



SIRIUS, COMPACT STARTER, DIRECT STARTER 690 V, 24 V AC/DC, 50 ... 60 HZ, 0.32 ... 1.25 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	0.32 ... 1.25
<b>Formula for making capacity limit current</b>		38.4 x I <sub>e</sub>
<b>Formula for interruption capacity limit current</b>		32 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> <li>• at 500 V Rated value</li> <li>• at 690 V Rated value</li> </ul>	kW kW kW	0.37 0.55 0.75
<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 A	1.25 1.1 1.2 1.1
<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	370 370 550 750
<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 Rated value</li> <li>• at 60 Hz Rated value</li> </ul>	V V	24 24

<b>Control supply voltage 1</b>		
• for DC Rated value	V	24
• Rated value	Hz	50
<b>Control supply voltage frequency 2 Rated value</b>	Hz	60
<b>Holding power</b>		
• with AC maximum	W	2.8
• for DC maximum	W	2.9

#### 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	1.25
• at 600 V Rated value	A	1.25
<b>yielded mechanical performance [hp]</b>		
• for three-phase AC motor at 460/480 V Rated value	metric hp	0.5
• for three-phase AC motor at 575/600 V Rated value	metric hp	0.5
<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>		fuse gL/gG: 10 A
<ul style="list-style-type: none"> <li>• for short-circuit protection of the auxiliary switch required</li> </ul>		6A gL/gG/400V
<ul style="list-style-type: none"> <li>• for short-circuit protection of the signaling switch of the short-circuit release required</li> </ul>		4A 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>		

#### 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>		screw-type terminals
<ul style="list-style-type: none"> <li>• for main current circuit</li> <li>• for auxiliary and control current circuit</li> </ul>		screw-type terminals
<b>Product function</b>		Yes
<ul style="list-style-type: none"> <li>• removable terminal for main circuit</li> <li>• removable terminal for auxiliary and control circuit</li> </ul>		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

Protection against electrical shock		finger-safe
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#### Communication/ Protocol:

Product function Bus communication		No
Product function Control circuit interface with IO link		No

#### Ambient conditions:

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

#### Electromagnetic compatibility:

Conducted interference due to burst acc. to IEC 61000-4-4		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

#### Supply voltage:

Supply voltage required Auxiliary voltage		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](#)



DNV



LRS



PRS



RINA

Shipping Approval	other
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RMRS

[Environmental Confirmations](#)

[Declaration of Conformity](#)

[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

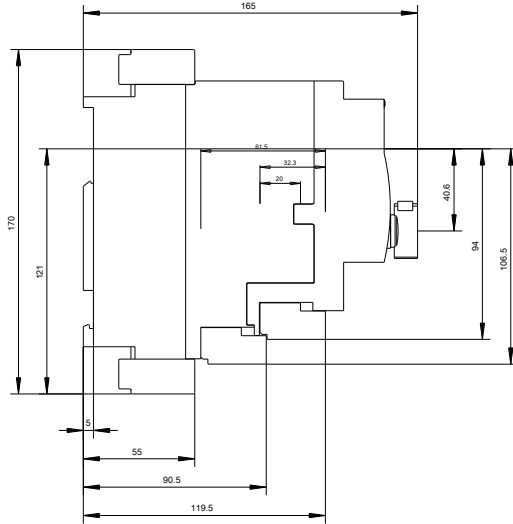
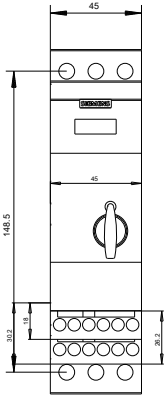
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mfb=3RA61201BB32>

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

<http://support.automation.siemens.com/WW/view/en/3RA61201BB32/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=3RA61201BB32&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mfb=3RA61201BB32&lang=en)



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