SIEMENS

Data sheet 3TK2834-1BB40

Figure similar

SIRIUS SAFETY RELAY WITH RELAY RELEASE CIRCUITS (RC), DC 24V, 45.0MM, SCREW TERMINAL, RC INSTANT.: 2S, 2OE, RC DELAYED: 0, MK: 0, PRESS CONTROL UNIT, MAX. ACHIEVABLE SIL: 3, PL: E

General technical data:	
product brand name	SIRIUS
Product designation	safety relays
Design of the product	for press control 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	
• 2-channel	1
Design of the cascading	none
Type of the safety-related wiring of the inputs	two-channel
Product property 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 A
PFHD with high demand rate acc. to EN 62061	0.0000000014 1/h
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	0
• as NO contact	
— safety-related instantaneous contact	4
— safety-related delayed switching	0
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	0
Stop category acc. to DIN EN 60204-1	0

General technical data:

Design of input	

• cascading input/functional switching	No
• feedback input	Yes
• Start input	No
Type of electrical connection Plug-in socket	Yes
Operating frequency maximum	1 000 1/h
Switching capacity current	
• of the NO contacts of the relay outputs	
— at DC-13	
— at 24 V	6 A
— at 115 V	0.2 A
— at 230 V	0.1 A
— at AC-15	
— at 115 V	5 A
— at 230 V	5 A
• of the NC contacts of the relay outputs	
— at DC-13	
— at 24 V	6 A
— at 115 V	0.2 A
— at 230 V	0.1 A
— at AC-15	
— at 115 V	5 A
— at 230 V	5 A
Thermal current of the switching element with contacts maximum	6 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: 6 A, or quick: 10 A
DC resistance of the cable maximum	30 Ω
Cable length between sensor and electronic evaluation device with Cu 1.5 mm² and 150 nF/km maximum	1 000 m
Make time with automatic start	
• at DC maximum	100 ms
Recovery time after opening of the safety circuits typical	250 ms

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 the magnet coil	
• at AC	

— at 50 Hz	0.85 ... 1.1
— at 60 Hz	0.85 ... 1.1
• at DC	0.85 ... 1.1

Installation/ mounting/ dimensions:	
mounting position	any
Mounting type	screw and snap-on mounting
Width	44.8 mm
Height	138.5 mm
Depth	120 mm

Connections/ Terminals:	
Type of electrical connection	screw-type terminals
Type of connectable conductor cross-section	
• solid	1x (0.5 ... 4.0 mm²), 2x (0.5 ... 2.5 mm²)
• finely stranded	
— with core end processing	1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.5 mm²)
Type of connectable conductor cross-section for AWG conductors	
• solid	2x (20 ... 14)
• stranded	2x (20 ... 14)

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

• EMERGENCY-OFF circuit monitoring	Yes
• valve monitoring	No
• tactile sensor monitoring	No
• magnetically operated switch monitoring	No
• safety-related circuits	Yes

Certificates/ approvals:

Certificate of suitability	BG, SUVA, UL, CSA, EN 60204-1, EN ISO 12100, EN 954-1, IEC 61508, EN 574
• TÜV (German technical inspectorate) certificate	Yes
• UL approval	Yes
• BG BIA certificate	Yes

General Product Approval				EMC	Functional Safety/Safety of Machinery
CCC	CSA	UL		C-TICK	ATEX

Declaration of Conformity	Test Certificates	other	
EG-Konf.	spezielle Prüfbescheinigungen	Umweltbestätigung	Bestätigungen

Further information

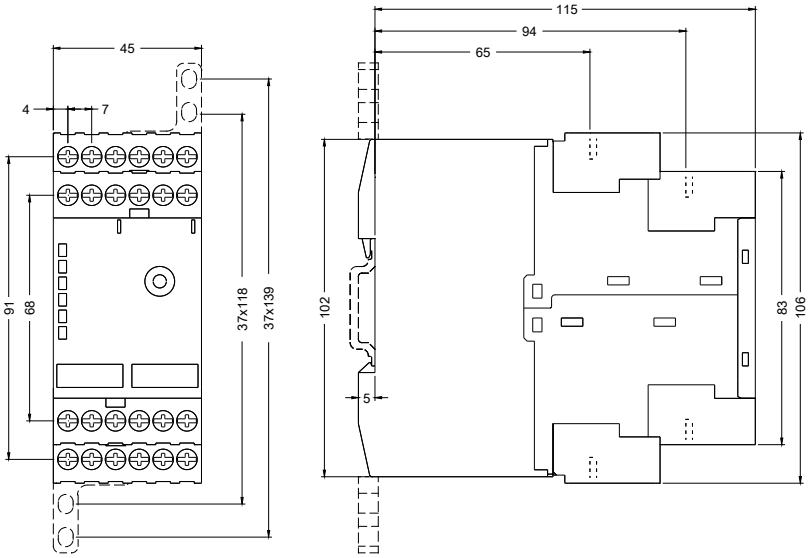
Information- and Downloadcenter (Catalogs, Brochures,…)
http://www.siemens.com/industrial-controls/catalogs

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=3TK28341BB40

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3TK28341BB40

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3TK28341BB40&lang=en



last modified: 17.07.2015