



SIRIUS, COMPACT STARTER, DIRECT STARTER 690 V, 24 V AC/DC, 50 ... 60 HZ, 0.1 ... 0.4 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	
• 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	0.1 ... 0.4 A
Formula for making capacity limit current	$120 \times I_e$
Formula for interruption capacity limit current	$100 \times I_e$
Mechanical power output for 4-pole AC motor	
<ul style="list-style-type: none"> • at 400 V Rated value 	0.09 kW
<ul style="list-style-type: none"> • at 500 V Rated value 	0.12 kW
<ul style="list-style-type: none"> • at 690 V Rated value 	0.18 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 	0.4 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 	0.3 A 0.32 A 0.35 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 	24 V 24 V
Control supply voltage 1	
<ul style="list-style-type: none"> • at DC Rated value • Rated value 	24 V 50 Hz
Control supply voltage frequency 2 Rated value	60 Hz
Holding power	
<ul style="list-style-type: none"> • with AC maximum • for DC maximum 	2.8 W 2.9 W

Auxiliary circuit:

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

Protective and monitoring functions:

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

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 	0.4 A 0.4 A
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:

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

- 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:

mounting position	any
<ul style="list-style-type: none"> • recommended 	vertical, on horizontal standard mounting rail
Mounting type	screw and snap-on mounting
Height	170 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 	screw-type 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"> • 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 	0.5 ... 4 mm ² , 2x (0.5 ... 2.5 mm ²)
<ul style="list-style-type: none"> — finely stranded with core end processing 	0.5 ... 2.5 mm ² , 2x (0.5 ... 1.5 mm ²)
<ul style="list-style-type: none"> • for AWG conductors for auxiliary contacts 	2x (20 ... 14)

Safety related data:

B10 value with high demand rate acc. to SN 31920	3 000 000
Proportion of dangerous failures	
<ul style="list-style-type: none"> • with low demand rate acc. to SN 31920 	40 %
<ul style="list-style-type: none"> • 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
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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:

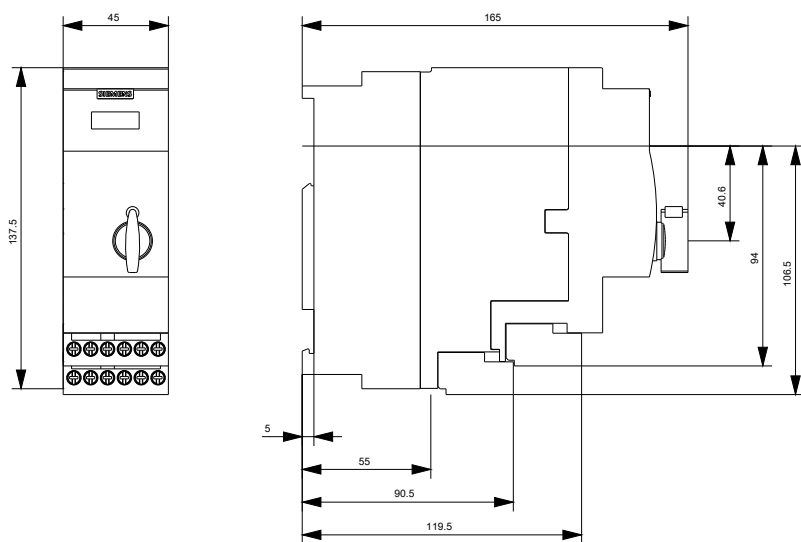
General Product Approval	EMC	Functional Safety/Safety of Machinery
 CCC	 EAC	 VDE
 CSA	 C-TICK	
 UL		

Declaration of Conformity	Test Certificates	Shipping Approval
 EG-Konf.	Typrüfbescheinigung/Werkszeugnis	 BUREAU VERITAS
		 DNV
		 LRS
		 PRS

Shipping Approval	other
 RINA	Umweltbestätigung
 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=3RA61201AB33>



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