



SIRIUS SAFETY RELAY ADVANCED EXPANSION UNIT INPUT EXTENSION FOR ONE ADDITIONAL 2-CHANNEL OR TWO 1-CHANNEL SENSORS US = 24 V DC SCREW CONNECTION

Figure similar

General technical data:		
product brand name		SIRIUS
Product designation		safety relays
Design of the product		Expansion unit
Protection class IP of the enclosure		IP20
Protection against electrical shock		finger-safe
Insulation voltage Rated value	V	50
Ambient temperature		
• during storage	°C	-40 ... +80
• during operation	°C	-25 ... +60
Air pressure acc. to SN 31205	kPa	90 ... 106
Relative humidity during operation	%	10 ... 95
Installation altitude at height above sea level maximum	m	2 000
Vibration resistance acc. to IEC 60068-2-6		5 ... 500 Hz: 0,75 mm
Shock resistance		10g / 11 ms
Surge voltage resistance Rated value	V	800
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
Equipment marking acc. to DIN EN 61346-2		F
Number of sensor inputs 1-channel or 2-channel		1

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
PFHD with high demand rate acc. to EN 62061	1/h	0.000000001
Average probability of failure on demand (PFDavg) with low demand rate acc. to IEC 61508	1/y	0.000007
T1 value for proof test interval or service life acc. to IEC 61508	y	20
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		
<ul style="list-style-type: none"> <li>• as NC contact <ul style="list-style-type: none"> <li>— for signaling function instantaneous contact</li> <li>— for signaling function delayed switching</li> <li>— safety-related instantaneous contact</li> <li>— safety-related delayed switching</li> </ul> </li> <li>• as NO contact <ul style="list-style-type: none"> <li>— for signaling function instantaneous contact</li> <li>— for signaling function delayed switching</li> <li>— safety-related instantaneous contact</li> <li>— safety-related delayed switching</li> </ul> </li> </ul>		0 0 0 0 0 0 0 0
Stop category acc. to DIN EN 60204-1		0

#### General technical data:

Design of input Start input		Yes
Type of electrical connection Plug-in socket		No
Cable length between sensor and electronic evaluation device with Cu 1.5 mm <sup>2</sup> and 150 nF/km maximum	m	4 000
Make time with automatic start		
<ul style="list-style-type: none"> <li>• typical</li> <li>• for DC maximum</li> </ul>	ms ms	60 60
Make time with automatic start after power failure		
<ul style="list-style-type: none"> <li>• typical</li> <li>• maximum</li> </ul>	ms ms	6 500 6 500
Make time with monitored start		
<ul style="list-style-type: none"> <li>• maximum</li> <li>• typical</li> </ul>	ms ms	60 60

<b>Backslide delay time after opening of the safety circuits typical</b>	ms	40
<b>Recovery time after opening of the safety circuits typical</b>	ms	30
<b>Pulse duration</b>		
• of the sensor input minimum	ms	60
• of the ON pushbutton input minimum	s	0.15

#### Control circuit/ Control:

<b>Type of voltage of the control supply voltage</b>		DC
<b>Control supply voltage</b>		
• for DC — Rated value	V	24
<b>Operating range factor control supply voltage rated value of the magnet coil</b>		
• for DC		0.8 ... 1.2
<b>Active power loss typical</b>	W	1.2

#### Installation/ mounting/ dimensions:

<b>mounting position</b>		any
<b>Required spacing for grounded parts at the side</b>	mm	5
<b>Required spacing with side-by-side mounting at the side</b>	mm	0
<b>Mounting type</b>		screw and snap-on mounting
<b>Width</b>	mm	17.5
<b>Height</b>	mm	100
<b>Depth</b>	mm	121.6

#### Connections/ Terminals:

<b>Type of electrical connection</b>		screw-type terminals
<b>Type of connectable conductor cross-section</b>		
• solid		1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (1.0 ... 1.5 mm <sup>2</sup> )
• finely stranded — with core end processing		1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.0 mm <sup>2</sup> )
<b>Type of connectable conductor cross-section for AWG conductors</b>		
• solid		1x (20 ... 14), 2x (18 ... 16)

#### Product Function:

<b>Product function parameterizable</b>		Sensor floating / sensor non-floating, monitored start / autostart, 1-channel / 2-channel sensor connection, cross-circuit detection, startup testing, antivalent sensors, 2-hand switches
<b>Suitability for operation Device connector 3ZY12</b>		Yes
<b>Suitability for interaction press control</b>		No
<b>Suitability for use</b>		

- safety switch
- Monitoring of floating sensors
- Monitoring of non-floating sensors
- magnetically operated switch monitoring
- safety-related circuits

	Yes
	Yes
	Yes
	Yes
	Yes

### Certificates/ approvals:

#### Certificate of suitability

- TÜV (German technical inspectorate) certificate
- UL approval

	Yes
	Yes

General Product Approval	EMC	Functional Safety/Safety of Machinery	Declaration of Conformity
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[Type Examination](#)



Test Certificates	other
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[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

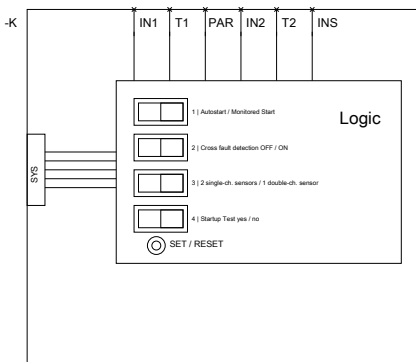
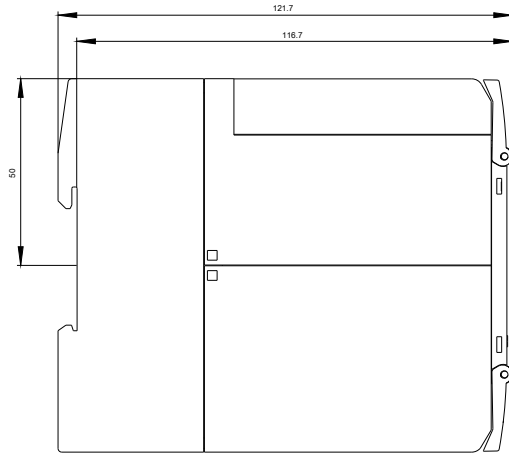
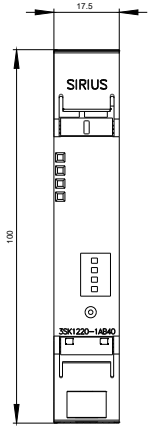
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3SK12201AB40>

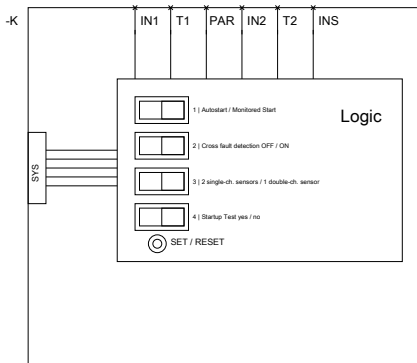
#### Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<http://support.automation.siemens.com/WW/view/en/3SK12201AB40/all>

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

<http://www.automation.siemens.com/bilddb/index.aspx?attID9=3SK12201AB40&lang=en>





last modified:

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