



SIRIUS SAFETY RELAY STANDARD SERIES DEVICE RELAY
 ENABLING CIRCUITS 3 NO CONTACTS + RELAY SIGNALING
 CIRCUIT 1 NC CONTACT US = 24 V AC/DC SCREW TERMINAL

Figure similar

General technical data:	
product brand name	SIRIUS
Product designation	safety relays
Design of the product	For autonomous safety applications
Protection class IP of the enclosure	IP20
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 acc. to SN 31205	90 ... 106 kPa
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	4 000 V
EMC emitted interference	IEC 60947-5-1, IEC 61000
Installation environment regarding EMC	This product is suitable for Class B environments and can also be used in domestic environments.
Overvoltage category	Installation category III
Degree of pollution	3
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 property cross-circuit-proof	Yes

Safety Integrity Level (SIL) • acc. to IEC 61508	SIL3
Performance level (PL) • 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	0.0000000017 1/h
Average probability of failure on demand (PFDavg) with low demand rate acc. to IEC 61508	0.000001 1/y
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 A
Number of outputs as contact-affected switching element	
• as NC contact	
— for signaling function instantaneous contact	1
— for signaling function delayed switching	0
— safety-related instantaneous contact	0
— safety-related delayed switching	0
• as NO contact	
— for signaling function instantaneous contact	0
— for signaling function delayed switching	0
— safety-related instantaneous contact	3
Number of outputs as contact-less semiconductor switching element	
• safety-related	
— delayed switching	0
— instantaneous contact	0
• for signaling function instantaneous contact	0
Stop category acc. to DIN EN 60204-1	0

General technical data:

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
Operating current at 17 V minimum	5 mA
Mechanical service life (switching cycles) typical	10 000 000
Design of the fuse link for short-circuit protection of the NO contacts of the relay outputs required	gL/gG: 6A or circuit breaker type A: 3A or circuit breaker type B: 2A or circuit breaker type C: 1A
Design of the fuse link for short circuit protection of the NC contacts of the relay outputs required	Diazed or Neozed fuses, operating class gL/gG: 6 A or MCB type A: 2 A or MCB type B: 2 A or MCB type C: 1 A
Cable length	
• for total of all sensor circuits with Cu 1.5 mm ² and 150 nF/km maximum	2 000 m
Make time with automatic start	
• typical	200 ms
• for DC maximum	320 ms
• with AC maximum	320 ms
Make time with automatic start after power failure	
• typical	200 ms
• maximum	320 ms
Make time with monitored start	
• maximum	20 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	65 ms
• maximum	75 ms
Recovery time after opening of the safety circuits typical	10 ms
Recovery time after power failure typical	0.09 s

Pulse duration	
<ul style="list-style-type: none"> • of the sensor input minimum • of the ON pushbutton input minimum 	<p>150 ms</p> <p>0.015 s</p>

Control circuit/ Control:

Type of voltage of the control supply voltage	AC/DC
Control supply voltage frequency	
<ul style="list-style-type: none"> • 1 Rated value • 2 Rated value 	<p>50 Hz</p> <p>60 Hz</p>
Control supply voltage	
<ul style="list-style-type: none"> • for DC <ul style="list-style-type: none"> — Rated value • with AC <ul style="list-style-type: none"> — at 50 Hz — Rated value — at 60 Hz — Rated value 	<p>24 V</p> <p>24 V</p> <p>24 V</p>
Operating range factor control supply voltage rated value of the magnet coil	
<ul style="list-style-type: none"> • with AC <ul style="list-style-type: none"> — at 50 Hz — at 60 Hz • for DC 	<p>0.85 ... 1.1</p> <p>0.85 ... 1.1</p> <p>0.85 ... 1.2</p>
Active power loss typical	2 W

Installation/ mounting/ dimensions:

mounting position	any
Required spacing for grounded parts at the side	5 mm
Required spacing with side-by-side mounting at the side	0 mm
Mounting type	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-section	
<ul style="list-style-type: none"> • solid • finely stranded <ul style="list-style-type: none"> — with core end processing 	<p>1x (0.5 ... 2.5 mm²), 2x (1.0 ... 1.5 mm²)</p> <p>1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.0 mm²)</p>
Type of connectable conductor cross-section for AWG conductors	
<ul style="list-style-type: none"> • 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 / autostart
Suitability for operation Device connector 3ZY12	No
Suitability for interaction press control	No
Suitability for use	
<ul style="list-style-type: none"> • safety switch 	Yes
<ul style="list-style-type: none"> • Monitoring of floating sensors 	Yes
<ul style="list-style-type: none"> • Monitoring of non-floating sensors 	Yes
<ul style="list-style-type: none"> • magnetically operated switch monitoring 	Yes
<ul style="list-style-type: none"> • safety-related circuits 	Yes

Certificates/ approvals:

General Product Approval	EMC	Functional Safety/Safety of Machinery	Declaration of Conformity
 CCC	 C-TICK	Type Examination	 EG-Konf.
 CSA	 UL		

Test Certificates	other
Type Test Certificates/Test Report	Confirmation

Further information

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

<http://www.siemens.com/industrial-controls/catalogs>

Industry Mall (Online ordering system)

<http://www.siemens.com/industrymall>

Cax online generator

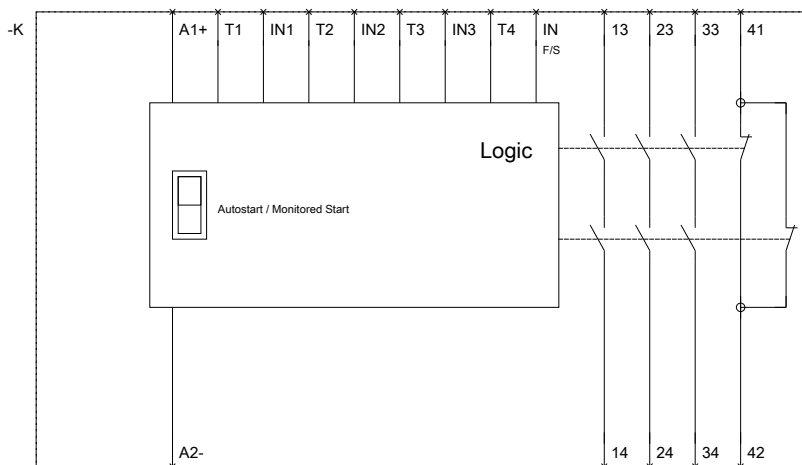
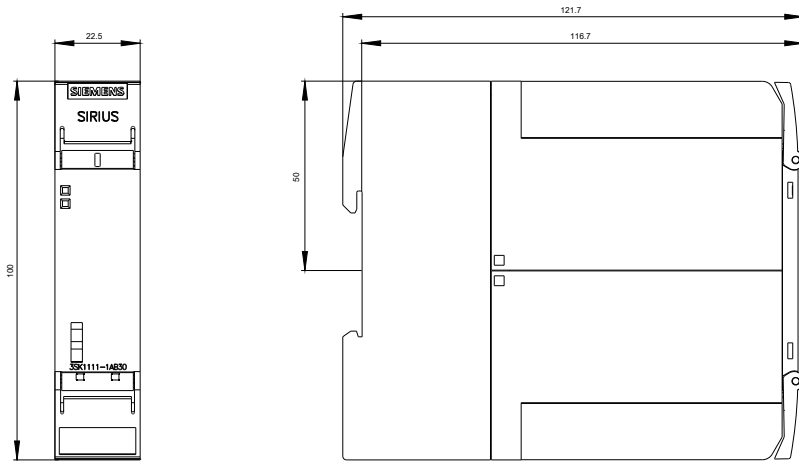
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3SK11111AB30>

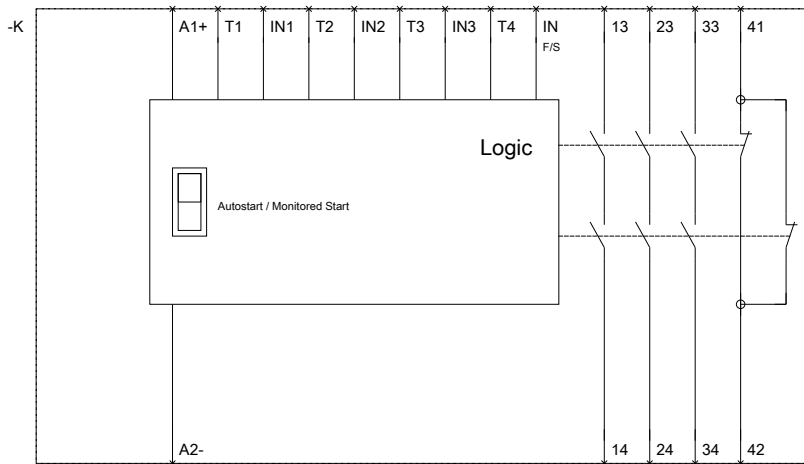
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3SK11111AB30>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3SK11111AB30&lang=en





last modified:

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