

!!! Phased-out product !!! The successor product series is 3SK2 (see FAQ 109741483) SIRIUS safety relay with relay enabling circuits (EC) 24...240 V UC, 45 mm overall width screw terminal EC instantaneous: 2 NO EC delayed: 2 SC: 3 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

<b>EMC emitted interference</b>	EN 60947-5-1
<b>Installation environment regarding EMC</b>	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.
<b>Reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750</b>	KT
<b>Reference code acc. to DIN EN 61346-2</b>	F
<b>Number of sensor inputs</b> • 1-channel or 2-channel	1
<b>Design of the cascading</b>	cascading or in-service switching
<b>Type of the safety-related wiring of the inputs</b>	single-channel and two-channel
<b>Product feature cross-circuit-proof</b>	Yes
<b>Safety Integrity Level (SIL)</b> • acc. to IEC 61508 • for delayed release circuit acc. to IEC 61508	3 SIL3
<b>SIL Claim Limit (subsystem) acc. to EN 62061</b>	3
<b>Performance level (PL)</b> • acc. to EN ISO 13849-1 • for delayed release circuit acc. to EN ISO 13849-1	e e
<b>Category acc. to EN 954-1</b>	4
<b>Category acc. to EN ISO 13849-1</b>	4
<b>Hardware fault tolerance acc. to IEC 61508</b>	1
<b>Safety device type acc. to IEC 61508-2</b>	Type B
<b>PFHD with high demand rate acc. to EN 62061</b>	0.0000000078 1/h
<b>Average probability of failure on demand (PFDavg) with low demand rate acc. to IEC 61508</b>	0.000015 1/y
<b>T1 value for proof test interval or service life acc. to IEC 61508</b>	20 y
<b>Number of outputs as contact-affected switching element</b> • 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	2 1 1 2 2
<b>Number of outputs as contact-less semiconductor switching element</b> • safety-related — delayed switching	0

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

### General technical data

<b>Design of input</b>	
• cascading input/functional switching	Yes
• feedback input	Yes
• Start input	Yes
<b>Type of electrical connection Plug-in socket</b>	Yes
<b>Operating frequency maximum</b>	2 000 1/h
<b>Switching capacity current</b>	
• 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	2 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
<b>Thermal current of the switching element with contacts maximum</b>	5 A
<b>Electrical endurance (switching cycles) typical</b>	100 000
<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: 4 A, or quick: 6 A
<b>DC resistance of the cable maximum</b>	1 000 $\Omega$
<b>Wire length between sensor and electronic evaluation device with Cu 1.5 mm<sup>2</sup> and 150 nF/km maximum</b>	2 000 m

<b>Make time with automatic start</b>	
• typical	50 ms
• at DC maximum	100 ms
• at AC maximum	100 ms
<b>Make time with automatic start after power failure</b>	
• typical	8 000 ms
• maximum	8 200 ms
<b>Make time with monitored start</b>	
• maximum	100 ms
• typical	50 ms
<b>Backslide delay time in the event of power failure</b>	
• maximum	320 ms
<b>Adjustable OFF-delay time after opening of the safety circuits</b>	0.5 ... 30 s
<b>Recovery time after power failure typical</b>	8 200 ms
<b>Pulse duration</b>	
• 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

<b>Type of voltage of the control supply voltage</b>	AC/DC
<b>Control supply voltage frequency</b>	
• 1 rated value	50 Hz
• 2 rated value	60 Hz
<b>Control supply voltage 1</b>	
• at DC	24 ... 240 V
<b>Control supply voltage 1 at AC</b>	
• at 50 Hz	24 ... 240 V
• at 60 Hz	24 ... 240 V
<b>Operating range factor control supply voltage rated value of magnet coil</b>	
• at AC	
— at 50 Hz	0.9 ... 1.1
— at 60 Hz	0.9 ... 1.1
• at DC	0.9 ... 1.1

#### Installation/ mounting/ dimensions

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

## Connections/Terminals

<b>Type of electrical connection</b>	screw-type terminals
<b>Type of connectable conductor cross-sections</b>	
<ul style="list-style-type: none"> <li>• solid</li> </ul>	1x (0.5 ... 4.0 mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>• finely stranded</li> <li style="padding-left: 20px;">— with core end processing</li> </ul>	1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> )
<b>Type of connectable conductor cross-sections at AWG conductors</b>	
<ul style="list-style-type: none"> <li>• solid</li> </ul>	2x (20 ... 14)
<ul style="list-style-type: none"> <li>• stranded</li> </ul>	2x (20 ... 14)

## Product Function

<b>Product function</b>	
<ul style="list-style-type: none"> <li>• Light barrier monitoring</li> <li>• Standstill monitoring</li> <li>• protective door monitoring</li> <li>• Automatic start</li> <li>• magnetically operated switch monitoring NC-NO</li> <li>• rotation speed monitoring</li> <li>• laser scanner monitoring</li> <li>• monitored start-up</li> <li>• Light array monitoring</li> <li>• magnetically operated switch monitoring NC-NC</li> <li>• EMERGENCY OFF function</li> <li>• Pressure-sensitive mat monitoring</li> </ul>	<p>Yes</p> <p>No</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>No</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>
<b>Suitability for interaction press control</b>	No
<b>Suitability for use</b>	
<ul style="list-style-type: none"> <li>• Monitoring of floating sensors</li> <li>• Monitoring of non-floating sensors</li> <li>• safety switch</li> <li>• position switch monitoring</li> <li>• EMERGENCY-OFF circuit monitoring</li> <li>• valve monitoring</li> <li>• tactile sensor monitoring</li> <li>• magnetically operated switch monitoring</li> <li>• safety-related circuits</li> </ul>	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>No</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>

## Certificates/approvals

<b>Certificate of suitability</b>	UL, CSA, EN 60204-1, EN ISO 12100, EN 954-1, IEC 61508
<ul style="list-style-type: none"> <li>• TÜV (German technical inspectorate) certificate</li> <li>• UL approval</li> </ul>	<p>Yes</p> <p>Yes</p>

- BG BIA certificate

Yes

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



Test Certificates	other
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[Special Test Certificate](#)

[Environmental Confirmations](#)

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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=3TK2826-1CW32>

**Cax online generator**

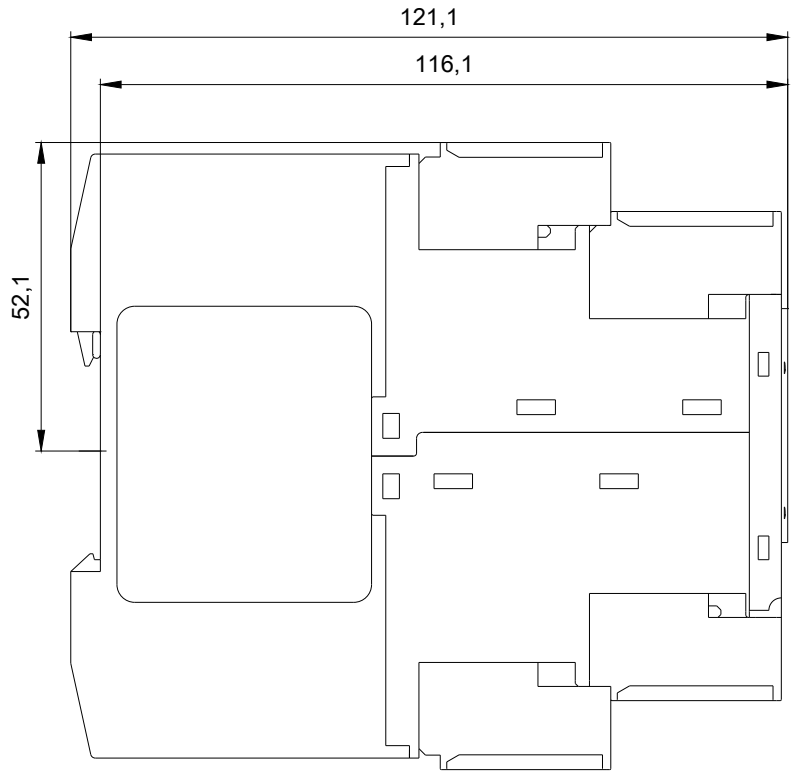
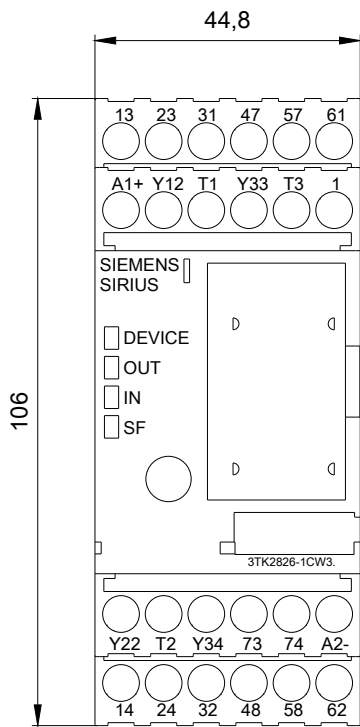
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3TK2826-1CW32>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3TK2826-1CW32>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3TK2826-1CW32&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3TK2826-1CW32&lang=en)



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