



SIRIUS safety relay Safety-oriented Speed monitoring 24 V DC, 45 mm overall width Spring-type terminal EC instantaneous: 2 NO EC delayed: 0 SC: 2 electrical NAMUR version Auto-start/manual start Basic device Maximum achievable PL according to EN 13849-1: e Maximum achievable SIL according to IEC 61508: 3

product brand name	SIRIUS
product designation	Speed monitor
design of the product	standstill and speed monitoring
<b>General technical data</b>	
protection class IP of the enclosure	IP20
touch protection against electrical shock	finger-safe
insulation voltage rated value	300 V
ambient temperature	
• during storage	-20 ... +70 °C
• during operation	0 ... 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	4 000 V
EMC emitted interference	EN 60947-5-1
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	KT
reference code according to EN 61346-2	F
number of sensor inputs	
• 2-channel	3
• 1-channel or 2-channel	0
design of the cascading	none
type of the safety-related wiring of the inputs	single-channel or two-channel
product feature cross-circuit-proof	Yes
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	e
• for delayed release circuit according to EN ISO 13849-1	e
category according to EN ISO 13849-1	4
hardware fault tolerance according to IEC 61508	1
safety device type according to IEC 61508-2	Type B
PFHD with high demand rate according to EN 62061	3.4E-9 1/h

<b>T1 value for proof test interval or service life according to IEC 61508</b>	20 a
<b>number of outputs as contact-affected switching element</b>	
• as NC contact	
— for signaling function instantaneous contact	0
— for signaling function delayed switching	0
— safety-related instantaneous contact	0
— safety-related delayed switching	0
• as NO contact	
— for signaling function instantaneous contact	0
— for signaling function delayed switching	0
— safety-related instantaneous contact	1
— safety-related delayed switching	1
<b>number of outputs as contact-less semiconductor switching element</b>	
• safety-related	
— delayed switching	0
— instantaneous contact	0
• for signaling function	
— delayed switching	1
— instantaneous contact	1
<b>stop category according to EN 60204-1</b>	0
<b>Inputs</b>	
<b>design of input</b>	
• cascading input/functional switching	No
• feedback input	Yes
• start input	Yes
<b>Encoder</b>	
<b>encoder signal evaluation</b>	two signal tracks each with inverted signals
<b>type of signal level of the encoder</b>	optionally TTL, HTL or sin/cos ( $U_a = 1V_{ss}$ )
<b>type of failure response of the encoder</b>	high-resistance
<b>Proximity switch</b>	
<b>measuring precision</b>	+/-2 %
<b>switching hysteresis</b>	6.25 %
<b>NAMUR sensors</b>	
<b>type of voltage of the supply voltage of NAMUR sensors</b>	DC
<b>supply voltage of NAMUR sensors</b>	8.2 V; provided by the device
<b>switching threshold for input current at input of NAMUR sensors</b>	
• with signal <0>	1.6 mA
• for signal <1>	1.8 mA
<b>switching threshold for input current at input of NAMUR sensors</b>	
• for cable break maximum	0.15 mA
• on short circuit minimum	6 mA
<b>pulse duration of NAMUR sensors minimum</b>	75 µs
<b>interpulse period of NAMUR sensors minimum</b>	75 µs
<b>adjustment range of signal frequency of NAMUR sensors</b>	1 Hz ... 2 kHz
<b>Outputs</b>	
<b>switching capacity current</b>	
• of semiconductor outputs	
— for signaling function at DC-13 at 24 V	0.02 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 24 V	3 A
— at 230 V	3 A
• of the NC contacts of the relay outputs at AC-15	
— at 24 V	3 A
— at 115 V	3 A
— at 230 V	2 A
<b>thermal current of the switching element with contacts</b>	5 A

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EG-Konf.

Declaration of Conformity	Test Certificates	other	Railway
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#### 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=3TK2810-1BA42-0AA0>

Cax online generator

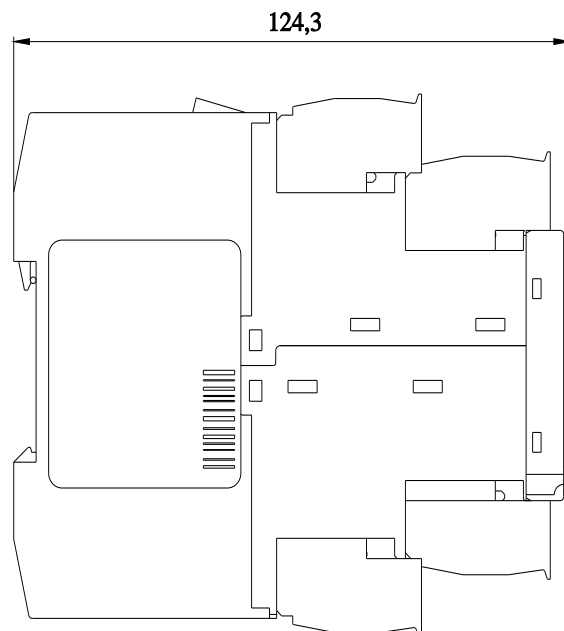
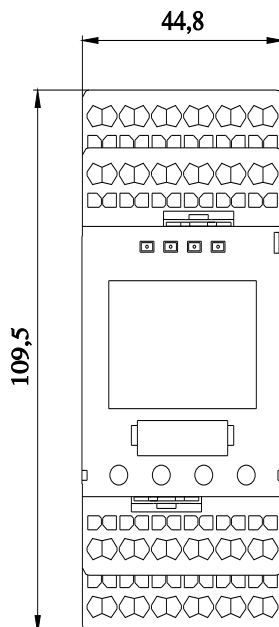
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3TK2810-1BA42-0AA0>

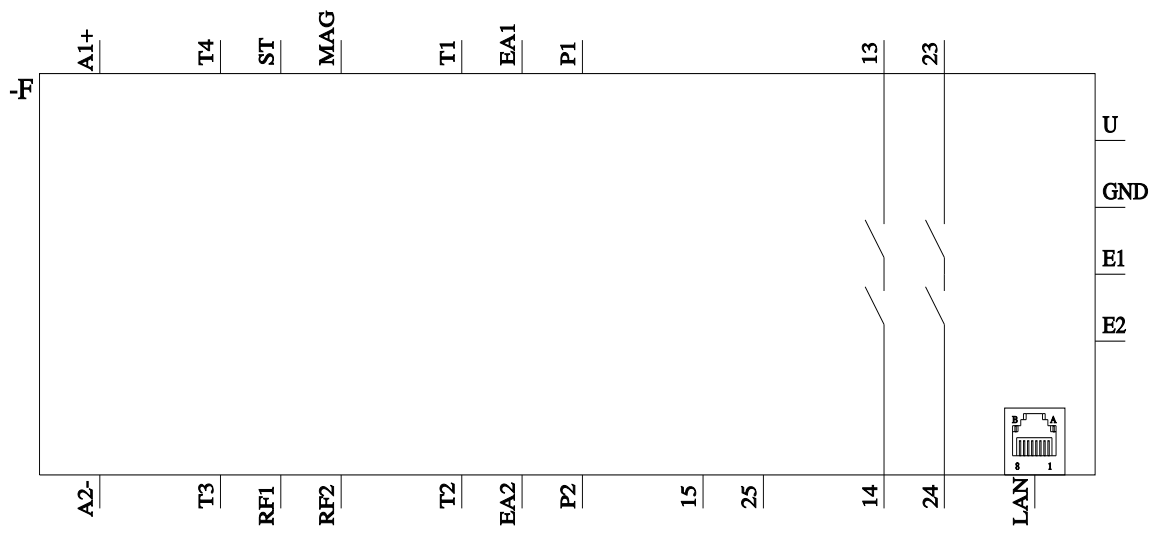
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3TK2810-1BA42-0AA0>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3TK2810-1BA42-0AA0&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3TK2810-1BA42-0AA0&lang=en)





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