



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:		
Product function		
<ul style="list-style-type: none"> Control circuit interface to parallel wiring 		Yes
Insulation voltage		
<ul style="list-style-type: none"> Rated value 	V	690
maximum permissible voltage for safe isolation		
<ul style="list-style-type: none"> between auxiliary and auxiliary circuit between control and auxiliary circuit between main and auxiliary circuit 	V	250 300 400
Degree of pollution		3
Shock resistance		a=60 m/s ² (6g) with 10 ms per 3 shocks in all axes
Vibration resistance		f= 4 ... 5.8 Hz, d= 15 mm; f= 5.8 ... 500 Hz, a= 20 m/s ² ; 10 cycles
Surge voltage resistance Rated value	V	6 000
Mechanical service life (switching cycles)		
<ul style="list-style-type: none"> of the main contacts typical of the auxiliary contacts typical of the signaling contacts typical 		10 000 000 10 000 000 10 000 000
Electrical endurance (switching cycles) of the auxiliary contacts		
<ul style="list-style-type: none"> at DC-13 at 6 A at 24 V typical at AC-15 at 6 A at 230 V typical 		100 000 500 000

Electrical endurance (switching cycles) of the signaling contacts		
<ul style="list-style-type: none"> • at DC-13 at 6 A at 24 V typical • at AC-15 at 6 A at 230 V typical 		100 000 500 000
Type of assignment		continuous operation according to IEC 60947-6-2
Protection class IP		IP20
Equipment marking		
<ul style="list-style-type: none"> • acc. to DIN EN 61346-2 		Q

Main circuit:

Number of poles for main current circuit		3
Adjustable response value current of the current-dependent overload release	A	3 ... 12
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 • at 500 V Rated value • at 690 V Rated value 	kW kW kW	5.5 5.5 7.5
Operating voltage		
<ul style="list-style-type: none"> • at AC-3 Rated value maximum 	V	690
Operating current		
<ul style="list-style-type: none"> • with AC at 400 V Rated value • at AC-43 <ul style="list-style-type: none"> — at 400 V Rated value — at 500 V Rated value — at 690 V Rated value 	A A A A	12 11.5 12.4 8.9
Operating power		
<ul style="list-style-type: none"> • at AC-3 <ul style="list-style-type: none"> — at 400 V Rated value • at AC-43 <ul style="list-style-type: none"> — at 400 V Rated value — at 500 V Rated value — at 690 V Rated value 	kW W W W	5.5 5 500 5 500 7 500
Operating frequency		
<ul style="list-style-type: none"> • at AC-41 acc. to IEC 60947-6-2 maximum • at AC-43 acc. to IEC 60947-6-2 maximum 	1/h 1/h	750 250
No-load switching frequency	1/h	3 600

Control circuit/ Control:

Type of voltage		AC
Control supply voltage 1 with AC		
<ul style="list-style-type: none"> • at 50 Hz Rated value • at 60 Hz Rated value 	V V	24 24

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

Auxiliary circuit:

Number of NC contacts		
• for auxiliary contacts		1
Number of NO contacts		
• for auxiliary contacts		1
• of the instantaneous short-circuit release for signaling contact		1
Number of CO contacts		
• of the current-dependent overload release for signaling contact		1
Product expansion Auxiliary switch		Yes
Operating current of the auxiliary contacts at AC-12 maximum	A	10
Operating current of the auxiliary contacts at DC-13		
• at 250 V	A	0.27

Protective and monitoring functions:

Trip class		CLASS 10 and 20 adjustable
OFF-delay time	ms	50
Operational short-circuit current breaking capacity (Ics)		
• at 400 V	kA	53
• at 500 V Rated value	kA	3
• at 690 V Rated value	kA	3

UL/CSA ratings:

Full-load current (FLA) for three-phase AC motor		
• at 480 V Rated value	A	12
• at 600 V Rated value	A	12
yielded mechanical performance [hp]		
• for three-phase AC motor at 200/208 V Rated value	metric hp	3
• for three-phase AC motor at 220/230 V Rated value	metric hp	3
• for three-phase AC motor at 460/480 V Rated value	metric hp	7.5

<ul style="list-style-type: none"> for three-phase AC motor at 575/600 V Rated value 	metric hp	10
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

Short-circuit:

Product function Short circuit protection		Yes
Design of short-circuit protection		electromagnetic
Design of the fuse link <ul style="list-style-type: none"> for short-circuit protection of the auxiliary switch required 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 		fuse gL/gG: 10 A 6A gL/gG/400V 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	mm	170
Width	mm	45
Depth	mm	165

Connections/ Terminals:

Type of electrical connection <ul style="list-style-type: none"> for main current circuit for auxiliary and control current circuit 		plug-in without terminals screw-type terminals
Product function <ul style="list-style-type: none"> removable terminal for main circuit removable terminal for auxiliary and control circuit 		Yes Yes
Type of connectable conductor cross-section <ul style="list-style-type: none"> for main contacts <ul style="list-style-type: none"> — solid — finely stranded with core end processing for AWG conductors for main contacts for auxiliary contacts <ul style="list-style-type: none"> — solid — finely stranded with core end processing for AWG conductors for auxiliary contacts 		2x (1.5 ... 6 mm ²), 1x 10 mm ² 2x (1.5 ... 6 mm ²) 2x (16 ... 10), 1x 8 0.5 ... 4 mm ² , 2x (0.5 ... 2.5 mm ²) 0.5 ... 2.5 mm ² , 2x (0.5 ... 1.5 mm ²) 2x (20 ... 14)

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
Failure rate [FIT] with low demand rate acc. to SN 31920	FIT	100
T1 value for proof test interval or service life acc. to IEC 61508	y	20
Protection against electrical shock		finger-safe

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



Shipping Approval	other
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[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=3RA61201DB33>

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

<http://support.automation.siemens.com/WW/view/en/3RA61201DB33/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=3RA61201DB33&lang=en

