SIEMENS

Data sheet

3TK2810-0BA01



SIRIUS safety relay safety-oriented Standstill monitoring 24 V DC, 45 mm screw terminal EC instantaneous: 3 NO + 1 NC EC delayed: 0 SC: 3 Auto-start Basic unit max. error category EN 954-1: 4 Maximum achievable PL according to EN 13849-1: Maximum achievable SIL according to IEC 61508: 3

product brand name	SIRIUS
product designation	Standstill monitor
design of the product	for safe stoppage monitoring
General technical data	for sale stoppage monitoring
	1000
protection class IP of the enclosure	IP20
protection class IP of the terminal	IP20
touch protection against electrical shock	finger-safe
insulation voltage rated value	690 V
ambient temperature	
during storage	-40 +75 °C
during operation	-25 +60 °C
air pressure according 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 according to IEC 60068-2-6	10 55 Hz: 0.35 mm
shock resistance	8g / 10 ms
surge voltage resistance rated value	6 000 V
EMC emitted interference	IEC 61000-6-2, IEC 61000-6-3
installation environment regarding EMC	This product is suitable for Class A environments only. In household environments, this device can cause unwanted radio interference. The user is required to implement appropriate measures in this case.
reference code according to DIN 40719 extended according to IEC 204-2 according to IEC 750	КТ
reference code according to 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	measuring inputs
product feature cross-circuit-proof	No
Safety Integrity Level (SIL)	
according to IEC 61508	3
according to IEC 62061	3
 for delayed release circuit according to IEC 61508 	SIL3
SIL Claim Limit (subsystem) according to EN 62061	3
performance level (PL)	
according to ISO 13849-1	е
category according to EN ISO 13849-1	4
hardware fault tolerance according to IEC 61508	1
safety device type according to IEC 61508-2	Туре В
PFHD with high demand rate according to EN 62061	1.5E-9 1/h
Average probability of failure on demand (PFDavg) with low	0.002 1/y

demand rate acc. to IEC 61508	
T1 value for proof test interval or service life according to	20 a
IEC 61508	
number of outputs as contact-affected switching element	
as NC contact	
— for signaling function instantaneous contact	2
as NO contact	
 — safety-related instantaneous contact 	4
 — safety-related delayed switching 	0
number of outputs as contact-less semiconductor	
switching element	
safety-related	0
 — delayed switching — instantaneous contact 	0
for signaling function	0
delayed switching	0
— instantaneous contact	2
stop category according to EN 60204-1	0
Inputs	•
design of input	
cascading input/functional switching	No
feedback input	Yes
start input	No
voltage measuring range at the measurement inputs at AC	
according to UL maximum	600 V
• maximum	690 V
input resistance at the measurement inputs	500 kΩ
adjustable response value voltage for standstill detection	20 400 mV
Outputs	
type of electrical connection plug-in socket	Yes
operating frequency maximum	1 200 1/h
switching capacity current	
 of semiconductor outputs 	
— for signaling function at DC-13 at 24 V	0.1 A
 of the NO contacts of the relay outputs at DC-13 	
— at 24 V	2 A
 of the NO contacts of the relay outputs at AC-15 	
— at 115 V	3 A
— at 230 V	3 A
 of the NC contacts of the relay outputs at DC-13 	
— at 24 V	2 A
of the NC contacts of the relay outputs at AC-15	
— at 115 V	2 A
— at 230 V	2 A
thermal current of the switching element with contacts maximum	5 A
electrical endurance (operating cycles) typical	200 000
mechanical service life (operating cycles) typical	50 000 000
design of the fuse link for short-circuit protection of the NO	quick: 5 A
contacts of the relay outputs required	
Times	
adjustable downtime	0.2 6 s
Control circuit/ Control	
type of voltage of the control supply voltage	DC
control supply voltage 1	24.14
at DC rated value	24 V
operating range factor control supply voltage rated value of magnet coil	
• at DC	0.9 1.2
Installation/ mounting/ dimensions	
mounting position	any
fastening method	screw and snap-on mounting

width			45 mr	n			
height			138.5	mm			
depth			120 n	ım			
Connections/ Terminals	;		_				
type of electrical conr	nection		screw	-type terminals			
type of connectable c	onductor cross-sections	6					
 solid 			1x (0.	(0.5 4.0 mm ²), 2x (0.5 2.5 mm ²)			
 finely stranded 							
- with core end processing			1x (0.5 2.5 mm²), 2x (0.5 1.5 mm²)				
	onductor cross-sections	s for AWG					
cables			0.4 (0)	14)			
 solid) 14)			
stranded roduct Function			ZX (20) 14)			
			-				
product function	toring		No				
light barrier moni			No				
 standstill monitor 	÷		Yes No				
 protective door m automatic start 	lonitoring		No				
	rated switch monitoring N	C-NO	No				
			No				
rotation speed m	•		NO				
laser scanner mo monitored start u	0		NO				
 monitored start-u light array monitor 	-		NO				
• •	erated switch monitoring N	C-NC	No				
EMERGENCY O	•	0-110	No				
pressure-sensitiv			No				
suitability for interacti			No				
suitability for use			NO				
safety switch			Yes				
position switch monitoring			No				
EMERGENCY-OFF circuit monitoring		No					
valve monitoring		No					
tactile sensor monitoring		No					
magnetically operated switch monitoring			No				
 safety-related cir 	•		Yes				
Certificates/ approvals			100				
certificate of suitabilit	V			SA EN 60204-1 EN IS	SO 12100, EN 954-1, IEC 61	508	
	y chnical inspectorate) certi	ficate	Yes	o, , En 00201, EN IC	12100, EN 00-F-1, IEO 01		
UL approval			Yes				
BG BIA approval			Yes				
- 20 Bir approva			100		Functional		
General Product App	roval				Safety/Safety of Ma- chinery	Declaration of Con- formity	
	(m)	\square		FAC	Type Examination Cer- tificate	(6	
				ΕΠΙ			
CSA	ccc	UL				EG-Konf.	
Declaration of Con- formity	Test Certificates	other		Railway			
UИ	Special Test Certific-	<u>Confirmatio</u>	<u>on</u>	Confirmation			
ŪK	ate						

Further information

Siemens has decided to exit the Russian market (see here). https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business Siemens is working on the renewal of the current EAC certificates. Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

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

https://www.siemens.com/ic10 Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3TK2810-0BA01

Cax online generator

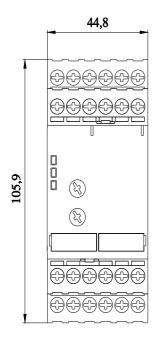
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3TK2810-0BA01

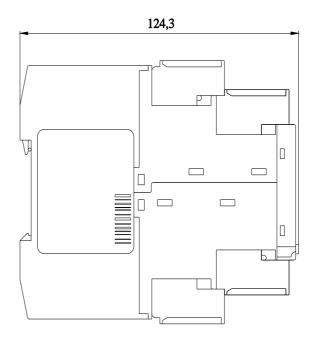
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

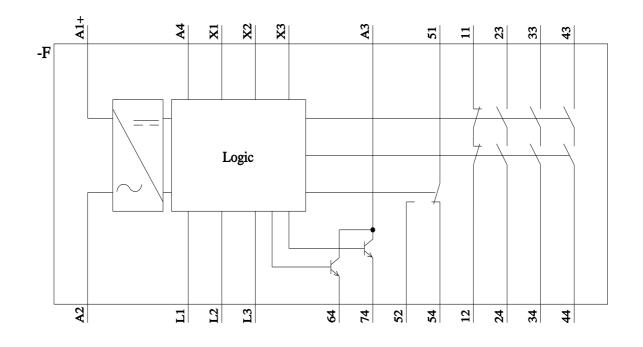
https://support.industry.siemens.com/cs/ww/en/ps/3TK2810-0BA01

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3TK2810-0BA01&lang=en







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