SIEMENS

Data sheet 3SK1122-1CB42



SIRIUS safety relay Basic unit Advanced series with time delay 0.5-30 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	
product type designation	3SK1	
product line	Advanced basic unit	
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	
product function		
automatic start	Yes	
 light barrier monitoring 	Yes	
 protective door monitoring 	Yes	
 magnetically operated switch monitoring NC-NO 	Yes	
 magnetically operated switch monitoring NC-NC 	Yes	
laser scanner monitoring	Yes	
 light array monitoring 	Yes	
 EMERGENCY OFF function 	Yes	
 monitored start-up 	Yes	
 pressure-sensitive mat monitoring 	No	
suitability for interaction press control	Yes	
suitability for operation device connector 3ZY12	Yes	
suitability for use		
 monitoring of floating sensors 	Yes	
 monitoring of non-floating sensors 	Yes	
 position switch monitoring 	Yes	
 EMERGENCY-OFF circuit monitoring 	Yes	
 opto-electronic protection device monitoring 	Yes	
 magnetically operated switch monitoring 	Yes	
safety switch	Yes	
 safety-related circuits 	Yes	
General technical data		
certificate of suitability UL approval	Yes	
product feature cross-circuit-proof	Yes	
power loss [W] maximum	2 W	
insulation voltage rated value	50 V	
degree of pollution	3	
overvoltage category	3	
surge voltage resistance rated value	800 V	
protection class IP of the enclosure	IP20	

chock registance	10g / 11 mg
shock resistance	10g / 11 ms 5 500 Hz: 0.75 mm
vibration resistance according to IEC 60068-2-6 operating frequency maximum	5 500 HZ: 0.75 mm 2 000 1/h
	F
reference code according to IEC 81346-2	11/05/2012
Substance Prohibitance (Date) SVHC substance name	Lead - 7439-92-1
SYNC Substance name	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one - 71868-10-5 Lead titanium zirconium oxide - 12626-81-2
Weight	0.199 kg
Ambient conditions	
installation altitude at height above sea level maximum	4 000 m; Derating, see Product Notification 109792701
ambient temperature	
during operation	-25 +60 °C
during storage	-40 +80 °C
relative humidity during operation	10 95 %
air pressure according to SN 31205	90 106 kPa
Electromagnetic compatibility	
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.
EMC emitted interference	IEC 60947-5-1, Class A
Safety related data	
stop category according to IEC 60204-1 IEC 62061	0/1
SIL Claim Limit (subsystem) according to EN 62061	3
Safety Integrity Level (SIL) according to IEC 62061	3
PFHD with high demand rate according to IEC 62061	1.5E-9 1/h
ISO 13849	
category according to EN ISO 13849-1	4
performance level (PL)	
 according to ISO 13849-1 	e
 for delayed release circuit according to ISO 13849-1 	e
IEC 61508	
Safety Integrity Level (SIL)	
 according to IEC 61508 	3
for delayed release circuit according to IEC 61508	SIL3
safety device type according to IEC 61508-2	Type B
Average probability of failure on demand (PFDavg) with low demand rate acc. to IEC 61508	7E-6 1/y
PFDavg with low demand rate according to IEC 61508	7E-6
Safe failure fraction (SFF)	99 %
hardware fault tolerance according to IEC 61508	1
T1 value for proof test interval or service life according to IEC 61508	20 a
Electrical Safety	f
touch protection against electrical shock	finger-safe
Short-circuit protection	
or short-circuit protection of the NO contacts of the relay outputs required	not required
Inputs	
design of input	
cascading input/functional switching	Yes
• feedback input	Yes
• start input	Yes
pulse duration of the sensor input minimum	60 ms
number of sensor inputs 1-channel or 2-channel	1
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	
switching capacity current of semiconductor outputs at DC-13 at 24 $\ensuremath{\text{V}}$	2 A	
Times		
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	0.5 30 s	
recovery time after opening of the safety circuits typical	30 ms	
recovery time after power failure typical	6.5 s	
pulse duration		
 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		
• initial value	0.8	
• full-scale value	1.2	
Installation/ mounting/ dimensions		
mounting position	any	
fastening method	screw and snap-on mounting	
height	100 mm	
width	22.5 mm	
depth	121.6 mm	
required spacing		
 for grounded parts at the side 	5 mm	
Connections/ Terminals		
type of electrical connection	screw terminal	
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)	
 for AWG cables solid 	1x (20 14), 2x (18 16)	
 for AWG cables stranded 	1x (20 16), 2x (20 16)	
type of electrical connection plug-in socket	No	
Approvals Certificates		
Canaral Braduat Annroyal		

General Product Approval



Confirmation









EMV

Functional Saftey

Test Certificates

Marine / Shipping



Type Examination Certificate Type Test Certificates/Test Report







Marine / Shipping other Railway Environment



Confirmation

Confirmation

Environmental Confirmations

Further information

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=3SK1122-1CB42

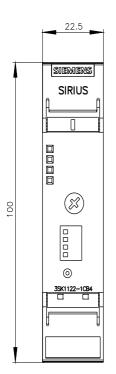
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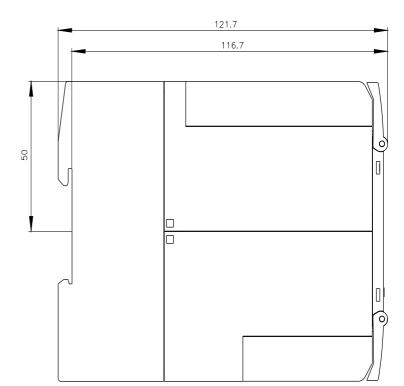
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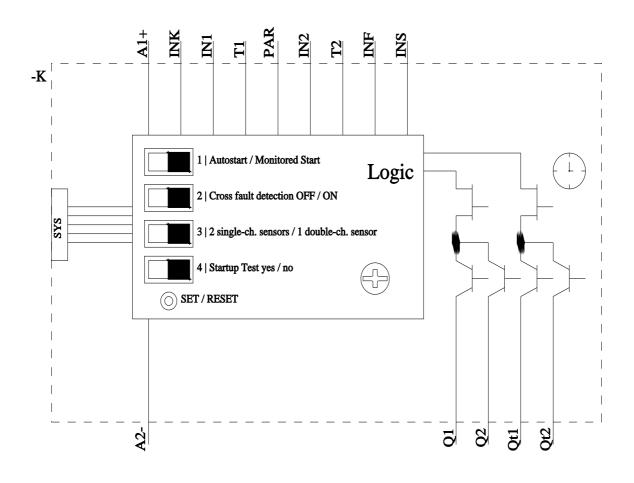
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

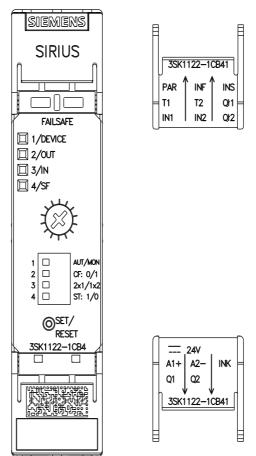
https://support.industry.siemens.com/cs/ww/en/ps/3SK1122-1CB42

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3SK1122-1CB42&lang=en









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