SIEMENS

Data sheet 3SK1111-1AW20



SIRIUS safety relay Basic unit Standard series Relay enabling circuits 3 NO contacts plus Relay signaling circuit 1 NC contact Us = 110 - 240 V AC/DC 50/60 Hz screw terminal

product brand name	SIRIUS
product category	Safety relays
product designation	safety relays
design of the product	Relay enabling circuits
General technical data	
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, 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	2.5 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	е
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	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	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
number of outputs as contact-affected switching element		
as NC contact for signaling function instantaneous contact	1	
— for signaling function instantaneous contact	1	
as NO contact	2	
safety-related instantaneous contact	3	
— safety-related delayed switching	0	
stop category according to EN 60204-1	0	
design of input		
cascading input/functional switching	No	
• feedback input	Yes	
• start input	Yes	
type of electrical connection plug-in socket	No	
operating frequency maximum	360 1/h	
switching capacity current		
of the NO contacts of the relay outputs		
— at DC-13		
— at 24 V	5 A	
— at 115 V	0.2 A	
— at 230 V	0.1 A	
— at AC-15		
— at 115 V	5 A	
— at 230 V	5 A	
 of the NC contacts of the relay outputs 		
— at DC-13		
— at 24 V	1 A	
— at 115 V	0.2 A	
— at 230 V	0.1 A	
— at AC-15		
— at 115 V	1.5 A	
— at 230 V	1.5 A	
thermal current of the switching element with contacts maximum	5 A	
total current maximum	12 A	
operational current at 17 V minimum	5 mA	
mechanical service life (operating cycles) typical	10 000 000	
design of the fuse link for short-circuit protection of the NO	gL/gG: 6A or circuit breaker type A: 3A or circuit breaker type B: 2A or circuit	
contacts of the relay outputs required	breaker type C: 1A	
design of the fuse link for short circuit protection of the NC	Diazed or Neozed fuses, operating class gL/gG: 6 A or MCB type A: 2 A or	
contacts of the relay outputs required	MCB type B: 2 A or MCB type C: 1 A	
wire length	0.000	
 for total of all sensor circuits with Cu 1.5 mm² and 150 nF/km maximum 	2 000 m	
make time with automatic start		
• typical	110 ms	
at DC maximum	130 ms	
at AC maximum	130 ms	
make time with automatic start after power failure		
• typical	110 ms	
• maximum	130 ms	
make time with monitored start		
maximum	15 ms	
• typical	15 ms	
backslide delay time after opening of the safety circuits typical	10 ms	
backslide delay time in the event of power failure		
• typical	200 ms	
• maximum	300 ms	
recovery time after opening of the safety circuits typical	10 ms	
recovery time after power failure typical	0.32 s	
pulse duration		
beree aaranan		

of the sensor input minimum	150 ms		
of the ON pushbutton input minimum	0.015 s		
Control circuit/ Control			
type of voltage of the control supply voltage	AC/DC		
control supply voltage frequency			
• 1 rated value	50 Hz		
2 rated value	60 Hz		
control supply voltage			
• at DC			
— rated value	110 240 V		
• at AC			
— at 50 Hz			
— rated value	110 240 V		
— at 60 Hz			
— rated value	110 240 V		
operating range factor control supply voltage rated value of magnet coil			
• at AC			
— at 50 Hz	0.85 1.1		
— at 60 Hz	0.85 1.1		
• at DC	0.85 1.1		
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 for AWG cables			
• solid	1x (20 14), 2x (18 16)		
• stranded	1x (20 16), 2x (20 16)		
Product Function			
product function parameterizable	Sensor floating / monitored start / automatic start		
suitability for operation device connector 3ZY12	No		
suitability for interaction press control	No		
suitability for use			
• safety switch	Yes		
 monitoring of floating sensors 	Yes		
 monitoring of non-floating sensors 	No		
 magnetically operated switch monitoring 	No		
safety-related circuits	Yes		
Certificates/ approvals			
General Product Approval	EMC		





Confirmation







Functional Safety/Safety of Machinery Declaration of Conformity	Test Certificates	Marine / Shipping
---	-------------------	-------------------





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=3SK1111-1AW20

Cax online generator

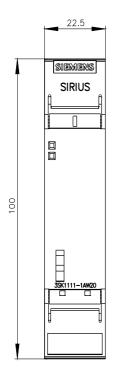
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3SK1111-1AW20

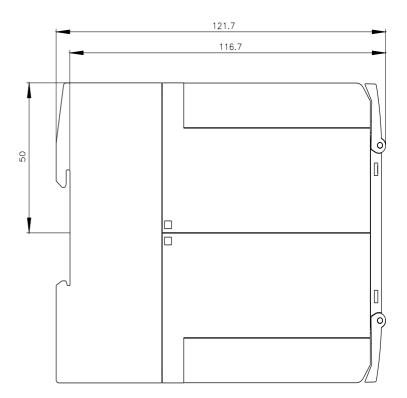
 $Service \& Support \ (Manuals, \ Certificates, \ Characteristics, \ FAQs, ...)$

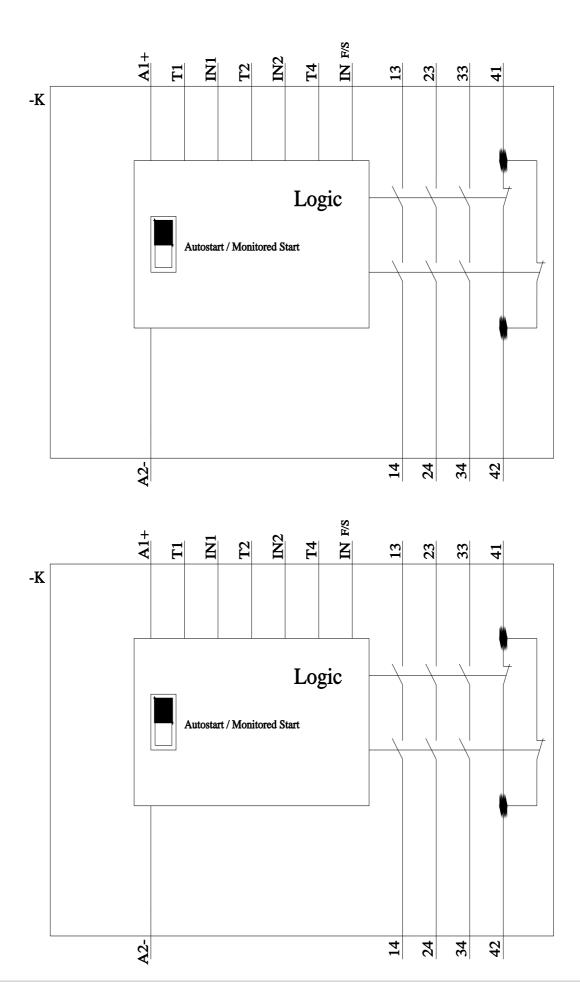
https://support.industry.siemens.com/cs/ww/en/ps/3SK1111-1AW20

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3SK1111-1AW20&lang=en







last modified: 8/11/2023 🖸