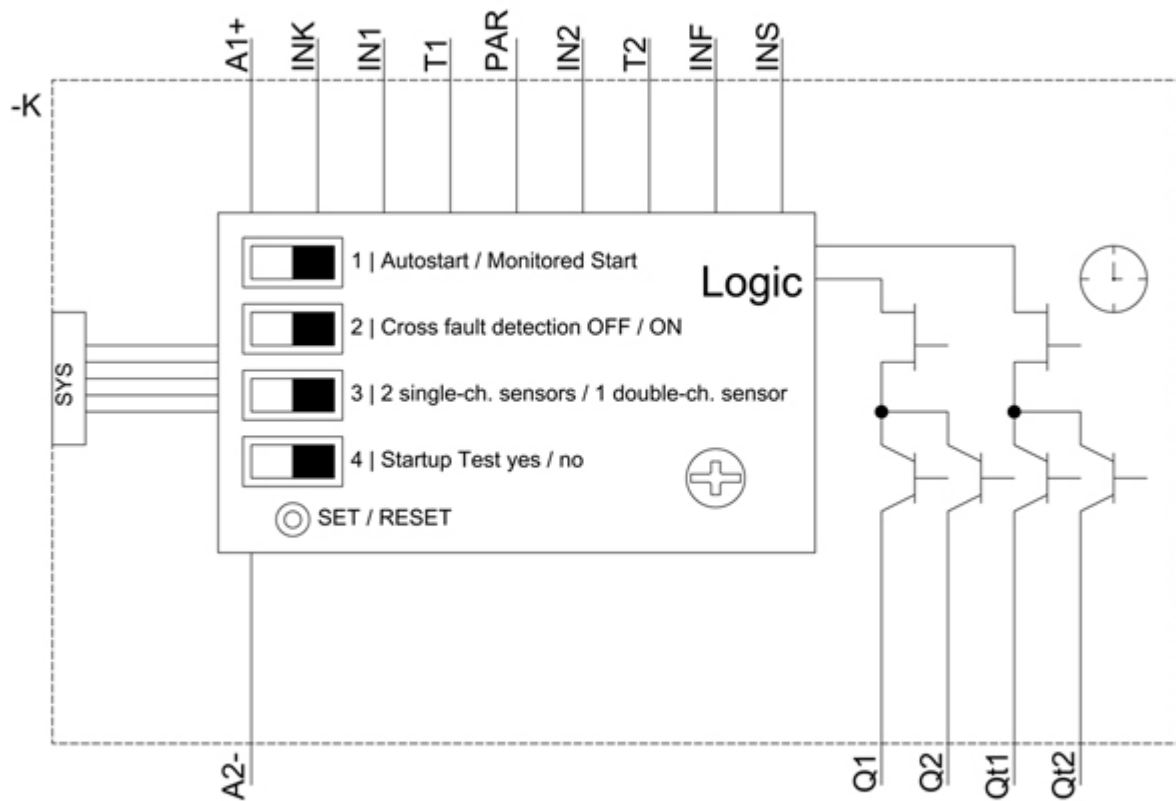
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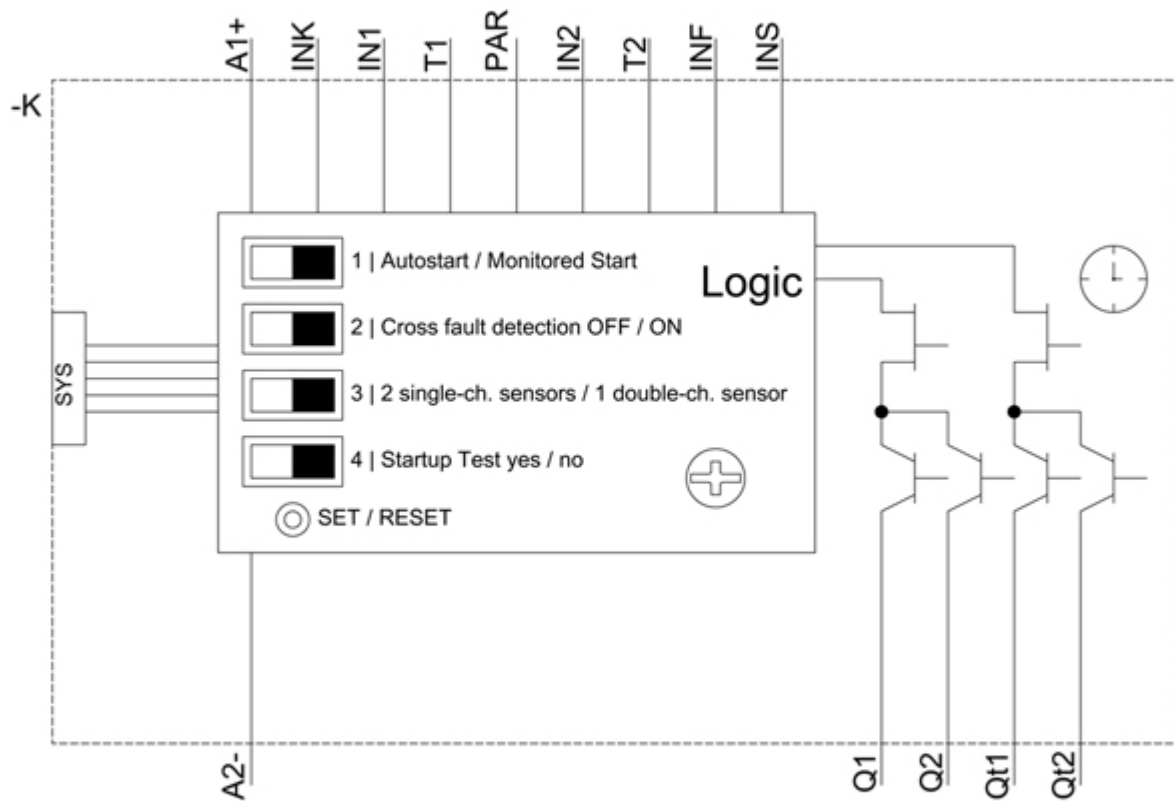
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3SK1122-1CB41>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3SK1122-1CB41>







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