



SIRIUS, COMPACT STARTER, DIRECT STARTER 690 V, 110 ... 240 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 • at 60 Hz 	V V	110 ... 240 110 ... 240

Control supply voltage 1		
• for DC	V	110 ... 240
• Rated value	Hz	50
Control supply voltage frequency 2 Rated value	Hz	60
Holding power		
• with AC maximum	W	6
• for DC maximum	W	5.1

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
--	--	----

Certificates/ approvals:

General Product Approval	EMC	Functional Safety/Safety of Machinery
--------------------------	-----	---------------------------------------



Test Certificates	Shipping Approval
-------------------	-------------------

[Type Test Certificates/Test Report](#)



Shipping Approval	other
-------------------	-------



[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

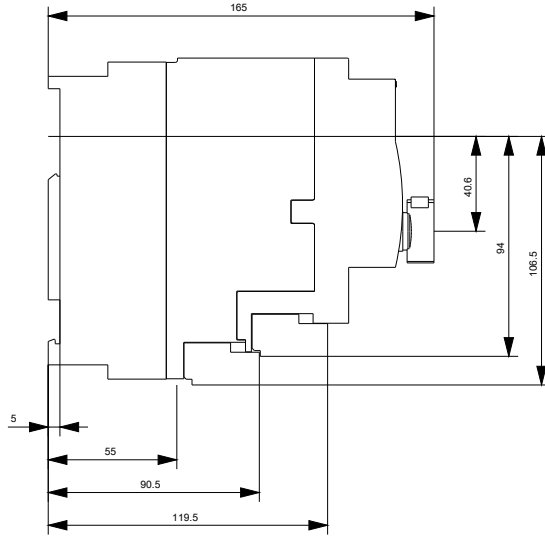
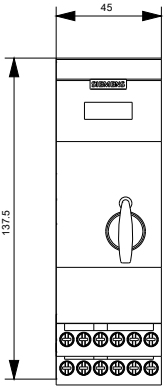
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mfb=3RA61201DP33>

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

<http://support.automation.siemens.com/WW/view/en/3RA61201DP33/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=3RA61201DP33&lang=en



last modified:

11.03.2015