



\*\*\*phase-out type\*\*\* compact starter reversing starter for IO-Link 690 V 24 V DC  
 0.1...0.4 A IP20 connection main circuit: plug-in, without terminals connection  
 control circuit: screw 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
<b>power loss [W] for rated value of the current</b>	
• at AC in hot operating state	0.01 W
• at AC in hot operating state per pole	0.01 W
• without load current share typical	2.9 W
<b>insulation voltage rated value</b>	690 V
<b>degree of pollution</b>	3
<b>surge voltage resistance rated value</b>	6 000 V
<b>degree of protection NEMA rating</b>	other
<b>shock resistance</b>	a=60 m/s <sup>2</sup> (6g) with 10 ms per 3 shocks in all axes
<b>vibration resistance</b>	f = 4 ... 5.8 Hz, d = 15 mm; f = 5.8 ... 500 Hz, a = 20 m/s <sup>2</sup> ; 10 cycles
<b>mechanical service life (operating cycles)</b>	
• of the main contacts typical	10 000 000
• of auxiliary contacts typical	10 000 000
• of the signaling contacts typical	10 000 000
<b>electrical endurance (operating cycles) of auxiliary contacts</b>	
• at DC-13 at 6 A at 24 V typical	30 000
• at AC-15 at 6 A at 230 V typical	200 000
<b>type of coordination</b>	continuous operation according to IEC 60947-6-2
<b>reference code according to IEC 81346-2</b>	Q
<b>Substance Prohibitance (day/month/year)</b>	05/01/2012
<b>SVHC substance name</b>	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
<b>Net Weight</b>	2.458 kg
<b>Ambient conditions</b>	
installation altitude at height above sea level maximum	2 000 m
<b>ambient temperature</b>	
• 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	0.1 ... 0.4 A
formula for making capacity limit current	120 x I <sub>e</sub>
formula for limit current breaking capacity	100 x I <sub>e</sub>
yielded mechanical performance for 4-pole AC motor	
• at 400 V rated value	0.09 kW
• at 500 V rated value	0.12 kW
• at 690 V rated value	0.18 kW
operating voltage at AC-3 rated value maximum	690 V
operational current	
• at AC at 400 V rated value	0.4 A
• at AC-3 at 400 V rated value	0.4 A
• at AC-43	
— at 400 V rated value	0.3 A
— at 500 V rated value	0.32 A
— at 690 V rated value	0.35 A
operating power	
• at AC-3 at 400 V rated value	0.09 kW
• at AC-43	
— at 400 V rated value	90 W
— at 500 V rated value	120 W
— at 690 V rated value	180 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	0.4 A
• at 600 V rated value	0.4 A
<b>Short-circuit protection</b>	
product function short circuit protection	Yes
design of short-circuit protection	electromagnetic
design of the fuse link	

<ul style="list-style-type: none"> <li>for short-circuit protection of the auxiliary switch required</li> </ul>	fuse gL/gG: 10 A
<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>	170 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>	<ul style="list-style-type: none"> <li>for main current circuit: plug-in without terminals</li> <li>for auxiliary and control circuit: screw-type terminals</li> </ul>
<b>type of connectable conductor cross-sections for main contacts</b>	<ul style="list-style-type: none"> <li>solid: 2x (1.5 ... 6 mm<sup>2</sup>), 1x 10 mm<sup>2</sup></li> <li>finely stranded with core end processing: 2x (1.5 ... 6 mm<sup>2</sup>)</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: 0.5 ... 4 mm<sup>2</sup>, 2x (0.5 ... 2.5 mm<sup>2</sup>)</li> <li>— finely stranded with core end processing: 0.5 ... 2.5 mm<sup>2</sup>, 2x (0.5 ... 1.5 mm<sup>2</sup>)</li> </ul> </li> <li>for AWG cables for auxiliary contacts: 2x (20 ... 14)</li> </ul>
<b>Safety related data</b>	
<b>proportion of dangerous failures</b>	<ul style="list-style-type: none"> <li>with high demand rate according to SN 31920: 50 %</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>	<ul style="list-style-type: none"> <li>AS-Interface protocol: No</li> <li>IO-Link protocol: Yes</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>	<ul style="list-style-type: none"> <li>of the address range of the inputs with cyclical transfer total: 2 byte</li> <li>of the address range of the outputs with cyclical transfer total: 2 byte</li> </ul>
<b>Electromagnetic compatibility</b>	
<b>conducted interference</b>	<ul style="list-style-type: none"> <li>due to burst according to IEC 61000-4-4: 4 kV main circuits, 2 kV auxiliary circuits, 2 kV IO-Link, 2 kV limit switches, 2 kV line hand-held device</li> <li>due to conductor-earth surge according to IEC 61000-4-5: 4 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection</li> <li>due to conductor-conductor surge according to IEC 61000-4-5: 2 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection</li> <li>due to high-frequency radiation according to IEC 61000-4-6: 0.15-80MHz at 10V</li> </ul>
<b>field-based interference according to IEC 61000-4-3</b>	80 ... 3000 MHz at 10V/m
<b>electrostatic discharge according to IEC 61000-4-2</b>	8 kV
<b>conducted HF interference emissions according to CISPR11</b>	150 kHz ... 30 MHz Class A
<b>field-bound HF interference emission according to CISPR11</b>	30 ... 1000 MHz Class A
<b>Supply voltage</b>	

Supply voltage required Auxiliary voltage	Yes
<b>Display</b>	
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				
<a href="#">Environmental Confirmations</a>					

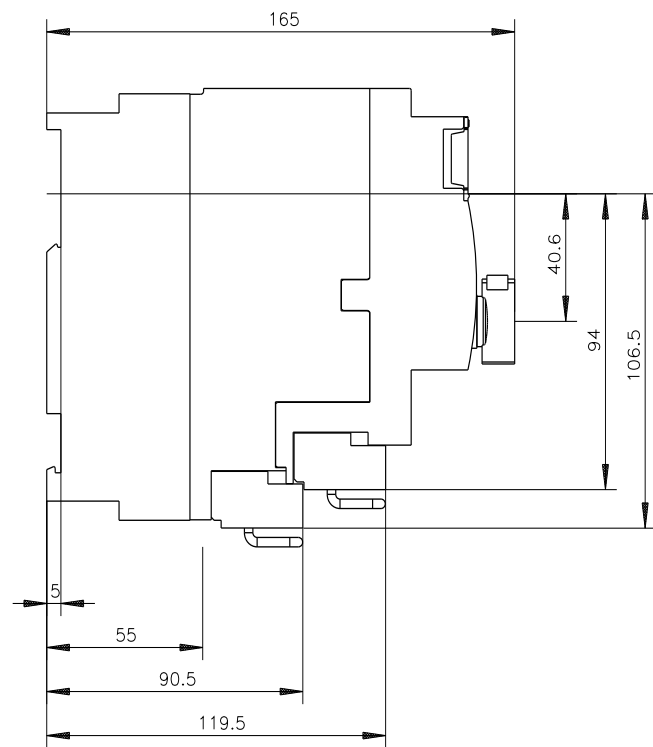
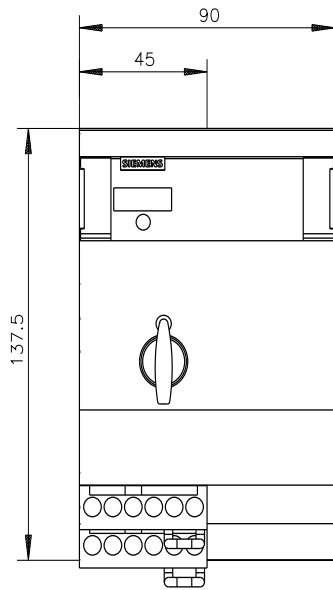
EMV	Functional Safety	Test Certificates	other		
	<a href="#">Type Examination Certificate</a>	<a href="#">Type Test Certificates/Test Report</a>	<a href="#">Confirmation</a>		<a href="#">Confirmation</a>

**Dangerous goods**

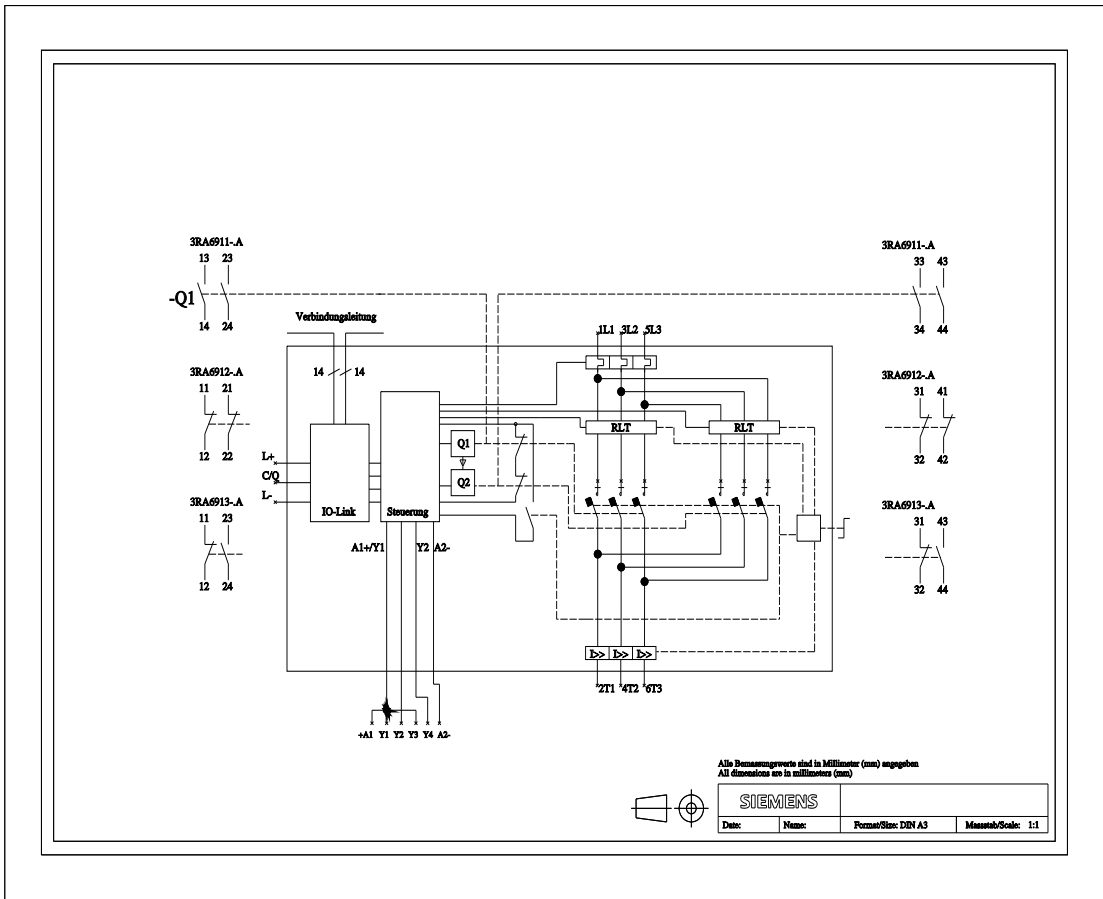
[Transport Information](#)

**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?mlfb=3RA6500-1AB43>
- Service&Support (Manuals, Certificates, Characteristics, FAQs,...)  
<https://support.industry.siemens.com/cs/ww/en/ps/3RA6500-1AB43>
- Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)  
[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RA6500-1AB43&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA6500-1AB43&lang=en)
- Cax online generator  
<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA6500-1AB43>
- Characteristic curves  
[https://curves.simaris.siemens.com/curves/<mmp\\_prod\\_noCOMP="HAUPT"></mmp\\_prod\\_no>](https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP=)







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