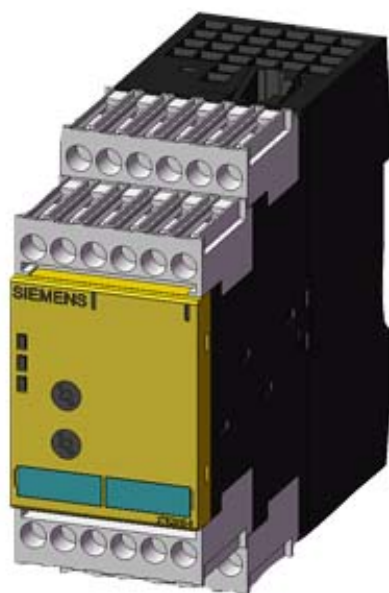




SIRIUS SAFETY RELAY FOR SAFETY-ORIENTED
STANDSTILL MONITORING,
400V AC, 45.0MM, SCREW TERMINAL,
FK INSTANT.: 3NO 1NC, FK DELAYED: 0,
MK: 3, AUTO START, BASIC UNIT,
MAX. ACHIEV. CAT. EN954-1: 4,
MAX. ACHIEV. SIL TO IEC61508:3,

General technical details:

product brand name		SIRIUS
product designation		safety relays
Design of the product		for safe stoppage monitoring
protection class IP / of the housing		IP20
Protection class IP / of the terminal		IP20
Protection against electrical shock		finger-safe
Insulation voltage / rated value	V	690
Ambient temperature		
• during storage	°C	-40 ... +75
• during operating	°C	-25 ... +60
Air pressure		
• according to SN 31205	kPa	90 ... 106
Relative humidity		
• during 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		10 ... 55 Hz: 0.35 mm
Resistance against shock		8g / 10 ms
Impulse voltage resistance / rated value	V	6,000
EMC emitted interference		IEC 61000-6-2, IEC 61000-6-3

Installation environment relating to 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.
Item designation • according to DIN 40719 extendable after IEC 204-2 / according to IEC 750 • according to DIN EN 61346-2		KT 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		measuring inputs
Product feature / transverse contact-secure		No
Safety Integrity Level (SIL) • according to IEC 61508 • for delayed release circuit / according to IEC 61508		SIL3 SIL3
SIL claim limit (for a subsystem) / according to EN 62061		3
Performance Level (PL) • according to ISO 13849-1 • for delayed release circuit / according to ISO 13849-1		e e
Category / according to EN 954-1		4
Category / according to ISO 13849-1		4
Hardware fault tolerance / according to IEC 61508		1
Safety device type / according to IEC 61508-2		Type B
Probability of dangerous failure per hour (PFHD) / with high demand rate / according to EN 62061	1/h	0.15E-8
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 • as NO contact / safety-related / instantaneous switching • as NO contact / safety-related / delayed switching		2 4 0
Number of outputs / as contact-less semiconductor switching element • safety-related • delayed switching • non-delayed • for reporting function • delayed switching • non-delayed		0 0 0 2
Stop category / according to DIN EN 60204-1		0

General technical details:		
Design of the input		
• cascading-input/functional switching		No
• feedback input		Yes
• start input		No
Design of the electrical connection / jumper socket		Yes
Operating cycles / maximum	1/h	1,200
Switching capacity current		
• of semiconductor outputs		
• for signaling function / for DC-13 / at 24 V	A	0.1
• of NO contacts of relay outputs		
• at DC-13		
• at 24 V	A	2
• at AC-15		
• at 115 V	A	3
• at 230 V	A	3
• of NC contacts of relay outputs		
• at DC-13		
• at 24 V	A	2
• at AC-15		
• at 115 V	A	2
• at 230 V	A	2
Thermal current / of the contact-affected switching element / maximum	A	5
Electrical operating cycles as operating time / typical		200,000
Mechanical operating cycles as operating time / typical		50,000,000
Design of the fuse link / for short-circuit protection of the NO contacts of the relay outputs / required		quick: 5 A
Control circuit:		
Type of voltage / of the controlled supply voltage		AC
Control supply voltage frequency		
• 1 / rated value	Hz	50
• 2 / rated value	Hz	60
Control supply voltage / 1 / at 50 Hz / for AC / rated value	V	400
Control supply voltage / 1 / at 60 Hz / for AC / rated value	V	400
operating range factor control supply voltage rated value / of the magnet coil		
• at 50 Hz		
• for AC		0.8 ... 1.1
• at 60 Hz		

- for AC

0.8 ... 1.1

Installation/mounting/dimensions:

mounting position		any
Type of mounting		screw and snap-on mounting
Width	mm	45
Height	mm	138.5
Depth	mm	120

Connections:

Design of the electrical connection		screw-type terminals
Type of the connectable conductor cross-section		
• solid		1x (0.5 ... 4 mm²), 2x (0.5 ... 2.5 mm²)
• finely stranded		1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.5 mm²)
• with wire end processing		
Type of the 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		Yes
• protective door monitoring		No
• automatic start		No
• magnetic switch monitoring Normally closed contact-Normally open contact		No
• rotation speed monitoring		No
• laser scanner monitoring		No
• monitored start-up		No
• light grid monitoring		No
• magnetic switch monitoring Normally closed contact-Normally closed contact		No
• emergency stop function		No
• step mat monitoring		No
Suitability for interaction / pressing control		No
Acceptability for application		
• safety cut-out switch		Yes
• position switch monitoring		No
• EMERGENCY-OFF circuit monitoring		No

- valve monitoring
- tactile sensor monitoring
- magnetically operated switches monitoring
- safety-related circuits

No
No
No
Yes

Certificates/approvals:

Verification of suitability

- 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

General Product Approval

Functional Safety / Safety of Machinery

Test Certificates



CSA



GOST



UL



VDE

[Special Test
Certificate](#)

other

[Declaration of
Conformity](#)

[Environmental
Confirmations](#)

Further information:

Information- and Downloadcenter (Catalogs, Brochures,...)

<http://www.siemens.com/industrial-controls/catalogs>

Industry Mall (Online ordering system)

<http://www.siemens.com/industrial-controls/mall>

Cax online generator:

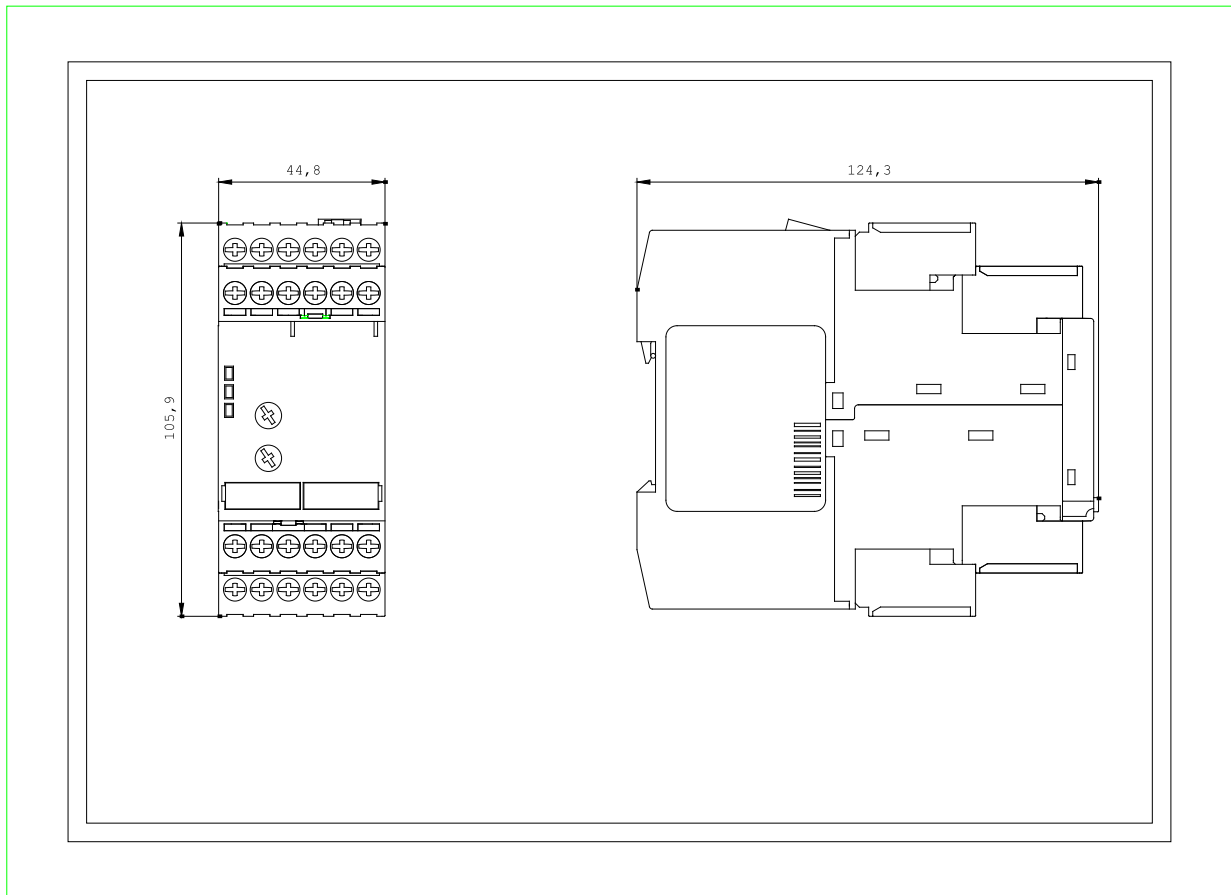
<http://www.siemens.com/cax>

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

<http://support.automation.siemens.com/WW/view/en/3TK2810-0JA01/all>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3TK2810-0JA01



last change:

Feb 18, 2013