



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: SPRING-LOADED TERMINAL

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

General technical data:	
Product function	
• Control circuit interface to parallel wiring	Yes
Product expansion	
• Auxiliary switch	Yes
Insulation voltage	
• Rated value	690 V
Surge voltage resistance Rated value	6 000 V
maximum permissible voltage for safe isolation	
• between auxiliary and auxiliary circuit	250 V
• between control and auxiliary circuit	300 V
• between main and auxiliary circuit	400 V
Protection class IP	IP20
Degree of pollution	3
Vibration resistance	f= 4 ... 5.8 Hz, d= 15 mm; f= 5.8 ... 500 Hz, a= 20 m/s ² ; 10 cycles
Mechanical service life (switching cycles)	
• of the main contacts typical	10 000 000
• of the auxiliary contacts typical	10 000 000
• of the signaling contacts typical	10 000 000
Electrical endurance (switching cycles) of the auxiliary contacts	
• at DC-13 at 6 A at 24 V typical	100 000

<ul style="list-style-type: none"> • at AC-15 at 6 A at 230 V typical 	500 000
Electrical endurance (switching cycles) of the signaling contacts	
<ul style="list-style-type: none"> • at DC-13 at 6 A at 24 V typical 	100 000
<ul style="list-style-type: none"> • at AC-15 at 6 A at 230 V typical 	500 000
Type of assignment	continuous operation according to IEC 60947-6-2
Equipment marking	
<ul style="list-style-type: none"> • acc. to DIN EN 61346-2 	Q

Ambient conditions:

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

Main circuit:

Number of poles for main current circuit	3
Adjustable response value current of the current-dependent overload release	3 ... 12 A
Formula for making capacity limit current	12 x I _e
Formula for interruption capacity limit current	10 x I _e
Mechanical power output for 4-pole AC motor	
<ul style="list-style-type: none"> • at 400 V Rated value 	5.5 kW
<ul style="list-style-type: none"> • at 500 V Rated value 	5.5 kW
<ul style="list-style-type: none"> • at 690 V Rated value 	7.5 kW
Operating voltage	
<ul style="list-style-type: none"> • at AC-3 Rated value maximum 	690 V
Operating current	
<ul style="list-style-type: none"> • at AC at 400 V Rated value 	12 A
<ul style="list-style-type: none"> • at AC-43 <ul style="list-style-type: none"> — at 400 V Rated value — at 500 V Rated value — at 690 V Rated value 	11.5 A 12.4 A 8.9 A
No-load switching frequency	3 600 1/h
Operating frequency	
<ul style="list-style-type: none"> • at AC-41 acc. to IEC 60947-6-2 maximum 	750 1/h
<ul style="list-style-type: none"> • at AC-43 acc. to IEC 60947-6-2 maximum 	250 1/h

Control circuit/ Control:

Type of voltage	AC
Control supply voltage 1 at AC	

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

Auxiliary circuit:

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

Protective and monitoring functions:

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

UL/CSA ratings:

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

Contact rating of the auxiliary contacts acc. to UL	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:

Design of the fuse link	
<ul style="list-style-type: none"> for short-circuit protection of the auxiliary switch required 	fuse gL/gG: 10 A
<ul style="list-style-type: none"> for short-circuit protection of the signaling switch of the short-circuit release required 	6A gL/gG/400V
<ul style="list-style-type: none"> for short-circuit protection of the signaling switch of the overload release required 	4A gL/gG/400V

Installation/ mounting/ dimensions:

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

Connections/ Terminals:

Product function	
<ul style="list-style-type: none"> removable terminal for main circuit 	Yes
<ul style="list-style-type: none"> removable terminal for auxiliary and control circuit 	Yes
Type of electrical connection	
<ul style="list-style-type: none"> for main current circuit 	plug-in without terminals
<ul style="list-style-type: none"> for auxiliary and control current circuit 	spring-loaded terminals
Type of connectable conductor cross-section	
<ul style="list-style-type: none"> for main contacts <ul style="list-style-type: none"> — solid 	2x (1.5 ... 6 mm ²), 1x 10 mm ²
<ul style="list-style-type: none"> — finely stranded with core end processing 	2x (1.5 ... 6 mm ²)
<ul style="list-style-type: none"> — finely stranded without core end processing 	2x (1.5 ... 6 mm ²)
<ul style="list-style-type: none"> for AWG conductors for main contacts 	2x (16 ... 10), 1x 8
Type of connectable conductor cross-section	
<ul style="list-style-type: none"> for auxiliary contacts <ul style="list-style-type: none"> — solid 	2x (0.25 ... 1.5 mm ²)
<ul style="list-style-type: none"> — finely stranded with core end processing 	2x (0.25 ... 1.5 mm ²)
<ul style="list-style-type: none"> — finely stranded without core end processing 	2x (0.25 ... 1.5 mm ²)
<ul style="list-style-type: none"> for AWG conductors for auxiliary contacts 	2x (24 ... 16)

Safety related data:

B10 value with high demand rate acc. to SN 31920	3 000 000
Proportion of dangerous failures	

• with low demand rate acc. to SN 31920	40 %
• with high demand rate acc. to SN 31920	50 %
T1 value for proof test interval or service life acc. to IEC 61508	20 y

Communication/ Protocol:

Product function Bus communication	No
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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
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
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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

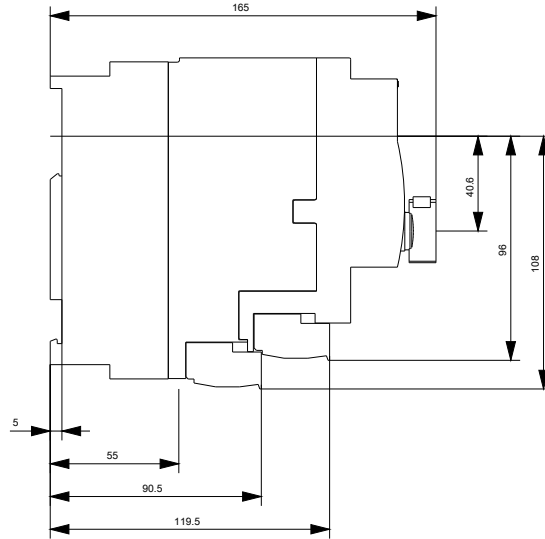
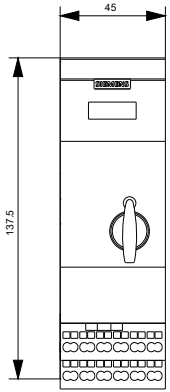
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA61202DB33>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RA61202DB33>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA61202DB33&lang=en



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