

!!! Phased-out product !!! The successor product series is 3SK2 (see FAQ 109741483) SIRIUS safety relay with relay enabling circuits (EC) 24 V DC, 45 mm screw terminal EC instantaneous: 2 NO EC delayed: 2 SC: 4 Switch with 8 functions Basic device Maximum achievable PL according to EN 13849-1: Maximum achievable SIL according to IEC 61508: 3



Figure similar

General technical data	
Product brand name	SIRIUS
Product designation	safety relays
Design of the product	for EMERGENCY-STOP units
Protection class IP of the enclosure	IP20
Protection class IP of the terminal	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: 0,075 mm
Shock resistance	8g / 10 ms
Surge voltage resistance rated value	4 000 V

EMC emitted interference	EN 60947-5-1
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.
Reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750	KT
Reference code acc. to DIN EN 61346-2	F
Number of sensor inputs • 1-channel or 2-channel	1
Design of the cascading	cascading or in-service switching
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 • for delayed release circuit acc. to IEC 61508	3 SIL3
SIL Claim Limit (subsystem) acc. to EN 62061	3
Performance level (PL) • acc. to EN ISO 13849-1 • for delayed release circuit acc. to EN ISO 13849-1	e e
Category acc. to EN 954-1	4
Category acc. to EN ISO 13849-1	4
Hardware fault tolerance acc. to IEC 61508	1
Safety device type acc. to IEC 61508-2	Type B
PFHD with high demand rate acc. to EN 62061	0.0000000078 1/h
Average probability of failure on demand (PFDavg) with low demand rate acc. to IEC 61508	0.000015 1/y
T1 value for proof test interval or service life acc. to IEC 61508	20 y
Number of outputs as contact-affected switching element • as NC contact — for signaling function instantaneous contact — for signaling function delayed switching • as NO contact — for signaling function delayed switching — safety-related instantaneous contact — safety-related delayed switching	1 1 1 2 2
Number of outputs as contact-less semiconductor switching element • safety-related — delayed switching	0

— instantaneous contact	0
• for signaling function	
— delayed switching	0
— instantaneous contact	2
Stop category acc. to DIN EN 60204-1	0 + 1

General technical data

Design of input	
• cascading input/functional switching	Yes
• feedback input	Yes
• Start input	Yes
Type of electrical connection Plug-in socket	Yes
Operating frequency maximum	2 000 1/h
Switching capacity current	
• of semiconductor outputs	
— for signaling function at DC-13 at 24 V	0.5 A
• of the NO contacts of the relay outputs at DC-13	
— at 24 V	4 A
— at 115 V	0.2 A
— at 230 V	0.1 A
• of the NO contacts of the relay outputs at AC-15	
— at 24 V	4 A
— at 115 V	4 A
— at 230 V	4 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
• of the NC contacts of the relay outputs at AC-15	
— at 24 V	4 A
— at 115 V	3 A
— at 230 V	3 A
Thermal current of the switching element with contacts maximum	5 A
Electrical endurance (switching cycles) typical	100 000
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: 4 A, or quick: 6 A
DC resistance of the cable maximum	1 000 Ω

Wire length between sensor and electronic evaluation device with Cu 1.5 mm² and 150 nF/km maximum	2 000 m
Make time with automatic start	
• typical	50 ms
• at DC maximum	100 ms
• at AC maximum	100 ms
Make time with automatic start after power failure	
• typical	8 000 ms
• maximum	8 200 ms
Make time with monitored start	
• maximum	100 ms
• typical	50 ms
Backslide delay time in the event of power failure	
• typical	75 ms
• maximum	125 ms
Adjustable OFF-delay time after opening of the safety circuits	0.5 ... 30 s
Recovery time after power failure typical	8 200 ms
Pulse duration	
• of the sensor input minimum	30 ms
• of the ON pushbutton input minimum	0.2 s
• of the cascading input minimum	0.2 s

Control circuit/ Control

Type of voltage of the control supply voltage	DC
Control supply voltage 1	
• at DC rated value	24 V
Operating range factor control supply voltage rated value of magnet coil	
• at DC	0.85 ... 1.2

Installation/ mounting/ dimensions

Mounting position	any
Mounting type	screw and snap-on mounting
Width	45 mm
Height	138.5 mm
Depth	120 mm

Connections/Terminals

Type of electrical connection	screw-type terminals
Type of connectable conductor cross-sections	
• solid	1x (0.5 ... 4.0 mm ²), 2x (0.5 ... 2.5 mm ²)
• finely stranded	
— with core end processing	1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.5 mm ²)

Type of connectable conductor cross-sections at AWG conductors <ul style="list-style-type: none"> • solid • stranded 	2x (20 ... 14) 2x (20 ... 14)
Product Function	
Product function <ul style="list-style-type: none"> • Light barrier monitoring • Standstill monitoring • protective door monitoring • Automatic start • magnetically operated switch monitoring NC-NO • rotation speed monitoring • laser scanner monitoring • monitored start-up • Light array monitoring • magnetically operated switch monitoring NC-NC • EMERGENCY OFF function • Pressure-sensitive mat monitoring 	Yes No Yes Yes Yes No Yes Yes Yes Yes Yes Yes
Suitability for interaction press control	No
Suitability for use <ul style="list-style-type: none"> • Monitoring of floating sensors • Monitoring of non-floating sensors • safety switch • position switch monitoring • EMERGENCY-OFF circuit monitoring • valve monitoring • tactile sensor monitoring • magnetically operated switch monitoring • safety-related circuits 	Yes Yes Yes Yes Yes No Yes Yes Yes
Certificates/approvals	
Certificate of suitability <ul style="list-style-type: none"> • TÜV (German technical inspectorate) certificate • UL approval • BG BIA certificate 	UL, CSA, EN 60204-1, EN ISO 12100, EN 954-1, IEC 61508 Yes Yes Yes

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



Declaration of Conformity	Test Certificates	other	
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[Miscellaneous](#)

[Special Test Certificate](#)

[Environmental Confirmations](#)

[Confirmation](#)

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=3TK2826-1BB42>

Cax online generator

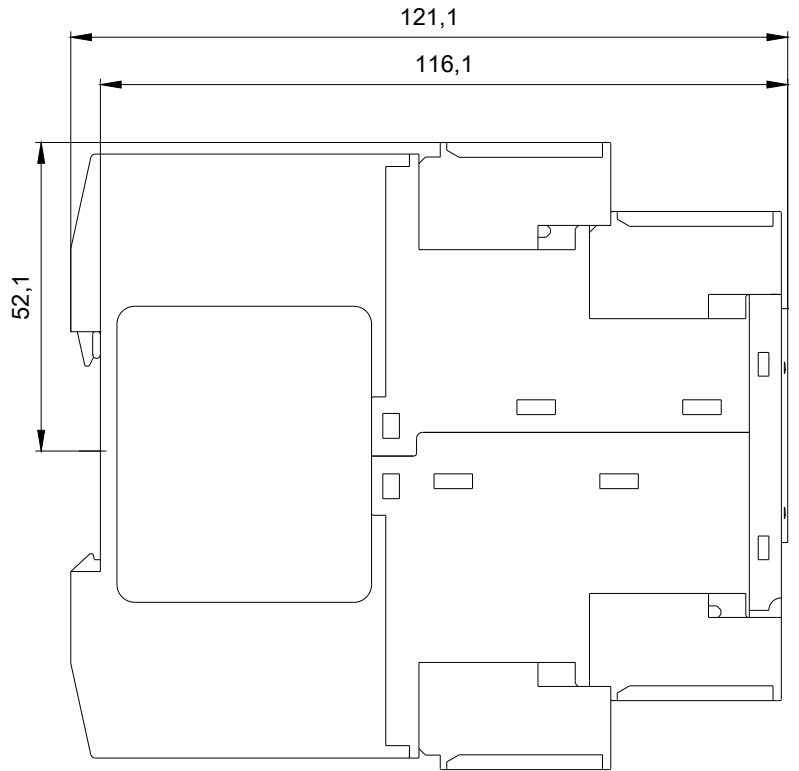
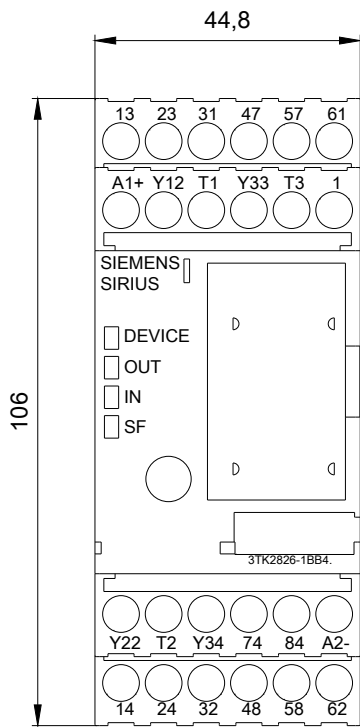
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3TK2826-1BB42>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3TK2826-1BB42>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3TK2826-1BB42&lang=en



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