SIEMENS

Data sheet 3RA6120-2CB32



SIRIUS, COMPACT STARTER, DIRECT STARTER 690 V, 24 V AC/DC, 50 ... 60 HZ, 1 ... 4 A, IP20, CONNECTION MAIN CIRCUIT: SPRING-LOADED TERMINAL, 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			
	Yes		
Control circuit interface to parallel wiring	162		
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 maximum	10 A		
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 200/208 V rated value

- 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

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	191 mm			
Width	45 mm			
Depth	165 mm			
Connections/Terminals				
Product function				
 removable terminal for main circuit 	Yes			
 removable terminal for auxiliary and control circuit 	Yes			
Type of electrical connection				
• for main current circuit	spring-loaded terminals			
 for auxiliary and control current circuit 	spring-loaded terminals			
Type of connectable conductor cross-sections				
• for main contacts				
— solid	2x (1.5 6 mm²), 1x 10 mm²			
 finely stranded with core end processing 	2x (1.5 6 mm²)			
 finely stranded without core end processing 	2x (1.5 6 mm²)			
at AWG conductors for main contacts	2x (16 10), 1x 8			
Type of connectable conductor cross-sections				
• for auxiliary contacts				
— solid	2x (0.25 1.5 mm²)			
— finely stranded with core end processing	2x (0.25 1.5 mm²)			
finely stranded without core end processing	2x (0.25 1.5 mm²)			
at 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 %
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 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

Certificates/approvals

General Product Approval	EMC	Functional
		Safety/Safety
		of Machinery













Declaration of Conformity	Test Certificates	Marine / Shipping			
	Type Test	E P. E	4 &	11/-	



Type Test
Certificates/Test
Report









Marine / Shipping

other





Environmental Confirmations

Confirmation

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

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

Industry Mall (Online ordering system)

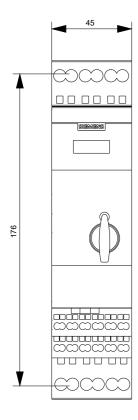
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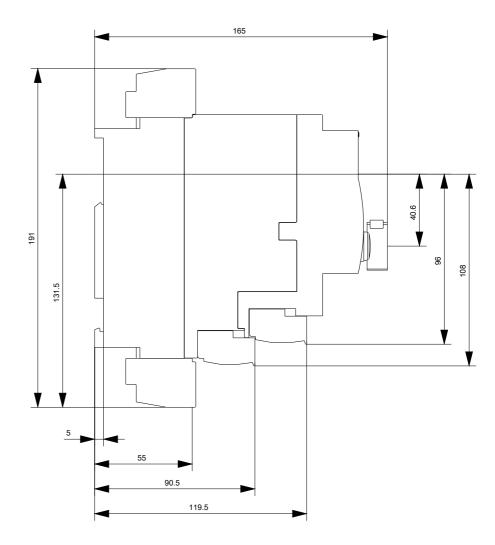
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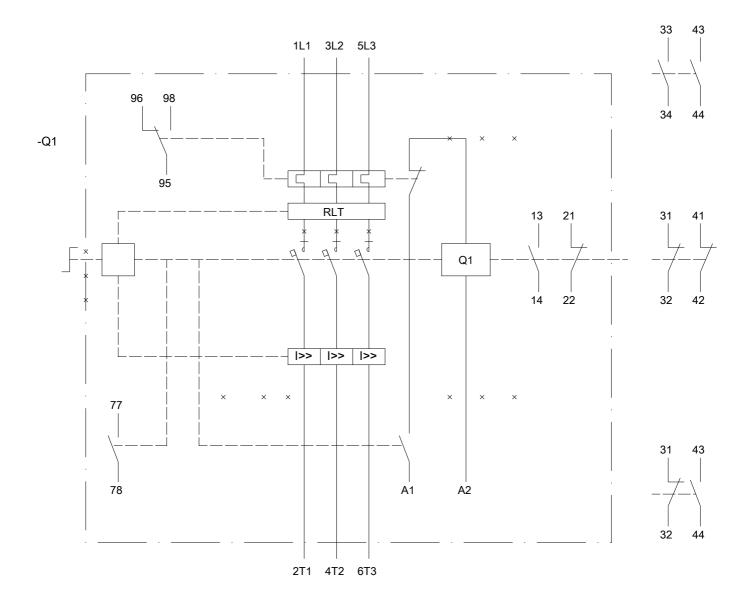
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Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3RA6120-2CB32

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA6120-2CB32&lang=en







last modified: 07/14/2017