



SIRIUS SAFETY RELAY BASIC UNIT ADVANCED SERIES RELAY  
 ENABLING CIRCUITS 3 NO CONTACTS + RELAY SIGNALING  
 CIRCUIT 1 NC CONTACT US = 24 V 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, 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	Installation category III
Degree of pollution	3
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 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	0.0000000025 1/h
Average probability of failure on demand (PFDavg) with low demand rate acc. to IEC 61508	0.000007 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 B
Number of outputs as contact-affected switching element • as NC contact — for signaling function instantaneous contact — for signaling function delayed switching — safety-related instantaneous contact — safety-related delayed switching • as NO contact — for signaling function instantaneous contact — for signaling function delayed switching — safety-related instantaneous contact	1 0 0 0 0 0 0 3
Number of outputs as contact-less semiconductor switching element • safety-related — delayed switching — instantaneous contact • for signaling function instantaneous contact	0 0 0
Stop category acc. to DIN EN 60204-1	0

#### General technical data:

Design of input • cascading input/functional switching • feedback input • Start input	Yes Yes Yes
Type of electrical connection Plug-in socket	No
Operating frequency maximum	360 1/h
Switching capacity current	

<ul style="list-style-type: none"> <li>• of the NO contacts of the relay outputs               <ul style="list-style-type: none"> <li>— at DC-13                   <ul style="list-style-type: none"> <li>— at 24 V</li> <li>— at 115 V</li> <li>— at 230 V</li> </ul> </li> <li>— at AC-15                   <ul style="list-style-type: none"> <li>— at 115 V</li> <li>— at 230 V</li> </ul> </li> </ul> </li> <li>• of the NC contacts of the relay outputs               <ul style="list-style-type: none"> <li>— at DC-13                   <ul style="list-style-type: none"> <li>— at 24 V</li> <li>— at 115 V</li> <li>— at 230 V</li> </ul> </li> <li>— at AC-15                   <ul style="list-style-type: none"> <li>— at 115 V</li> <li>— at 230 V</li> </ul> </li> </ul> </li> </ul>	5 A 0.2 A 0.1 A 5 A 5 A 1 A 0.2 A 0.1 A 1.5 A 1.5 A
<b>Thermal current of the switching element with contacts maximum</b>	5 A
<b>Operating current at 17 V minimum</b>	5 mA
<b>Mechanical service life (switching cycles) typical</b>	10 000 000
<b>Design of the fuse link for short-circuit protection of the NO contacts of the relay outputs required</b>	gL/gG: 6A or circuit breaker type A: 3A or circuit breaker type B: 2A or circuit breaker type C: 1A
<b>Design of the fuse link for short circuit protection of the NC contacts of the relay outputs required</b>	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
<b>Cable length</b> <ul style="list-style-type: none"> <li>• with Cu 1.5 mm<sup>2</sup> and 150 nF/km per sensor circuit maximum</li> </ul>	4 000 m
<b>Make time with automatic start</b> <ul style="list-style-type: none"> <li>• for DC maximum</li> </ul>	110 ms
<b>Make time with automatic start after power failure</b> <ul style="list-style-type: none"> <li>• typical</li> <li>• maximum</li> </ul>	6 500 ms 6 500 ms
<b>Make time with monitored start</b> <ul style="list-style-type: none"> <li>• maximum</li> </ul>	110 ms
<b>Backslide delay time after opening of the safety circuits typical</b>	40 ms
<b>Backslide delay time in the event of power failure</b> <ul style="list-style-type: none"> <li>• typical</li> <li>• maximum</li> </ul>	30 ms 50 ms
<b>Recovery time after opening of the safety circuits typical</b>	30 ms
<b>Recovery time after power failure typical</b>	6.5 s
<b>Pulse duration</b>	

- of the sensor input minimum 75 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 <ul style="list-style-type: none"> <li>• for DC <ul style="list-style-type: none"> <li>— Rated value</li> </ul> </li> </ul>	24 V
Operating range factor control supply voltage rated value of the magnet coil <ul style="list-style-type: none"> <li>• for DC</li> </ul>	0.8 ... 1.2
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"> <li>• solid</li> <li>• finely stranded <ul style="list-style-type: none"> <li>— with core end processing</li> </ul> </li> </ul>	1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (1.0 ... 1.5 mm <sup>2</sup> ) 1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.0 mm <sup>2</sup> )
Type of connectable conductor cross-section for AWG conductors <ul style="list-style-type: none"> <li>• solid</li> <li>• stranded</li> </ul>	1x (20 ... 14), 2x (18 ... 16) 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
Suitability for operation Device connector 3ZY12	Yes
Suitability for interaction press control	Yes
Suitability for use <ul style="list-style-type: none"> <li>• safety switch</li> <li>• Monitoring of floating sensors</li> <li>• Monitoring of non-floating sensors</li> <li>• magnetically operated switch monitoring</li> <li>• safety-related circuits</li> </ul>	Yes Yes Yes Yes Yes

## Certificates/ approvals:

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

[Type Examination](#)

Test Certificates	other
<a href="#">Type Test Certificates/Test Report</a>	<a href="#">Confirmation</a>

## 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

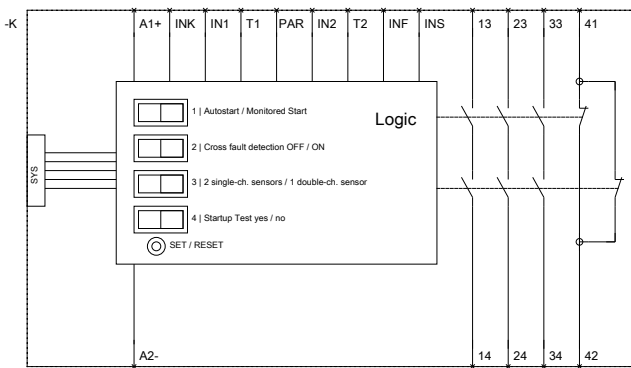
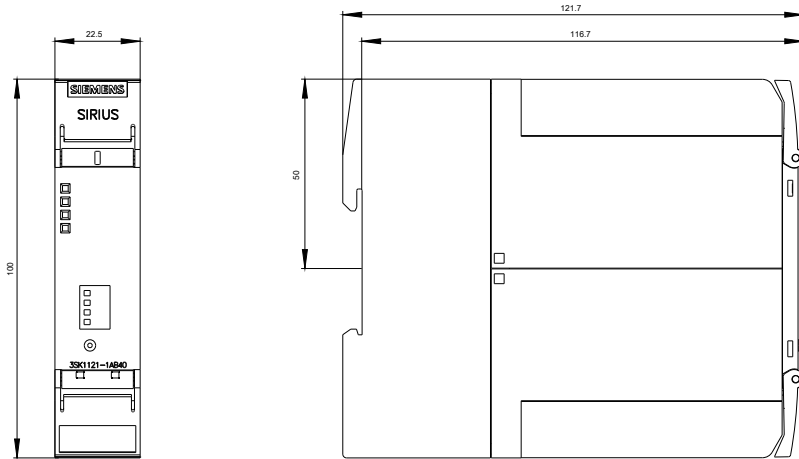
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3SK11211AB40>

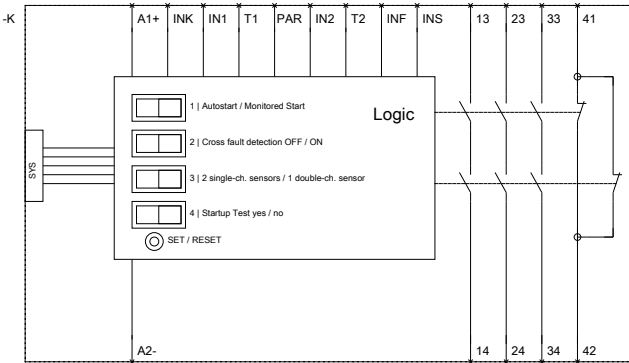
### Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3SK11211AB40>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3SK11211AB40&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3SK11211AB40&lang=en)





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