



SIRIUS SAFETY RELAY WITH RELAY RELEASE CIRCUITS (RC),
DC 24V, 45.0MM, SPRING-LOADED TERMINAL, RC INSTANT.:
4NO, RC DELAYED: 0, MK: 3, 8-FUNCTION SWITCH, BASIC
DEVICE, MAX. ACHIEVABLE PL TO EN13849-1: E, MAX.
ACHIEVABLE SIL TO IEC61508:3,

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.
Equipment marking acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750	KT
Equipment marking 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	SIL3
SIL Claim Limit (subsystem) acc. to EN 62061	3
Performance level (PL) • acc. to EN ISO 13849-1	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 • as NO contact — safety-related instantaneous contact — safety-related delayed switching	1 4 0
Number of outputs as contact-less semiconductor switching element • safety-related — delayed switching — instantaneous contact • for signaling function — delayed switching — instantaneous contact	 0 0 0 2
Stop category acc. to DIN EN 60204-1	0

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
— 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
— 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 after opening of the safety circuits typical	50 ms
Backslide delay time in the event of power failure	
• typical	75 ms
• maximum	320 ms
Recovery time after opening of the safety circuits typical	250 ms
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	spring-loaded 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	2 x (0.25 ... 1.5 mm ²)
— without core end processing	2x (0.25 ... 1.5 mm ²)
Type of connectable conductor cross-sections at AWG conductors	
• solid	2x (24 ... 16)
• stranded	2x (24 ... 16)

Product Function:

Product function	
• Light barrier monitoring	Yes
• Standstill monitoring	No
• protective door monitoring	Yes
• Automatic start	Yes
• magnetically operated switch monitoring NC-NO	Yes
• rotation speed monitoring	No
• laser scanner monitoring	Yes
• monitored start-up	Yes
• Light array monitoring	Yes
• magnetically operated switch monitoring NC-NC	Yes
• EMERGENCY OFF function	Yes
• Pressure-sensitive mat monitoring	Yes
Suitability for interaction press control	
No	
Suitability for use	
• Monitoring of floating sensors	Yes
• Monitoring of non-floating sensors	Yes
• safety switch	Yes
• position switch monitoring	Yes
• EMERGENCY-OFF circuit monitoring	Yes
• valve monitoring	No
• tactile sensor monitoring	Yes
• magnetically operated switch monitoring	Yes
• safety-related circuits	Yes

Certificates/ approvals:

Certificate of suitability		UL, CSA, EN 60204-1, EN ISO 12100, EN 954-1, IEC 61508
• TÜV (German technical inspectorate) certificate	Yes	
• UL approval	Yes	
• BG BIA certificate	Yes	

General Product Approval	EMC	Functional Safety/Safety of Machinery
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CCC



CSA



UL



C-Tick

[Baumusterprüfbescheinigung](#)

Declaration of Conformity	Test Certificates	other
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EG-Konf.

[spezielle Prüfbescheinigungen](#)

[Umweltbestätigung](#)

[Bestätigungen](#)

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

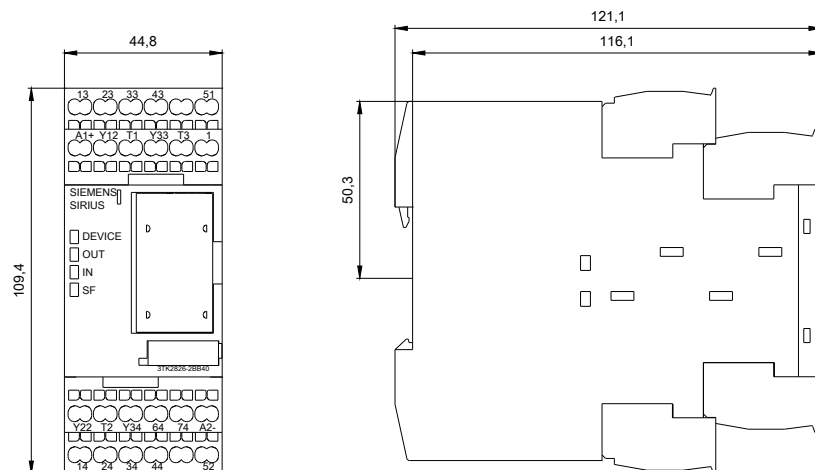
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3TK2826-2BB40>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3TK2826-2BB40>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3TK2826-2BB40&lang=en



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