



SIRIUS, COMPACT STARTER, DIRECT STARTER 690 V, 24 V AC/DC, 50 ... 60 HZ, 3 ... 12 A, IP20, CONNECTION MAIN CIRCUIT: PLUGGABLE, WITHOUT TERMINALS, 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>	
• Control circuit interface to parallel wiring	Yes
<b>Product expansion</b>	
• Auxiliary switch	Yes
<b>Insulation voltage</b>	
• Rated value	690 V
<b>Surge voltage resistance Rated value</b>	6 000 V
<b>maximum permissible voltage for safe isolation</b>	
• between auxiliary and auxiliary circuit	250 V
• between control and auxiliary circuit	300 V
• between main and auxiliary circuit	400 V
<b>Protection class IP</b>	IP20
<b>Degree of pollution</b>	3
<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 (switching cycles)</b>	
• of the main contacts typical	10 000 000
• of the auxiliary contacts typical	10 000 000
• of the signaling contacts typical	10 000 000
<b>Electrical endurance (switching cycles) of the auxiliary contacts</b>	
• at DC-13 at 6 A at 24 V typical	100 000

<ul style="list-style-type: none"> <li>• at AC-15 at 6 A at 230 V typical</li> </ul>	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> </ul>	100 000
<ul style="list-style-type: none"> <li>• at AC-15 at 6 A at 230 V typical</li> </ul>	500 000
<b>Type of assignment</b>	continuous operation according to IEC 60947-6-2
<b>Equipment marking</b>	
<ul style="list-style-type: none"> <li>• acc. to DIN EN 61346-2</li> </ul>	Q

#### Ambient conditions:

<b>Installation altitude at height above sea level maximum</b>	2 000 m
<b>Ambient temperature</b>	
<ul style="list-style-type: none"> <li>• during operation</li> </ul>	-20 ... +60 °C
<ul style="list-style-type: none"> <li>• during storage</li> </ul>	-55 ... +80 °C
<ul style="list-style-type: none"> <li>• during transport</li> </ul>	-55 ... +80 °C
<b>Relative humidity during operation</b>	10 ... 90 %

#### Main circuit:

<b>Number of poles for main current circuit</b>	3
<b>Adjustable response value current of the current-dependent overload release</b>	3 ... 12 A
<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>	
<ul style="list-style-type: none"> <li>• at 400 V Rated value</li> </ul>	5.5 kW
<ul style="list-style-type: none"> <li>• at 500 V Rated value</li> </ul>	5.5 kW
<ul style="list-style-type: none"> <li>• at 690 V Rated value</li> </ul>	7.5 kW
<b>Operating voltage</b>	
<ul style="list-style-type: none"> <li>• at AC-3 Rated value maximum</li> </ul>	690 V
<b>Operating current</b>	
<ul style="list-style-type: none"> <li>• at AC at 400 V Rated value</li> </ul>	12 A
<ul style="list-style-type: none"> <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>	11.5 A 12.4 A 8.9 A
<b>No-load switching frequency</b>	3 600 1/h
<b>Operating frequency</b>	
<ul style="list-style-type: none"> <li>• at AC-41 acc. to IEC 60947-6-2 maximum</li> </ul>	750 1/h
<ul style="list-style-type: none"> <li>• at AC-43 acc. to IEC 60947-6-2 maximum</li> </ul>	250 1/h

#### Control circuit/ Control:

<b>Type of voltage</b>	AC
<b>Control supply voltage 1 at AC</b>	

<ul style="list-style-type: none"> <li>• at 50 Hz Rated value</li> <li>• at 60 Hz Rated value</li> </ul>	<p>24 V</p> <p>24 V</p>
<b>Control supply voltage 1</b> <ul style="list-style-type: none"> <li>• at DC Rated value</li> <li>• Rated value</li> </ul>	<p>24 V</p> <p>50 Hz</p>
<b>Control supply voltage frequency 2 Rated value</b>	<p>60 Hz</p>
<b>Holding power</b> <ul style="list-style-type: none"> <li>• with AC maximum</li> <li>• for DC maximum</li> </ul>	<p>2.8 W</p> <p>2.9 W</p>

#### Auxiliary circuit:

<b>Number of NC contacts</b> <ul style="list-style-type: none"> <li>• for auxiliary contacts</li> </ul>	<p>1</p>
<b>Number of NO contacts</b> <ul style="list-style-type: none"> <li>• for auxiliary contacts</li> <li>• of the instantaneous short-circuit release for signaling contact</li> </ul>	<p>1</p> <p>1</p>
<b>Number of CO contacts</b> <ul style="list-style-type: none"> <li>• of the current-dependent overload release for signaling contact</li> </ul>	<p>1</p>
<b>Operating current of the auxiliary contacts at AC-12 maximum</b>	<p>10 A</p>
<b>Operating current of the auxiliary contacts at DC-13</b> <ul style="list-style-type: none"> <li>• at 250 V</li> </ul>	<p>0.27 A</p>

#### Protective and monitoring functions:

<b>Trip class</b>	<p>CLASS 10 and 20 adjustable</p>
<b>OFF-delay time</b>	<p>50 ms</p>
<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>	<p>53 kA</p> <p>3 kA</p> <p>3 kA</p>

#### 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>	<p>12 A</p> <p>12 A</p>
<b>yielded mechanical performance [hp]</b> <ul style="list-style-type: none"> <li>• for three-phase AC motor <ul style="list-style-type: none"> <li>— at 200/208 V Rated value</li> <li>— at 220/230 V Rated value</li> <li>— at 460/480 V Rated value</li> <li>— at 575/600 V Rated value</li> </ul> </li> </ul>	<p>3 hp</p> <p>3 hp</p> <p>7.5 hp</p> <p>10 hp</p>

<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
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### Short-circuit:

<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
<ul style="list-style-type: none"> <li>• for short-circuit protection of the signaling switch of the short-circuit release required</li> </ul>	6A gL/gG/400V
<ul style="list-style-type: none"> <li>• for short-circuit protection of the signaling switch of the overload release required</li> </ul>	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>	170 mm
<b>Width</b>	45 mm
<b>Depth</b>	165 mm

### Connections/ Terminals:

<b>Product function</b>	
<ul style="list-style-type: none"> <li>• removable terminal for main circuit</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• removable terminal for auxiliary and control circuit</li> </ul>	Yes
<b>Type of electrical connection</b>	
<ul style="list-style-type: none"> <li>• for main current circuit</li> </ul>	plug-in without terminals
<ul style="list-style-type: none"> <li>• for auxiliary and control current circuit</li> </ul>	screw-type terminals
<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> </ul> </li> </ul>	2x (1.5 ... 6 mm <sup>2</sup> ), 1x 10 mm <sup>2</sup>
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— finely stranded with core end processing</li> </ul> </li> </ul>	2x (1.5 ... 6 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>• for AWG conductors for main contacts</li> </ul>	2x (16 ... 10), 1x 8
<b>Type of connectable conductor cross-section</b>	
<ul style="list-style-type: none"> <li>• for auxiliary contacts <ul style="list-style-type: none"> <li>— solid</li> </ul> </li> </ul>	0.5 ... 4 mm <sup>2</sup> , 2x (0.5 ... 2.5 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— finely stranded with core end processing</li> </ul> </li> </ul>	0.5 ... 2.5 mm <sup>2</sup> , 2x (0.5 ... 1.5 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>• for AWG conductors for auxiliary contacts</li> </ul>	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> </ul>	40 %
<ul style="list-style-type: none"> <li>• with high demand rate acc. to SN 31920</li> </ul>	50 %

<b>T1 value for proof test interval or service life acc. to IEC 61508</b>	20 y
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**Communication/ Protocol:**

<b>Product function Bus communication</b>	No
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**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
<b>Conducted HF-interference emissions acc. to CISPR11</b>	150 kHz ... 30 MHz Class A
<b>Field-bound HF-interference emission acc. to CISPR11</b>	30 ... 1000 MHz Class A

**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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Declaration of Conformity	Test Certificates	Shipping Approval
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[Typprüfbescheinigung/Werkszeugnis](#)



Shipping Approval	other
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[Umweltbestätigung](#)

#### 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**

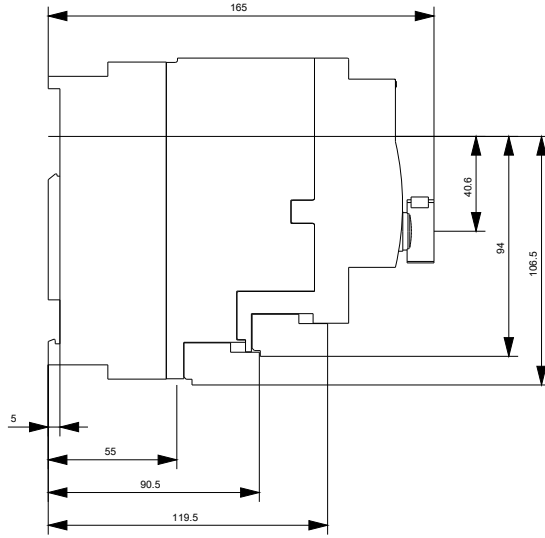
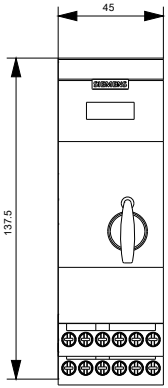
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA61201DB33>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RA61201DB33>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RA61201DB33&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA61201DB33&lang=en)



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