



SIRIUS, COMPACT STARTER, DIRECT STARTER .  
 690 V, 24 V DC, 3 ... 12 A, IP20, CONN. MAIN  
 CIRCUIT: SPRING-LOADED TERMINAL, CONN.  
 CONTROL CIRCUIT: SPRING-LOADED TERMINAL

product brand name		SIRIUS
Product designation		compact starter
Design of the product		direct starter

**General technical data:**

<b>Product function</b>		
<ul style="list-style-type: none"> <li>Control circuit interface to parallel wiring</li> </ul>		No
<b>Insulation voltage</b>		
<ul style="list-style-type: none"> <li>Rated value</li> </ul>	V	690
<b>Degree of pollution</b>		3
<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>Surge voltage resistance Rated value</b>	V	6 000
<b>Mechanical service life (switching cycles)</b>		
<ul style="list-style-type: none"> <li>of the main contacts typical</li> <li>of the auxiliary contacts typical</li> <li>of the signaling contacts typical</li> </ul>		10 000 000 10 000 000 10 000 000
<b>Electrical endurance (switching cycles) of the auxiliary contacts</b>		
<ul style="list-style-type: none"> <li>at DC-13 at 6 A at 24 V typical</li> <li>at AC-15 at 6 A at 230 V typical</li> </ul>		100 000 500 000
<b>Type of assignment</b>		continuous operation according to IEC 60947-6-2
<b>Protection class IP</b>		IP20
<b>Equipment marking</b>		
<ul style="list-style-type: none"> <li>acc. to DIN EN 61346-2</li> </ul>		Q

Main circuit:		
<b>Number of poles for main current circuit</b>		3
<b>Adjustable response value current of the current-dependent overload release</b>	A	3 ... 12
<b>Formula for making capacity limit current</b>		12 x I <sub>e</sub>
<b>Formula for interruption capacity limit current</b>		10 x I <sub>e</sub>
<b>Mechanical power output for 4-pole AC motor</b>		
• at 400 V Rated value	kW	5.5
• at 500 V Rated value	kW	5.5
• at 690 V Rated value	kW	7.5
<b>Operating voltage</b>		
• at AC-3 Rated value maximum	V	690
<b>Operating current</b>		
• with AC at 400 V Rated value	A	12
• at AC-43		
— at 400 V Rated value	A	11.5
— at 500 V Rated value	A	12.4
— at 690 V Rated value	A	8.9
<b>Operating power</b>		
• at AC-3		
— at 400 V Rated value	kW	5.5
• at AC-43		
— at 400 V Rated value	W	5 500
— at 500 V Rated value	W	5 500
— at 690 V Rated value	W	7 500
<b>Operating frequency</b>		
• at AC-41 acc. to IEC 60947-6-2 maximum	1/h	750
• at AC-43 acc. to IEC 60947-6-2 maximum	1/h	250
<b>No-load switching frequency</b>	1/h	3 600

Control circuit/ Control:		
<b>Type of voltage</b>		AC
<b>Holding power</b>		
• for DC maximum	W	2.9

Auxiliary circuit:		
<b>Number of NC contacts</b>		
• for auxiliary contacts		0
<b>Number of NO contacts</b>		
• for auxiliary contacts		0
• of the instantaneous short-circuit release for signaling contact		0
<b>Number of CO contacts</b>		

<ul style="list-style-type: none"> <li>of the current-dependent overload release for signaling contact</li> </ul>		0
<b>Product expansion Auxiliary switch</b>		Yes
<b>Operating current of the auxiliary contacts at AC-12 maximum</b>	A	10
<b>Operating current of the auxiliary contacts at DC-13</b> <ul style="list-style-type: none"> <li>at 250 V</li> </ul>	A	0.27

#### Protective and monitoring functions:

<b>Trip class</b>		CLASS 10 and 20 adjustable
<b>OFF-delay time</b>	ms	50
<b>Operational short-circuit current breaking capacity (Ics)</b> <ul style="list-style-type: none"> <li>at 400 V</li> <li>at 500 V Rated value</li> <li>at 690 V Rated value</li> </ul>	kA kA kA	53 3 3

#### UL/CSA ratings:

<b>Full-load current (FLA) for three-phase AC motor</b> <ul style="list-style-type: none"> <li>at 480 V Rated value</li> <li>at 600 V Rated value</li> </ul>	A A	12 12
<b>yielded mechanical performance [hp]</b> <ul style="list-style-type: none"> <li>for three-phase AC motor at 200/208 V Rated value</li> <li>for three-phase AC motor at 220/230 V Rated value</li> <li>for three-phase AC motor at 460/480 V Rated value</li> <li>for three-phase AC motor at 575/600 V Rated value</li> </ul>	metric hp metric hp metric hp metric hp	3 3 7.5 10

#### Short-circuit:

<b>Product function Short circuit protection</b>		Yes
<b>Design of short-circuit protection</b>		electromagnetic
<b>Design of the fuse link</b> <ul style="list-style-type: none"> <li>for short-circuit protection of the auxiliary switch required</li> </ul>		fuse gL/gG: 10 A

#### Installation/ mounting/ dimensions:

<b>mounting position</b> <ul style="list-style-type: none"> <li>recommended</li> </ul>		any vertical, on horizontal standard mounting rail
<b>Mounting type</b>		screw and snap-on mounting
<b>Height</b>	mm	191
<b>Width</b>	mm	45
<b>Depth</b>	mm	165

#### Connections/ Terminals:

<b>Type of electrical connection</b>		
<ul style="list-style-type: none"> <li>• for main current circuit</li> <li>• for auxiliary and control current circuit</li> </ul>		spring-loaded terminals spring-loaded terminals
<b>Product function</b>		
<ul style="list-style-type: none"> <li>• removable terminal for main circuit</li> <li>• removable terminal for auxiliary and control circuit</li> </ul>		Yes Yes
<b>Type of connectable conductor cross-section</b>		
<ul style="list-style-type: none"> <li>• for main 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 conductors for main contacts</li> <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 conductors for auxiliary contacts</li> </ul>		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> ) 2x (16 ... 10), 1x 8 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)

#### Safety related data:

<b>B10 value with high demand rate acc. to SN 31920</b>		3 000 000
<b>Proportion of dangerous failures</b>		
<ul style="list-style-type: none"> <li>• with high demand rate acc. to SN 31920</li> </ul>	%	50
<b>Protection against electrical shock</b>		finger-safe

#### Communication/ Protocol:

<b>Product function Bus communication</b>		Yes
<b>Protocol is supported</b>		
<ul style="list-style-type: none"> <li>• IO-Link protocol</li> </ul>		Yes
<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>	ms	2.5
<b>Type of voltage supply via input/output link master</b>		No
<b>Amount of data</b>		
<ul style="list-style-type: none"> <li>• of the address area of the inputs with cyclical transfer total</li> </ul>	byte	2
<ul style="list-style-type: none"> <li>• of the address area of the outputs with cyclical transfer total</li> </ul>	byte	2

#### Ambient conditions:

<b>Installation altitude at height above sea level maximum</b>	m	2 000
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<b>Ambient temperature</b>		
• during operation	°C	-20 ... +60
• during storage	°C	-55 ... +80
• during transport	°C	-55 ... +80
<b>Relative humidity during operation</b>	%	10 ... 90

#### Electromagnetic compatibility:

<b>Conducted interference due to burst acc. to IEC 61000-4-4</b>		4 kV main circuits, 2 kV auxiliary circuits, 2 kV IO-Link, 2 kV limit switches, 2 kV line hand-held device
<b>Conducted interference due to conductor-earth surge acc. to IEC 61000-4-5</b>		4 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection
<b>Conducted interference due to conductor-conductor surge acc. to IEC 61000-4-5</b>		2 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection
<b>Conducted interference due to high-frequency radiation acc. to IEC 61000-4-6</b>		0.15-80Mhz at 10V
<b>Field-bound parasitic coupling acc. to IEC 61000-4-3</b>		80 ... 3000 MHz at 10V/m
<b>Electrostatic discharge acc. to IEC 61000-4-2</b>		8 kV

#### Supply voltage:

<b>Supply voltage required</b>		Yes
<b>Auxiliary voltage</b>		

#### Display:

<b>Display version</b>		
• as status display of the input/output link device		green/red dual LED

#### Certificates/ approvals:

General Product Approval	EMC	Functional Safety/Safety of Machinery
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Test Certificates	Shipping Approval
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[Type Test Certificates/Test Report](#)



other
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[Declaration of Conformity](#)

[Environmental Confirmations](#)

[other](#)

### Further information

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

<http://www.siemens.com/industrial-controls/catalogs>

**Industry Mall (Online ordering system)**

<http://www.siemens.com/industrymall>

**Cax online generator**

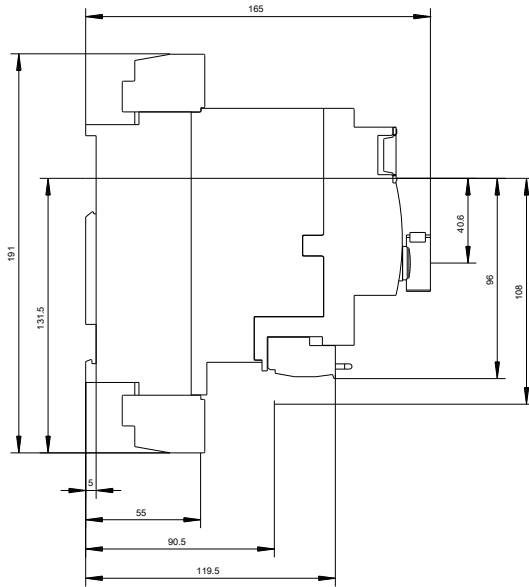
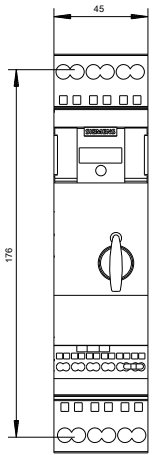
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA64002DB42>

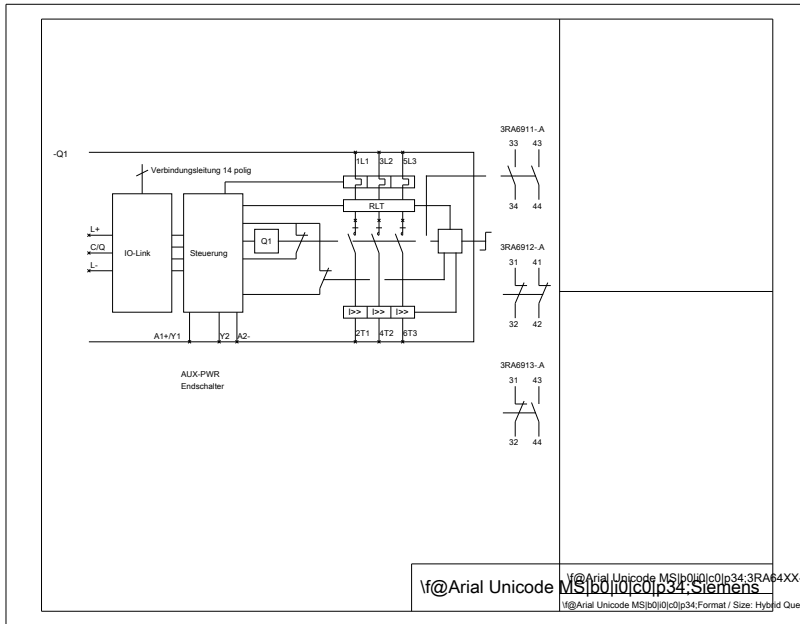
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

<http://support.automation.siemens.com/WW/view/en/3RA64002DB42/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RA64002DB42&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA64002DB42&lang=en)





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