

SIRIUS SAFETY RELAY WITH ELECTRONIC RELEASE
 CIRCUIT (RC) DC 24V,
 22.5MM, SCREW TERMINAL,
 RC INSTANT.: 2 HL, RC DELAYED: 0,
 MK: 0, AUTOSTART / MONITORED START,
 BASIC DEVICE, MAX. ACHIEVABLE SIL: 2,
 PL: D

General technical details:

Product brand name	SIRIUS	
Product designation	safety relays	
Design of the product	for EMERGENCY-STOP units	
Protection class IP / of the housing	IP40	
Protection class IP / of the terminal	IP20	
Protection against electrical shock	finger-safe	
Insulation voltage / rated value	V	50
Ambient temperature		
• during storage	°C	-40 ... 80
• during the operating phase	°C	-25 ... 60
Air pressure		
• according to SN 31205	kPa	90 ... 106
Relative humidity		
• during the operating phase	%	10 ... 95
Installation altitude / at a height over sea level / maximum	m	2,000
Resistance against vibration / according to IEC 60068-2-6	5 ... 500 Hz: 0,075 mm	
Resistance against shock	8g / 10 ms and 15g / 5 ms	
Impulse voltage resistance / rated value	V	500
EMC emitted interference	EN 60947-5-1, EN 61000-6-2, EN 61000-6-4	
Item designation		
• according to DIN 40719 extendable after IEC 204-2 / according to IEC 750	KT	
• according to DIN EN 61346-2	F	
Number of sensor inputs		
• 1-channel or 2-channel	1	
Design of the cascading	none	
Type of the safety-related wiring / of the inputs	single-channel and two-channel	
Product feature / transverse contact-secure	Yes	

Safety Integrity Level (SIL) / according to IEC 61508		SIL2
SIL claim limit (for a subsystem) / according to EN 62061		2
Performance level (PL) / according to ISO 13849-1		d
Category / according to EN 954-1		3
Category / according to ISO 13849-1		3
Probability of dangerous failure per hour (PFHD) / with high demand rate / according to EN 62061	1/h	0.10999999999999999E-7
T1 value / for proof test interval or service life / according to IEC 61508	a	20
Number of outputs / as contact-affected switching element		
• as NC contact / for reporting function / instantaneous switching		0
• as NO contact / fail-safe / instantaneous switching		0
• as NO contact / fail-safe / delayed switching		0
Number of outputs / as contact-less semiconductor switching element		
• fail-safe		
• delayed switching		0
• non-delayed		2
• for reporting function		
• delayed switching		0
• non-delayed		0
Stop category / according to DIN EN 60204-1		0

General technical details:

Design of the input		
• cascading-entrance/operation-even switching		No
• reducing-entrance		Yes
• start-up entrance		Yes
Design of the electrical connection / jumper socket		Yes
Operating cycles / maximum	1/h	2,000
Switching capacity current / of the semiconductor outputs / at DC-13 / at 24 V	A	0.5
Design of the fuse link / for short-circuit protection of the NO contacts of the relay outputs / necessary		not required
Resistance to direct current / of the cable / maximum	Ω	250
Cable length / between sensor and electronic evaluation device / with Cu 1.5 mm² and 150 nF/km / maximum	m	2,000
Make time / with automatic start		
• typical	ms	80
• for DC / maximum	ms	100
Make time / with automatic start / after mains power cut		
• typical	ms	350

<ul style="list-style-type: none"> • maximum 	ms	500
Make time / with monitored start		
<ul style="list-style-type: none"> • maximum • typical 	ms	100
	ms	60
Backslide delay time / after opening of the safety circuits / typical	ms	20
Backslide delay time / at mains power cut		
<ul style="list-style-type: none"> • typical • maximum 	ms	0
	ms	0
Recovery time / after opening of the safety circuits / typical	ms	120
Recovery time / after mains power cut / typical	s	0.5
Pulse duration		
<ul style="list-style-type: none"> • of the sensor input / minimum • of the ON pushbutton input / minimum • of the cascading-entrance / minimum 	ms	5
	s	0.06
	s	0.0050

Control circuit:

Type of voltage / of the controlled supply voltage		DC
Control supply voltage / 1 / for DC / rated value	V	24
Operating range factor control supply voltage rated value / of solenoid		
<ul style="list-style-type: none"> • for DC 		0.9 ... 1.15

Installation/mounting/dimensions:

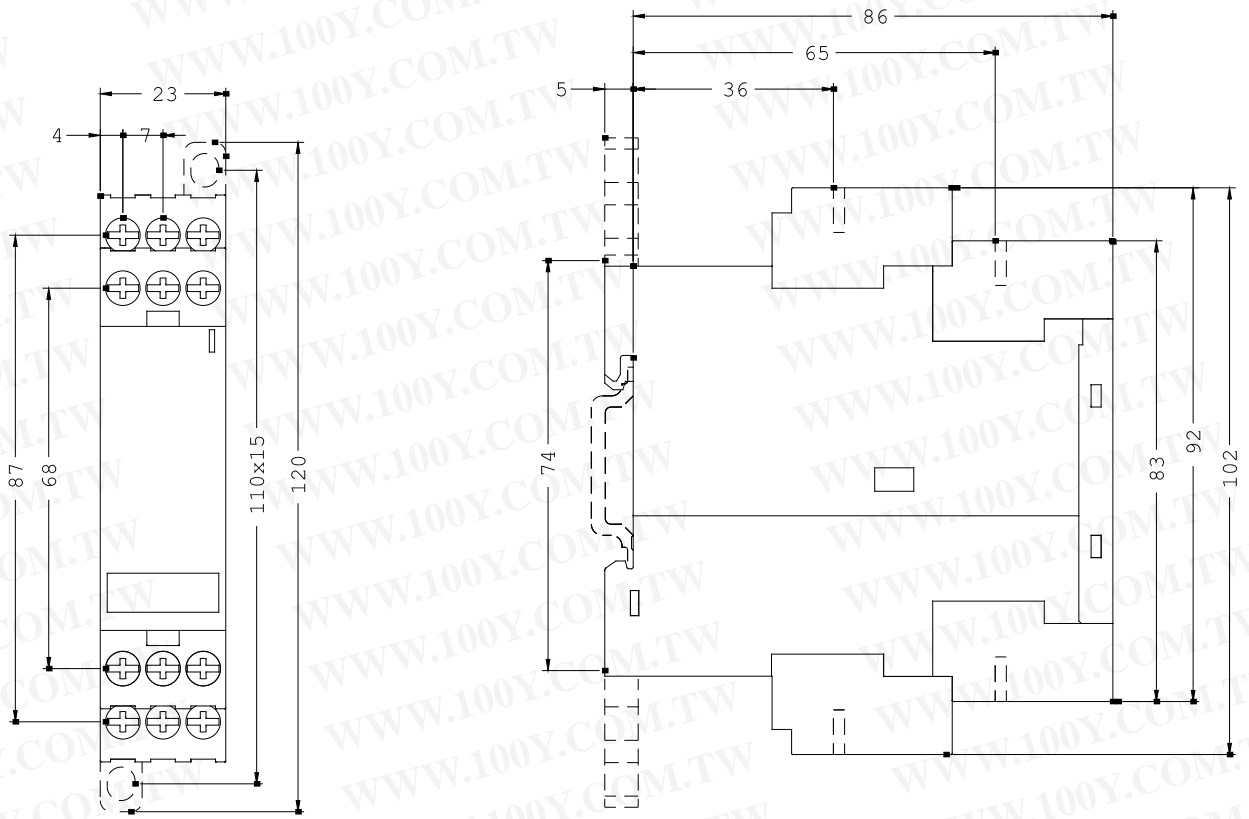
Built in orientation		any
Type of mounting		screw and snap-on mounting
Width	mm	22.5
Height	mm	100
Depth	mm	88

Connections:

Design of the electrical connection		screw-type terminals
Type of connectable conductor cross section		
<ul style="list-style-type: none"> • solid • finely stranded • with wire end processing 		0.5 ... 4 mm ² , 2x (0.5 ... 2.5 mm ²)
		0.5 ... 2.5 mm ² , 2x (0.5 ... 1.5 mm ²)
Type of connectable conductor cross section / for AWG conductors		
<ul style="list-style-type: none"> • solid • stranded 		2x (24 ... 16)
		2x (24 ... 16)

Product Function:

Product function <ul style="list-style-type: none"> • light barrier monitoring • standstill monitoring • protective door monitoring • automatic start • magnetic switch monitoring Normally closed contact-Normally open contact • rotation speed monitoring • laser scanner monitoring • monitored start-up • light grid monitoring • magnetic switch monitoring Normally closed contact-Normally closed contact • emergency-OFF function • step mat monitoring 		No No Yes Yes No No Yes No Yes Yes No
Suitability for interaction / pressing control		No
Acceptability for application <ul style="list-style-type: none"> • safety cut-out switch • position switch monitoring • EMERGENCY-OFF circuit monitoring • opto-electronical protection device monitoring • monitoring of magnetically operated switches • monitoring of proximity switches • safety-oriented circuits 		Yes Yes Yes Yes Yes No Yes
Certificates/approvals:		
Verification of suitability <ul style="list-style-type: none"> • TÜV (German technical inspectorate) certificate • UL-registration • BG BIA certificate 		UL, CSA, EN 60204-1, EN ISO 12100, EN 954-1, IEC 61508 Yes Yes Yes
Further information:		
Information- and Downloadcenter (Catalogs, Brochures,...) http://www.siemens.com/industrial-controls/catalogs		
Global Industry Mall (Online ordering system) http://www.siemens.com/industrial-controls/mall		
Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3TK2840-1BB40/all		
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3TK2840-1BB40		



last change:

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