SIEMENS

Data sheet 3RA6120-2BB32



SIRIUS, COMPACT STARTER, DIRECT STARTER 690 V, 24 V AC/DC, 50 ... 60 HZ, 0.32 ... 1.25 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	
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	0.32 1.25 A
Formula for making capacity limit current	38.4 x le
Formula for interruption capacity limit current	32 x le
Mechanical power output for 4-pole AC motor	
• at 400 V rated value	0.37 kW
• at 500 V rated value	0.55 kW
• at 690 V rated value	0.75 kW
Operating voltage	
 at AC-3 rated value maximum 	690 V
Operating current	
• at AC at 400 V rated value	1.25 A
● at AC-43	
— at 400 V rated value	1.1 A
— at 500 V rated value	1.2 A
— at 690 V rated value	1.1 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 (lcs)	
● 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	1.25 A
• at 600 V rated value	1.25 A
Yielded mechanical performance [hp]	
• for three-phase AC motor	
— at 460/480 V rated value	0.5 hp
— at 575/600 V rated value	0.5 hp
Contact rating of auxiliary contacts according to UL	contacts 21-22, 13-14, 43-44 Q600 / A600, contacts 77-78 R300 / B300, contacts 95-96-98 R300 / D300
Short-circuit protection	
Product function Short circuit protection	Yes

Design of the fuse link

• 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
• 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	Yes
circuit	
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 	2x (1.5 6 mm²)
processing	
 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 	2x (0.25 1.5 mm²)
processing	
• 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

i ioduci idricuori bus communication	Product function Bus communication	No
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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

Field-bound HF-interference emission acc. to CISPR11

150 kHz ... 30 MHz Class A

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
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=3RA6120-2BB32

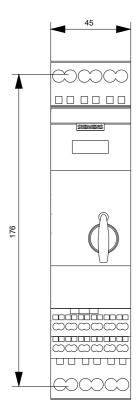
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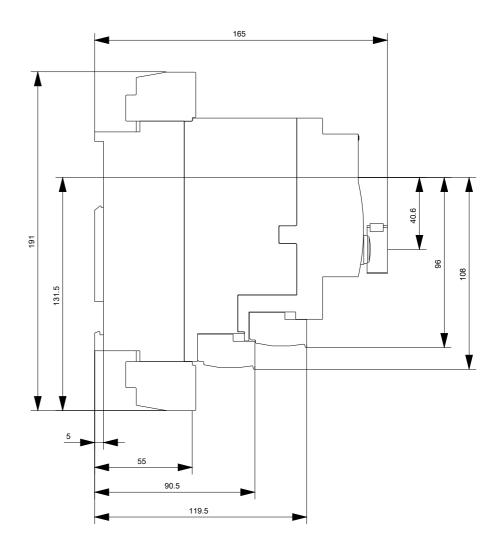
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA6120-2BB32

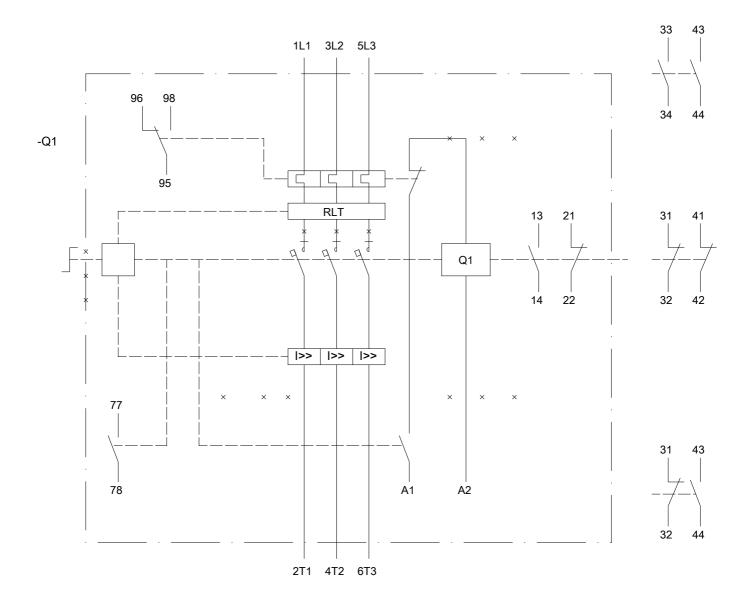
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

https://support.industry.siemens.com/cs/ww/en/ps/3RA6120-2BB32

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA6120-2BB32&lang=en







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