



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>	
• 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>	0.1 ... 0.4 A
<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> </ul>	0.09 kW
<ul style="list-style-type: none"> <li>• at 500 V Rated value</li> </ul>	0.12 kW
<ul style="list-style-type: none"> <li>• at 690 V Rated value</li> </ul>	0.18 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>	0.4 A
<ul style="list-style-type: none"> <li>• at AC-43</li> </ul>	
<ul style="list-style-type: none"> <li>— at 400 V Rated value</li> </ul>	0.3 A
<ul style="list-style-type: none"> <li>— at 500 V Rated value</li> </ul>	0.32 A
<ul style="list-style-type: none"> <li>— at 690 V Rated value</li> </ul>	0.35 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</li> <li>• at 60 Hz</li> </ul>	110 ... 240 V 110 ... 240 V
<b>Control supply voltage 1</b>	
<ul style="list-style-type: none"> <li>• at DC</li> <li>• Rated value</li> </ul>	110 ... 240 V 50 Hz
<b>Control supply voltage frequency 2 Rated value</b>	60 Hz
<b>Holding power</b>	
<ul style="list-style-type: none"> <li>• with AC maximum</li> <li>• for DC maximum</li> </ul>	6 W 5.1 W

#### Auxiliary circuit:

<b>Number of NC contacts</b>	
<ul style="list-style-type: none"> <li>• for auxiliary contacts</li> </ul>	1
<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>	1 1
<b>Number of CO contacts</b>	
<ul style="list-style-type: none"> <li>• of the current-dependent overload release for signaling contact</li> </ul>	1
<b>Operating current of the auxiliary contacts at AC-12 maximum</b>	10 A
<b>Operating current of the auxiliary contacts at DC-13</b>	
<ul style="list-style-type: none"> <li>• at 250 V</li> </ul>	0.27 A

#### Protective and monitoring functions:

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

#### 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>	0.4 A 0.4 A
<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>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

- 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>	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> <li>• removable terminal for auxiliary and control circuit</li> </ul>	Yes Yes
<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>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> </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
<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> <li>— finely stranded with core end processing</li> </ul> </li> <li>• for AWG conductors for auxiliary contacts</li> </ul>	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>T1 value for proof test interval or service life acc. to IEC 61508</b>	20 y

**Communication/ Protocol:**

<b>Product function Bus communication</b>	No
-------------------------------------------	----

**Electromagnetic compatibility:**

<b>Conducted interference due to burst acc. to IEC 61000-4-4</b>	4 kV main contacts, 2 kV auxiliary contacts
------------------------------------------------------------------	---------------------------------------------

Conducted interference due to conductor-earth surge acc. to IEC 61000-4-5	4 kV main contacts, 2 kV auxiliary contacts
Conducted interference due to conductor-conductor surge acc. to IEC 61000-4-5	2 kV main contacts, 1 kV auxiliary contacts
Conducted interference due to high-frequency radiation acc. to IEC 61000-4-6	0.15-80Mhz at 10V
Field-bound parasitic coupling acc. to IEC 61000-4-3	10 V/m
Electrostatic discharge acc. to IEC 61000-4-2	8 kV
Conducted HF-interference emissions acc. to CISPR11	150 kHz ... 30 MHz Class A
Field-bound HF-interference emission acc. to CISPR11	30 ... 1000 MHz Class A



#### Supply voltage:

Supply voltage required Auxiliary voltage	No
-------------------------------------------	----

#### Certificates/ approvals:

General Product Approval	EMC	Functional Safety/Safety of Machinery
 CCC	 EAC	 VDE
 CSA	 C-TICK	
 UL		

Declaration of Conformity	Test Certificates	Shipping Approval
 EG-Konf.	<a href="#">Typprüfbescheinigung/Werkszeugnis</a>	 BUREAU VERITAS
		 DNV
		 LRS
		 PRS

Shipping Approval	other
 RINA	<a href="#">Umweltbestätigung</a>
 RMRS	

#### Further information

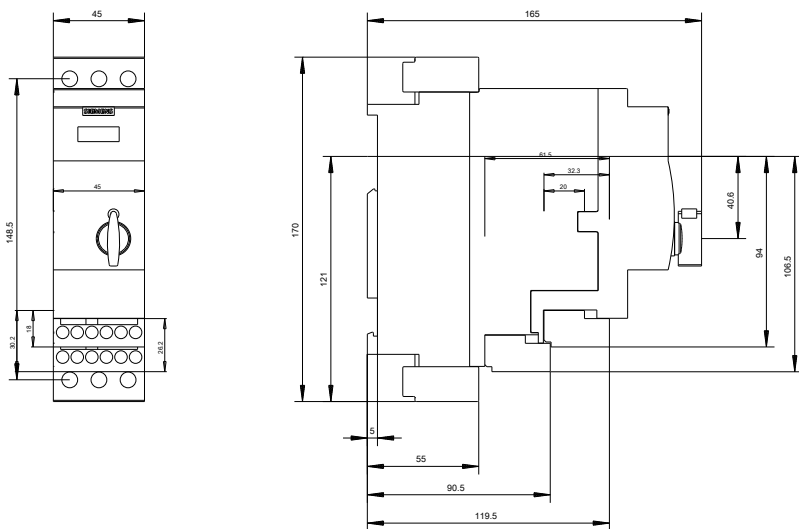
- Information- and Downloadcenter (Catalogs, Brochures,...)  
<http://www.siemens.com/industrial-controls/catalogs>
- Industry Mall (Online ordering system)  
<http://www.siemens.com/industrymall>
- Cax online generator  
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA61201AP32>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RA61201AP32>

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

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



last modified:

29.06.2015