

starter package for modular safety system 3RK3 content: central unit MSS basic connection: screw terminal software safety ES V1.0 standard, PC cable

<b>product brand name</b>	SIRIUS
<b>product category</b>	Modular Safety System
<b>product designation</b>	Starter kit
<b>suitability for use for monitoring of optoelectronic protective devices according to IEC 61496-1</b>	Yes
<b>suitability for use</b>	
• monitoring of floating sensors	Yes
• monitoring of non-floating sensors	Yes
• position switch monitoring	Yes
• EMERGENCY-OFF circuit monitoring	Yes
• valve monitoring	Yes
• opto-electronic protection device monitoring	Yes
• proximity switch monitoring	Yes
• safety-related circuits	Yes
<b>General technical data</b>	
<b>product function</b>	
• EMERGENCY STOP function	Yes
• protective door monitoring	Yes
• protective door monitoring with tumbler	No
• muting, 2 sensor-parallel	No
• muting, 4 sensor-parallel	No
• muting, 4 sensor-sequential	No
• monitoring parameterizable	No
• evaluation: electro-sensitive protective equipment	Yes
• evaluation: selector switch	Yes
• pressure-sensitive mat monitoring	Yes
• evaluation: two-hand operator panel	Yes
• evaluation: enabling switch	Yes
• monitored start-up	Yes
• two-hand control according to EN 574	Yes
<b>number of function blocks typical</b>	300
<b>insulation voltage rated value</b>	300 V
<b>degree of pollution</b>	3
<b>surge voltage resistance rated value</b>	2 500 V
consumed current for rated value of supply voltage	1.685 A
<b>protection class IP</b>	
• of the enclosure	IP20
• of the terminal	IP20
<b>shock resistance</b>	15 g / 11 ms
<b>vibration resistance according to IEC 60068-2-6</b>	5 ... 500 Hz: 0.75 mm
<b>operating frequency maximum</b>	1 000 1/h
<b>mechanical service life (operating cycles) typical</b>	10 000 000
<b>reference code according to IEC 81346-2</b>	K
<b>Substance Prohibition (day/month/year)</b>	07/01/2006
<b>SVHC substance name</b>	Lead monoxide (lead oxide) CAS-No. 1317-36-8
<b>Net Weight</b>	0.863 kg
<b>product function suitable for AS-i Power24V</b>	No
<b>product function diagnostics with CTT2 device</b>	No
<b>Ambient conditions</b>	
installation altitude at height above sea level maximum	2 000 m

<b>ambient temperature</b>	
<ul style="list-style-type: none"> <li>during operation</li> <li>during storage</li> <li>during transport</li> </ul>	<p>-20 ... +60 °C</p> <p>-40 ... +85 °C</p> <p>-40 ... +85 °C</p>
air pressure according to SN 31205	70 ... 106 kPa
<b>Electromagnetic compatibility</b>	
<b>installation environment regarding EMC</b>	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.
<b>conducted interference</b>	
<ul style="list-style-type: none"> <li>due to burst according to IEC 61000-4-4</li> <li>due to conductor-earth surge according to IEC 61000-4-5</li> <li>due to conductor-conductor surge according to IEC 61000-4-5</li> </ul>	<p>2 kV (power ports) / 1 kV (signal ports)</p> <p>2 kV</p> <p>1 kV</p>
<b>field-based interference according to IEC 61000-4-3</b>	10 V/m
<b>electrostatic discharge according to IEC 61000-4-2</b>	4 kV contact discharge / 8 kV air discharge
<b>Safety related data</b>	
<b>diagnostics test interval by internal test function maximum</b>	1 000 s
<b>stop category according to IEC 60204-1</b>	0 / 1
<b>category according to EN 954-1</b>	4
IEC 62061	
SIL Claim Limit (subsystem) according to EN 62061	Kat. 4 / SIL3 / Ple
<b>Safety Integrity Level (SIL)</b>	
<ul style="list-style-type: none"> <li>according to IEC 62061</li> </ul>	SIL 3
<b>PFHD with high demand rate</b>	
<ul style="list-style-type: none"> <li>according to IEC 62061</li> </ul>	7E-9 1/h
ISO 13849	
performance level (PL) according to EN ISO 13849-1	e
category according to EN ISO 13849-1	4
<b>performance level (PL)</b>	
<ul style="list-style-type: none"> <li>according to ISO 13849-1</li> </ul>	PL e
IEC 61508	
<b>Safety Integrity Level (SIL)</b>	
<ul style="list-style-type: none"> <li>according to IEC 61508</li> </ul>	3
<b>hardware fault tolerance</b>	
<ul style="list-style-type: none"> <li>according to IEC 61508</li> </ul>	1
<b>T1 value</b>	
<ul style="list-style-type: none"> <li>for proof test interval or service life according to IEC 61508</li> </ul>	20 a
Electrical Safety	
<b>touch protection against electrical shock</b>	finger-safe
<b>Short-circuit protection</b>	
design of the fuse link for short-circuit protection of the NO contacts of the relay outputs required	NH Type 3NA, DIAZED Type 5SB, NEOZED Type 5SE
<b>Inputs/ Outputs</b>	
<b>product function</b>	
<ul style="list-style-type: none"> <li>parameterizable inputs</li> <li>parameterizable outputs</li> </ul>	<p>Yes</p> <p>Yes</p>
<b>number of inputs</b>	
<ul style="list-style-type: none"> <li>safety-related</li> <li>non-safety-related</li> </ul>	<p>8</p> <p>0</p>
<b>input delay time</b>	0 ... 150 ms
<b>ingress acquisition time at digital input maximum</b>	60 ms
<b>input delay time at digital input maximum</b>	150 ms
<b>number of outputs</b>	
<ul style="list-style-type: none"> <li>safety-related 2-channel</li> <li>for testing contact-based sensors</li> </ul>	<p>2</p> <p>2</p>
number of outputs as contact-affected switching element safety-related	
<ul style="list-style-type: none"> <li>1-channel</li> </ul>	0

• 2-channel	1
<b>number of outputs as contact-less semiconductor switching element</b>	
• safety-related 2-channel	1
• non-safety-related	0
<b>design of the contactless switching element safety-related</b>	P potential
<b>pulse duration of the contactless semiconductor contact block for switching off safety-related maximum</b>	1 ms
<b>recovery time of the safe outputs</b>	420 ms
<b>dark period of the common drivers</b>	1 ms
switching capacity current of semiconductor outputs at DC-13 at 24 V	1.5 A

#### Communication/ Protocol

<b>protocol optional is supported</b>	
• PROFIBUS DP protocol	Yes; when using the DP interface module; 32 bit cyclical data
protocol is supported AS-Interface protocol	No

#### Control circuit/ Control

<b>type of voltage</b>	DC
<b>control supply voltage rated value</b>	24 V
<b>operating range factor control supply voltage rated value at DC</b>	
• initial value	0.85
• full-scale value	1.15
<b>inrush current peak</b>	
• at 24 V	70 A
<b>duration of inrush current peak</b>	
• at 24 V	1 ms
<b>operating power rated value</b>	4.5 W

#### Installation/ mounting/ dimensions

<b>mounting position</b>	vertical
<b>fastening method</b>	Snap-mounted to DIN rail or screw-mounted with additional push-in lug
<b>height</b>	111 mm
<b>width</b>	45 mm
<b>depth</b>	124 mm

#### Connections/ Terminals

<b>product function removable terminal</b>	Yes
<b>type of electrical connection</b>	screw terminal
<b>type of connectable conductor cross-sections</b>	
• solid	1x (0.5 ... 4.0mm <sup>2</sup> ), 2x (0.5 ... 2.5 mm <sup>2</sup> )
• finely stranded with core end processing	1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> )
• for AWG cables solid	2x (20 ... 14)
• for AWG cables stranded	2x (20 ... 14)
connectable conductor cross-section finely stranded with core end processing	0.5 ... 2.5 mm <sup>2</sup>
<b>AWG number as coded connectable conductor cross section</b>	
• solid	20 ... 14
• stranded	20 ... 14
<b>DC resistance of the cable maximum</b>	100 Ω

#### Approvals Certificates

Environment	General Product Approval	Functional Safety	Test Certificates	other
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[Environmental Conformations](#)



[Miscellaneous](#)

[Type Test Certificates/Test Report](#)

[Confirmation](#)



#### Further information

Information on the packaging  
<https://support.industry.siemens.com/cs/ww/en/view/109813875>

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

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=3RK3921-1AA10>

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RK3921-1AA10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RK3921-1AA10>

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

[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RK3921-1AA10&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RK3921-1AA10&lang=en)

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