

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	Input expansions
Design of the product	Sensor expansion for safety-related expansion of the Advanced basic units by adding a further two-channel sensor or two single-channel sensors.
Protection class IP of the enclosure	IP20
Protection against electrical shock	finger-safe
Insulation voltage rated value	50 V
Ambient temperature	
• during storage	-40 ... +80 °C
• during operation	-25 ... +60 °C
Air pressure acc. to SN 31205	90 kPa ... 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	800 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	3
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 feature 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	0.000000001 1/h
PFDavg with low demand rate acc. to IEC 61508	0.000007
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 — as contact-affected switching element as NC contact for signaling function delayed switching — as contact-affected switching element as NC contact safety-related instantaneous contact — as contact-affected switching element as NC contact safety-related delayed switching - Number of outputs as contact-affected switching element as NO contact — for signaling function instantaneous contact — for signaling function delayed switching — safety-related instantaneous contact — safety-related delayed switching	0 0 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

Wire length between sensor and electronic evaluation device with Cu 1.5 mm ² and 150 nF/km maximum	4 000 m
Make time with automatic start • typical • at DC maximum	60 ms 60 ms
Make time with automatic start after power failure • typical • maximum	6 500 ms 6 500 ms
Make time with monitored start • maximum • typical	60 ms 60 ms
Backslide delay time after opening of the safety circuits typical	40 ms
Recovery time after opening of the safety circuits typical	30 ms
Pulse duration • of the sensor input minimum • of the ON pushbutton input minimum	60 ms 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	0.8 ... 1.2
Power loss [W] typical	1.2 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	17.5 mm
Height	100 mm
Depth	121.6 mm

Connections/Terminals:

Type of electrical connection	screw-type terminals
Type of connectable conductor cross-sections • solid • finely stranded	1x (0.5 ... 2.5 mm ²), 2x (1.0 ... 1.5 mm ²)

— with core end processing	1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.0 mm²)
Type of connectable conductor cross-sections at AWG conductors	
• solid	1x (20 ... 14), 2x (18 ... 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	No
Suitability for use	
• safety switch	Yes
• Monitoring of floating sensors	Yes
• Monitoring of non-floating sensors	Yes
• magnetically operated switch monitoring	Yes
• safety-related circuits	Yes

Certificates/approvals

Certificate of suitability	
• TÜV (German technical inspectorate) certificate	Yes
• UL approval	Yes

General Product Approval	EMC	Functional Safety/Safety of Machinery
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CCC



CSA



UL



C-Tick

[Baumusterbescheinigung](#)

Declaration of Conformity	Test Certificates	Shipping Approval	other	Railway
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EG-Konf.

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LRS



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Further information

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

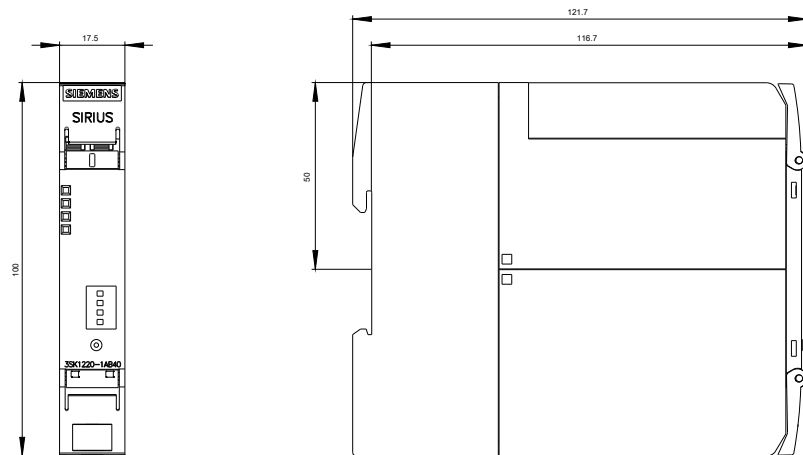
<http://www.siemens.com/industrial-controls/catalogs>

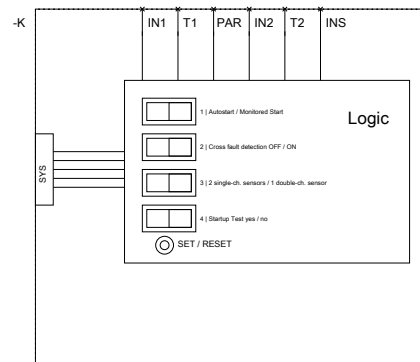
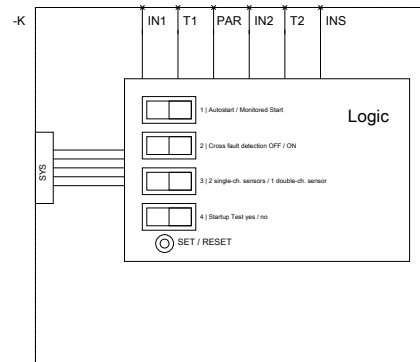
Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3SK1220-1AB40>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3SK1220-1AB40>





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