SIEMENS

Data sheet 3SK1122-1CB44

SIRIUS safety relay Basic unit Advanced series with time delay 5-300 s electronic enabling circuits 2 NO instantaneous 2 NO delayed Us = 24 V DC screw terminal

product brand name	SIRIUS
product category	Safety relays
product designation	safety relays
design of the product	Solid-state enabling circuits
General technical data	
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 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	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 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	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)	
● according to IEC 62061	3
● according to IEC 61508	3
● for delayed release circuit according to IEC 61508	SIL3
performance level (PL)	
● according to ISO 13849-1	e
● for delayed release circuit according to EN 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	1.5E-9 1/h
PFDavg with low demand rate according to IEC 61508	7E-6
T1 value for proof test interval or service life	20 y

according to IEC 61508	
hardware fault tolerance according to IEC 61508	1
safety device type according to IEC 61508-2	Type B
Inputs/ Outputs	
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 according to EN 60204-1	0 / 1
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 mm² 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	5 ... 300
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	
● solid	1x (0.5 ... 2.5 mm²), 2x (1.0 ... 1.5 mm²)

● finely stranded	
— with core end processing	1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.0 mm²)
type of connectable conductor cross-sections at AWG cables	
● solid	1x (20 ... 14), 2x (18 ... 16)
● stranded	1x (20 ... 16), 2x (20 ... 16)

Product Function

product function parameterizable	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
suitability for operation device connector 3ZY12	Yes
suitability for interaction press control	Yes
suitability for use	
● safety switch	Yes
● monitoring of floating sensors	Yes
● monitoring of non-floating sensors	Yes
● magnetically operated switch monitoring	Yes
● safety-related circuits	Yes

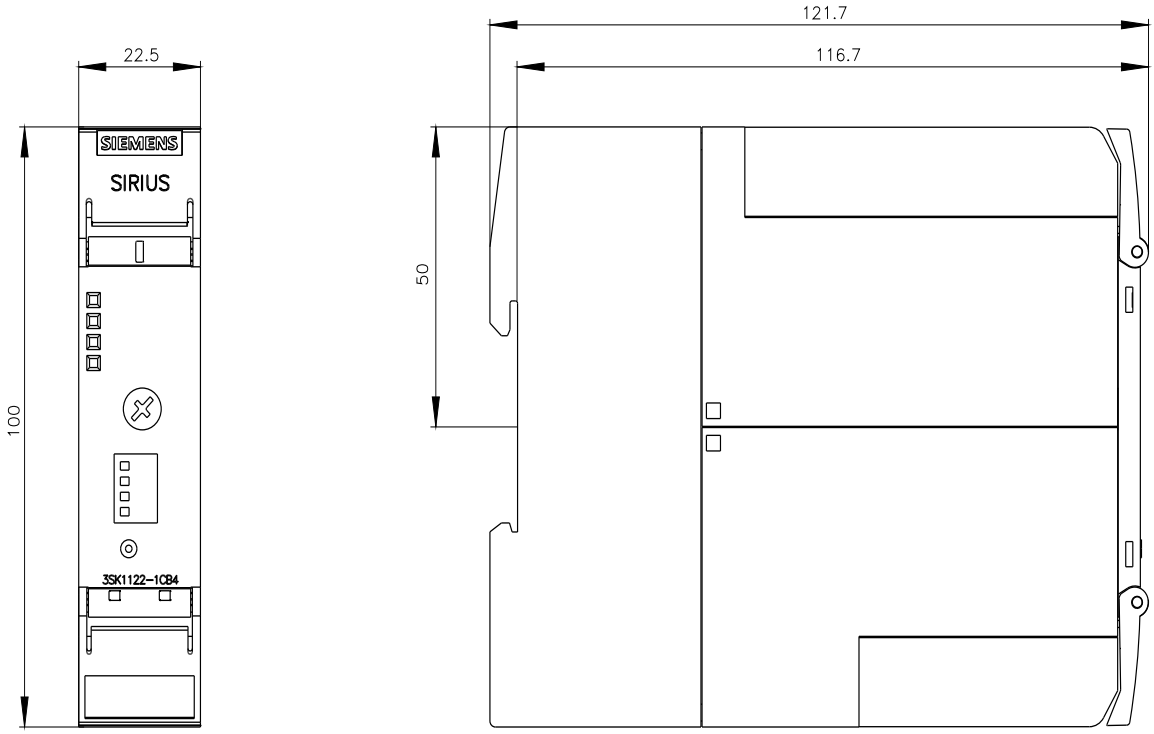
Certificates/ approvals

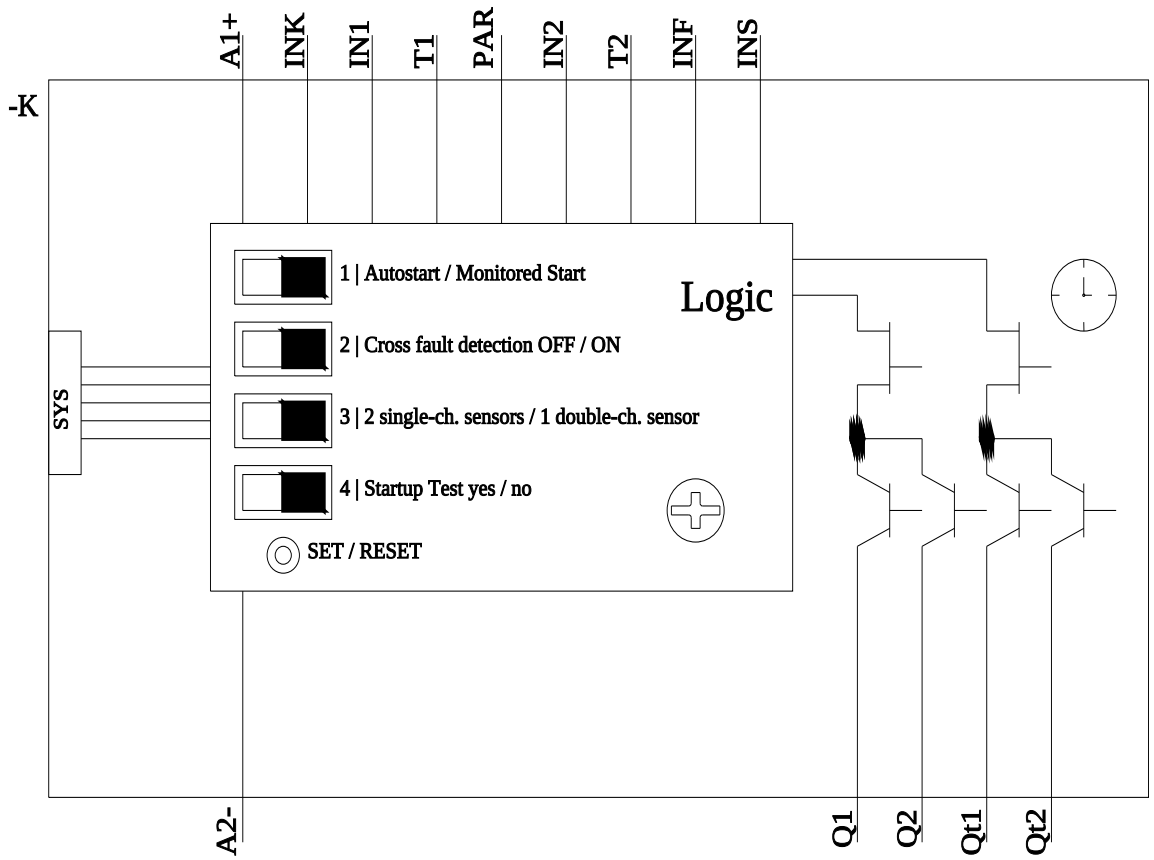
General Product Approval				EMC	Functional Safety/Safety of Machinery
CSA	CCC	Confirmation	EAC	RCM	Type Examination Certificate

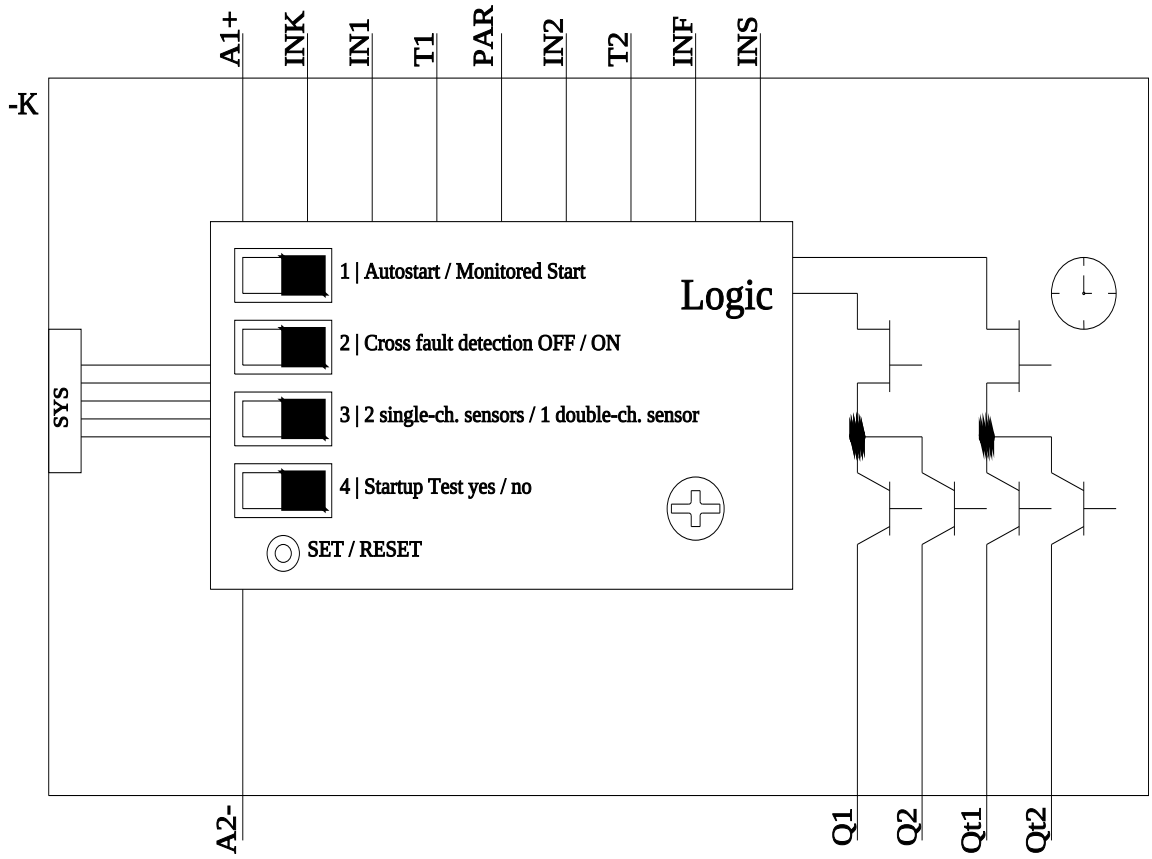
Declaration of Conformity	Test Certificates	Marine / Shipping	other
EG-Konf.	Type Test Certific-ates/Test Report	LRS	Confirmation

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=3SK1122-1CB44
Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3SK1122-1CB44
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3SK1122-1CB44
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3SK1122-1CB44&lang=en







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