SIEMENS

Data sheet 3RA6120-0CB30



SIRIUS, COMPACT STARTER, DIRECT STARTER 690 V, 24 V AC/DC, 50 ... 60 HZ, 1 ... 4 A, IP20, CONNECTION MAIN CIRCUIT: PLUGGABLE, WITHOUT TERMINALS, CONNECTION AUXILIARY CIRCUIT: PLUGGABLE, WITHOUT TERMINALS

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 extension	
Auxiliary switch	Yes
Insulation voltage	
• rated value	690 V
Degree of pollution	3
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
Vibration resistance	f= 4 5.8 Hz, d= 15 mm; f= 5.8 500 Hz, a= 20 m/s²; 10 cycles
Mechanical service life (switching cycles)	

 of the main contacts typical 	10 000 000
 of auxiliary contacts typical 	10 000 000
of the signaling contacts typical	10 000 000
Electrical endurance (switching cycles) of auxiliary	
contacts	
• at DC-13 at 6 A at 24 V typical	30 000
• at AC-15 at 6 A at 230 V typical	200 000
Type of assignment	continous operation according to IEC 60947-6-2
Equipment marking	
• acc. to DIN EN 61346-2	Q
• acc. to DIN EN 81346-2	Q
Ambient conditions	
Ambient temperature	
during operation	-20 +60 °C
during storage	-55 +80 °C
during transport	-55 +80 °C
Main circuit	
Number of poles for main current circuit	3
Adjustable pick-up value current of the current- dependent overload release	1 4 A
Formula for making capacity limit current	12 x le
Formula for interruption capacity limit current	10 x le
Mechanical power output for 4-pole AC motor	
• at 400 V rated value	1.5 kW
• at 500 V rated value	2.2 kW
• at 690 V rated value	3 kW
Operating voltage	
 at AC-3 rated value maximum 	690 V
Operating current	
• at AC at 400 V rated value	4 A
● at AC-43	
— at 400 V rated value	3.6 A
— at 500 V rated value	3.9 A
— at 690 V rated value	3.8 A
No-load switching frequency	3 600 1/h
Operating frequency	
• at AC-41 acc. to IEC 60947-6-2 maximum	750 1/h
• at AC-43 acc. to IEC 60947-6-2 maximum	250 1/h
Control circuit/ Control	
Type of voltage	AC/DC
Control supply voltage 1 at AC	

• at 50 Hz rated value	24 V	
• at 60 Hz rated value	24 V	
Control supply voltage 1		
• at DC rated value	24 V	
Holding power		
• at AC maximum	2.8 W	
• at DC maximum	2.9 W	
Auxiliary circuit		
Number of NC contacts		
 for auxiliary contacts 	1	
Number of NO contacts		
 for auxiliary contacts 	1	
 of instantaneous short-circuit trip unit for signaling contact 	1	
Number of CO contacts		
 of the current-dependent overload release for signaling contact 	1	
Operating current of auxiliary contacts at AC-12	10 A	
maximum		
Operating current of auxiliary contacts at DC-13		
● 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)		
● at 400 V	53 kA	
• at 500 V rated value	3 kA	
● at 690 V rated value	3 kA	
UL/CSA ratings		
Full-load current (FLA) for three-phase AC motor		
• at 480 V rated value	4 A	
• at 600 V rated value	4 A	
Yielded mechanical performance [hp]		
• for three-phase AC motor		

- at 220/230 V rated value

- at 460/480 V rated value

- at 575/600 V rated value

Contact rating of auxiliary contacts according to UL

B300, contacts 95-96-98 R300 / D300

contacts 21-22, 13-14, 43-44 Q600 / A600, contacts 77-78 R300 /

0.75 hp

2 hp

3 hp

Short-circuit protection		
Product function Short circuit protection	Yes	
Design of the fuse link		
 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 	6A gL/gG/400V	
 for short-circuit protection of the signaling switch of the overload release required 	4A gL/gG/400V	
Installation/ mounting/ dimensions		
Mounting position	any	
• 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		
removable terminal for main circuit	Yes	
 removable terminal for auxiliary and control 	Yes	
circuit		
Type of electrical connection		
• for main current circuit	plug-in without terminals	
• for auxiliary and control current circuit	plug-in without terminals	
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	100 FIT	
T1 value for proof test interval or service life acc. to IEC 61508	20 y	
Communication/ Protocol		
Product function Bus communication	No	
Protocol is supported		
• IO-Link protocol	No	
Electromagnetic compatibility		
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	150 kHz 30 MHz Class A
CISPR11	
Field-bound HF-interference emission acc. to	30 1000 MHz Class A
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CISPR11	
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Supply voltage required Auxiliary voltage No

Certificates/approvals

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General Product Approval	EMC	Functional
		Safety/Safety
		of Machinery













Declaration of	Test	Marine / Shipping
Conformity	Certificates	



Type Test
Certificates/Test
Report









Marine / Shipping

other





Environmental Confirmations

Confirmation

Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

http://www.siemens.com/industrial-controls/catalogs

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RA6120-0CB30

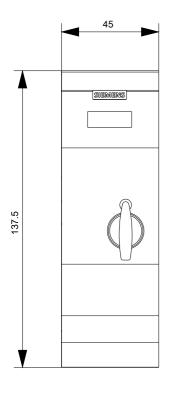
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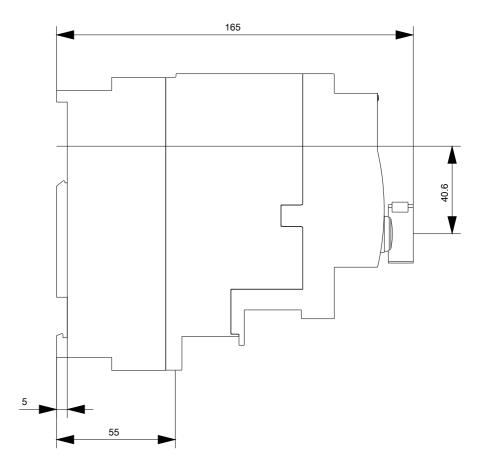
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA6120-0CB30

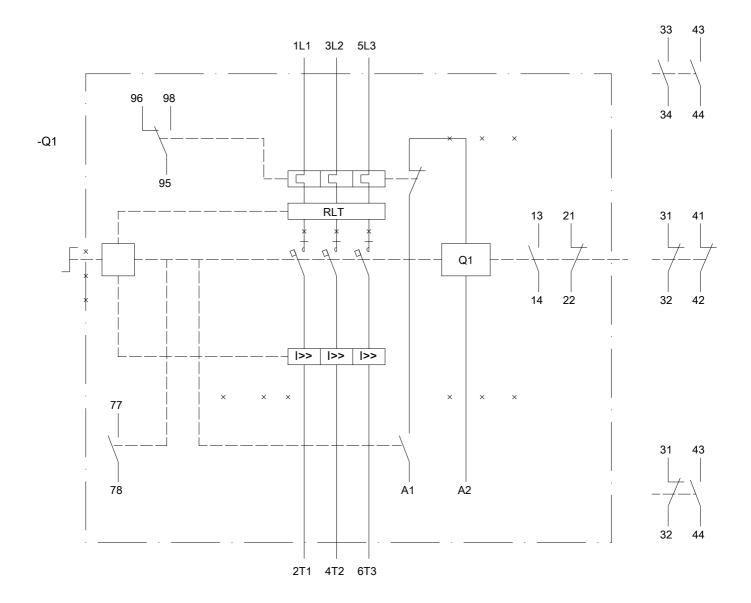
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

https://support.industry.siemens.com/cs/ww/en/ps/3RA6120-0CB30

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA6120-0CB30&lang=en







last modified: 07/14/2017