



\*\*\*phase-out type\*\*\* compact starter reversing starter for IO-Link 690 V 24 V DC 0.32...1.25 A IP20 connection main circuit: spring-loaded terminal connection control circuit: spring-loaded terminal alternative 3RK1308 or 3RA8 requirement controller such as ET 200SP in use

product brand name	SIRIUS
product designation	Compact starter for IO-Link
design of the product	reversing starter
product type designation	3RA65
<b>General technical data</b>	
product function control circuit interface to parallel wiring	No
product extension auxiliary switch	Yes
power loss [W] for rated value of the current	
• at AC in hot operating state	0.1 W
• at AC in hot operating state per pole	0.03 W
• without load current share typical	2.9 W
insulation voltage rated value	690 V
degree of pollution	3
surge voltage resistance rated value	6 000 V
degree of protection NEMA rating	other
shock resistance	a=60 m/s <sup>2</sup> (6g) with 10 ms per 3 shocks in all axes
vibration resistance	f = 4 ... 5.8 Hz, d = 15 mm; f = 5.8 ... 500 Hz, a = 20 m/s <sup>2</sup> ; 10 cycles
mechanical service life (operating cycles)	
• of the main contacts typical	10 000 000
• of auxiliary contacts typical	10 000 000
• of the signaling contacts typical	10 000 000
electrical endurance (operating cycles) of auxiliary contacts	
• at DC-13 at 6 A at 24 V typical	30 000
• at AC-15 at 6 A at 230 V typical	200 000
type of coordination	continuous operation according to IEC 60947-6-2
reference code according to IEC 81346-2	Q
Substance Prohibitance (day/month/year)	05/01/2012
SVHC substance name	Lead CAS-No. 7439-92-1 Lead monoxide (lead oxide) CAS-No. 1317-36-8 2-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)phenol (UV-329) CAS-No. 3147-75-9 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one CAS-No. 71868-10-5 Melamine CAS-No. 108-78-1 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol CAS-No. 119-47-1
Net Weight	2.554 kg
<b>Ambient conditions</b>	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
• during operation	-20 ... +60 °C
• during storage	-55 ... +80 °C

• during transport	-55 ... +80 °C
relative humidity during operation	10 ... 90 %
<b>Main circuit</b>	
number of poles for main current circuit	3
adjustable current response value current of the current-dependent overload release	0.32 ... 1.25 A
formula for making capacity limit current	38.4 x I <sub>e</sub>
formula for limit current breaking capacity	32 x I <sub>e</sub>
yielded mechanical performance for 4-pole AC motor	
• at 400 V rated value	0.37 kW
• at 500 V rated value	0.55 kW
• at 690 V rated value	0.75 kW
operating voltage at AC-3 rated value maximum	690 V
operational current	
• at AC at 400 V rated value	1.25 A
• at AC-3 at 400 V rated value	1.25 A
• at AC-43	
— at 400 V rated value	1.1 A
— at 500 V rated value	1.2 A
— at 690 V rated value	1.1 A
operating power	
• at AC-3 at 400 V rated value	0.37 kW
• at AC-43	
— at 400 V rated value	370 W
— at 500 V rated value	550 W
— at 690 V rated value	750 W
no-load switching frequency	3 600 1/h
operating frequency	
• at AC-41 according to IEC 60947-6-2 maximum	750 1/h
• at AC-43 according to IEC 60947-6-2 maximum	250 1/h
<b>Control circuit/ Control</b>	
type of voltage	DC
control supply voltage 1 at DC rated value	24 V
control supply voltage 1 at DC	24 V
holding power	
• at DC maximum	2.9 W
<b>Auxiliary circuit</b>	
number of NC contacts for auxiliary contacts	0
number of NO contacts for auxiliary contacts	0
number of NO contacts of instantaneous short-circuit trip unit for signaling contact	0
number of CO contacts of the current-dependent overload release for signaling contact	0
operational current of auxiliary contacts at AC-12 maximum	10 A
operational current of auxiliary contacts at DC-13 at 250 V	0.27 A
<b>Protective and monitoring functions</b>	
trip class	CLASS 10 and 20 adjustable
operating short-circuit current breaking capacity (I <sub>cs</sub> )	
• at 400 V rated value	53 kA
• at 500 V rated value	3 kA
• at 690 V rated value	3 kA
<b>UL/CSA ratings</b>	
full-load current (FLA) for 3-phase AC motor	
• at 480 V rated value	1.25 A
• at 600 V rated value	1.25 A
yielded mechanical performance [hp] for 3-phase AC motor	
• at 460/480 V rated value	0.5 hp
• at 575/600 V rated value	0.5 hp
<b>Short-circuit protection</b>	

<b>product function short circuit protection</b>	Yes	
<b>design of short-circuit protection</b>	electromagnetic	
<b>design of the fuse link</b>	fuse gL/gG: 10 A	
<ul style="list-style-type: none"> <li>for short-circuit protection of the auxiliary switch required</li> </ul>		
<b>Installation/ mounting/ dimensions</b>		
<b>mounting position</b>	any	
<b>mounting position recommended</b>	vertical, on horizontal standard DIN rail	
<b>fastening method</b>	screw and snap-on mounting	
<b>height</b>	191 mm	
<b>width</b>	90 mm	
<b>depth</b>	165 mm	
<b>Connections/ Terminals</b>		
<b>product component removable terminal for main circuit</b>	Yes	
<b>product component removable terminal for auxiliary and control circuit</b>	Yes	
<b>type of electrical connection</b>	spring-loaded terminals spring-loaded terminals	
<ul style="list-style-type: none"> <li>for main current circuit</li> <li>for auxiliary and control circuit</li> </ul>		
<b>type of connectable conductor cross-sections for main contacts</b>	2x (1.5 ... 6 mm <sup>2</sup> ), 1x 10 mm <sup>2</sup> 2x (1.5 ... 6 mm <sup>2</sup> ) 2x (1.5 ... 6 mm <sup>2</sup> )	
<ul style="list-style-type: none"> <li>solid</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> </ul>		
<b>type of connectable conductor cross-sections</b>		
<ul style="list-style-type: none"> <li>for auxiliary contacts <ul style="list-style-type: none"> <li>— solid</li> <li>— finely stranded with core end processing</li> <li>— finely stranded without core end processing</li> </ul> </li> <li>for AWG cables for auxiliary contacts</li> </ul>	2x (0.25 ... 1.5 mm <sup>2</sup> ) 2x (0.25 ... 1.5 mm <sup>2</sup> ) 2x (0.25 ... 1.5 mm <sup>2</sup> ) 2x (24 ... 16)	
<b>Safety related data</b>		
<b>proportion of dangerous failures</b>	50 %	
<ul style="list-style-type: none"> <li>with high demand rate according to SN 31920</li> </ul>		
<b>B10 value with high demand rate according to SN 31920</b>	1 500 000	
<b>Electrical Safety</b>		
<b>protection class IP on the front according to IEC 60529</b>	IP20	
<b>touch protection on the front according to IEC 60529</b>	finger-safe	
<b>Communication/ Protocol</b>		
<b>product function bus communication</b>	Yes	
<b>protocol is supported</b>	No Yes	
<ul style="list-style-type: none"> <li>AS-Interface protocol</li> <li>IO-Link protocol</li> </ul>		
<b>product function control circuit interface with IO link</b>	Yes	
<b>IO-Link transfer rate</b>	COM2 (38,4 kBaud)	
<b>point-to-point cycle time between master and IO-Link device minimum</b>	2.5 ms	
<b>type of voltage supply via input/output link master</b>	No	
<b>data volume</b>	2 byte 2 byte	
<ul style="list-style-type: none"> <li>of the address range of the inputs with cyclical transfer total</li> <li>of the address range of the outputs with cyclical transfer total</li> </ul>		
<b>Electromagnetic compatibility</b>		
<b>conducted interference</b>	4 kV main circuits, 2 kV auxiliary circuits, 2 kV IO-Link, 2 kV limit switches, 2 kV line hand-held device 4 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection 2 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection 0.15-80Mhz at 10V	
<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> <li>due to high-frequency radiation according to IEC 61000-4-6</li> </ul>		
<b>field-based interference according to IEC 61000-4-3</b>		80 ... 3000 MHz at 10V/m

electrostatic discharge according to IEC 61000-4-2	8 kV
conducted HF interference emissions according to CISPR11	150 kHz ... 30 MHz Class A
field-bound HF interference emission according to CISPR11	30 ... 1000 MHz Class A

**Supply voltage**

Supply voltage required Auxiliary voltage	Yes
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**Display**

number of LEDs	5
display version as status display of the input/output link device	green/red dual LED

**Approvals Certificates**

Environment	General Product Approval
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[Environmental Confirmations](#)



EMV	Functional Safety	Test Certificates	other
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[Type Examination Certificate](#)

[Type Test Certificates/Test Report](#)

[Confirmation](#)

[Confirmation](#)



**Dangerous goods**

[Transport Information](#)

**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?mifb=3RA6500-2BB42>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RA6500-2BB42>

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

[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mifb=3RA6500-2BB42&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mifb=3RA6500-2BB42&lang=en)

**Cax online generator**

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mifb=3RA6500-2BB42>

**Characteristic curves**

[https://curves.simaris.siemens.com/curves/<mmp\\_prod\\_noCOMP="HAUPT"></mmp\\_prod\\_no>](https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP=)

last modified:

4/4/2026