



SIRIUS, COMPACT STARTER, DIRECT STARTER 690 V, 110 ... 240 V AC/DC, 50 ... 60 HZ, 0.1 ... 0.4 A, IP20, CONNECTION MAIN CIRCUIT: SCREW TERMINAL, CONNECTION AUXILIARY CIRCUIT: SCREW 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>		Yes
<b>Insulation voltage</b>		
<ul style="list-style-type: none"> <li>• Rated value</li> </ul>	V	690
<b>maximum permissible voltage for safe isolation</b>		
<ul style="list-style-type: none"> <li>• between auxiliary and auxiliary circuit</li> <li>• between control and auxiliary circuit</li> <li>• between main and auxiliary circuit</li> </ul>	V	250 300 400
<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>Electrical endurance (switching cycles) of the signaling 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	0.1 ... 0.4
<b>Formula for making capacity limit current</b>		$120 \times I_e$
<b>Formula for interruption capacity limit current</b>		$100 \times I_e$
<b>Mechanical power output for 4-pole AC motor</b>		
<ul style="list-style-type: none"> <li>• at 400 V Rated value</li> <li>• at 500 V Rated value</li> <li>• at 690 V Rated value</li> </ul>	kW kW kW	0.09 0.12 0.18
<b>Operating voltage</b>		
<ul style="list-style-type: none"> <li>• at AC-3 Rated value maximum</li> </ul>	V	690
<b>Operating current</b>		
<ul style="list-style-type: none"> <li>• with AC at 400 V Rated value</li> <li>• at AC-43 <ul style="list-style-type: none"> <li>— at 400 V Rated value</li> <li>— at 500 V Rated value</li> <li>— at 690 V Rated value</li> </ul> </li> </ul>	A A A A	0.4 0.3 0.32 0.35
<b>Operating power</b>		
<ul style="list-style-type: none"> <li>• at AC-3 <ul style="list-style-type: none"> <li>— at 400 V Rated value</li> </ul> </li> <li>• at AC-43 <ul style="list-style-type: none"> <li>— at 400 V Rated value</li> <li>— at 500 V Rated value</li> <li>— at 690 V Rated value</li> </ul> </li> </ul>	W W W W	90 90 120 180
<b>Operating frequency</b>		
<ul style="list-style-type: none"> <li>• at AC-41 acc. to IEC 60947-6-2 maximum</li> <li>• at AC-43 acc. to IEC 60947-6-2 maximum</li> </ul>	1/h 1/h	750 250
<b>No-load switching frequency</b>	1/h	3 600

#### Control circuit/ Control:

<b>Type of voltage</b>		AC
<b>Control supply voltage 1 with AC</b>		
<ul style="list-style-type: none"> <li>• at 50 Hz</li> <li>• at 60 Hz</li> </ul>	V V	110 ... 240 110 ... 240

<b>Control supply voltage 1</b>		
• for DC	V	110 ... 240
• Rated value	Hz	50
<b>Control supply voltage frequency 2 Rated value</b>	Hz	60
<b>Holding power</b>		
• with AC maximum	W	6
• for DC maximum	W	5.1

#### Auxiliary circuit:

<b>Number of NC contacts</b>		
• for auxiliary contacts		1
<b>Number of NO contacts</b>		
• for auxiliary contacts		1
• of the instantaneous short-circuit release for signaling contact		1
<b>Number of CO contacts</b>		
• of the current-dependent overload release for signaling contact		1
<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>		
• at 250 V	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>		
• at 400 V	kA	53
• at 500 V Rated value	kA	3
• at 690 V Rated value	kA	3

#### UL/CSA ratings:

<b>Full-load current (FLA) for three-phase AC motor</b>		
• at 480 V Rated value	A	0.4
• at 600 V Rated value	A	0.4
<b>Contact rating of the auxiliary contacts acc. to UL</b>		contacts 21-22, 13-14, 43-44 Q600 / A600, contacts 77-78 R300 / B300, contacts 95-96-98 R300 / D300

#### 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>		
• for short-circuit protection of the auxiliary switch required		fuse gL/gG: 10 A

- for short-circuit protection of the signaling switch of the short-circuit release required
- for short-circuit protection of the signaling switch of the overload release required

6A gL/gG/400V

4A gL/gG/400V

**Installation/ mounting/ dimensions:**

<b>mounting position</b>		any
<ul style="list-style-type: none"> <li>• recommended</li> </ul>		vertical, on horizontal standard mounting rail
<b>Mounting type</b>		screw and snap-on mounting
<b>Height</b>	mm	170
<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>		screw-type terminals screw-type 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> </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> </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 (16 ... 10), 1x 8  0.5 ... 4 mm <sup>2</sup> , 2x (0.5 ... 2.5 mm <sup>2</sup> ) 0.5 ... 2.5 mm <sup>2</sup> , 2x (0.5 ... 1.5 mm <sup>2</sup> ) 2x (20 ... 14)

**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 low demand rate acc. to SN 31920</li> <li>• with high demand rate acc. to SN 31920</li> </ul>	% %	40 50
<b>Failure rate [FIT] with low demand rate acc. to SN 31920</b>	FIT	100
<b>T1 value for proof test interval or service life acc. to IEC 61508</b>	y	20
<b>Protection against electrical shock</b>		finger-safe

**Communication/ Protocol:**

<b>Product function Bus communication</b>		No
<b>Product function Control circuit interface with IO link</b>		No

**Ambient conditions:**

<b>Installation altitude at height above sea level maximum</b>	m	2 000
<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 contacts, 2 kV auxiliary contacts
<b>Conducted interference due to conductor-earth surge acc. to IEC 61000-4-5</b>		4 kV main contacts, 2 kV auxiliary contacts
<b>Conducted interference due to conductor-conductor surge acc. to IEC 61000-4-5</b>		2 kV main contacts, 1 kV auxiliary contacts
<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>		10 V/m
<b>Electrostatic discharge acc. to IEC 61000-4-2</b>		8 kV

**Supply voltage:**

<b>Supply voltage required Auxiliary voltage</b>		No
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**Certificates/ approvals:**

General Product Approval	EMC	Functional Safety/Safety of Machinery
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CCC



CSA



UL



C-TICK



VDE

Test Certificates	Shipping Approval
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[Type Test Certificates/Test Report](#)



BUREAU VERITAS



DNV



LRS



PRS



RINA

Shipping Approval	other
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RMRS

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#### 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**

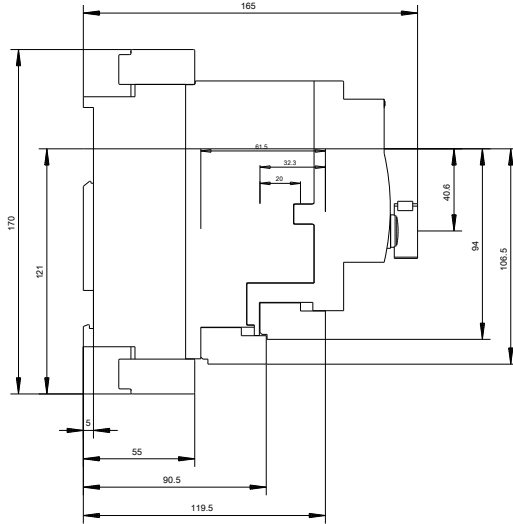
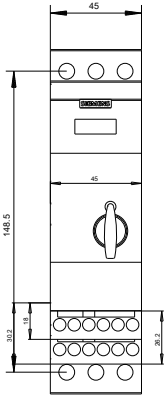
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mfb=3RA61201AP32>

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

<http://support.automation.siemens.com/WW/view/en/3RA61201AP32/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mfb=3RA61201AP32&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mfb=3RA61201AP32&lang=en)



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