SIEMENS

Data sheet

3RA6120-2BP33

SIRIUS, COMPACT STARTER, DIRECT STARTER 690 V, 110 ... 240 V AC/DC, 50 ... 60 HZ, 0.32 ... 1.25 A, IP20, CONNECTION MAIN CIRCUIT: PLUGGABLE, WITHOUT TERMINALS, 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	110 240 V		
• at 60 Hz	110 240 V		
Control supply voltage 1	110 210 V		
• at DC	110 240 V		
Holding power			
at AC maximum	6 W		
• at DC maximum	5.1 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	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 	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 	plug-in without 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 mm ²)		
 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 %		

Collumn note (CIT)						
Failure rate [FIT]	000	100 FIT				
• with low demand rate acc. to SN 31920						
T1 value for proof test interval or service life acc. to IEC 61508		20 у				
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 CISPR11	c. to	30 1000 MHz Class	A			
Supply voltage						
Supply voltage required Auxiliary voltage		No				
Certificates/approvals						
General Product Approval			EMC	Functional Safety/Safety of Machinery		
		EHC	C-Tick	VDE		
Declaration of ConformityTestCertificates	Marine / Sl	hipping				
EG-Konf. <u>Type Test</u> <u>Certificates/Test</u> <u>Report</u>	B U R E A U VERITAS		Lloyd's Register Lrs	PRS		
Marine / Shipping	other					
RINA RMRS	Environmer Confirmatio					
Further information						

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

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

Industry Mall (Online ordering system)

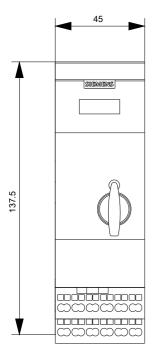
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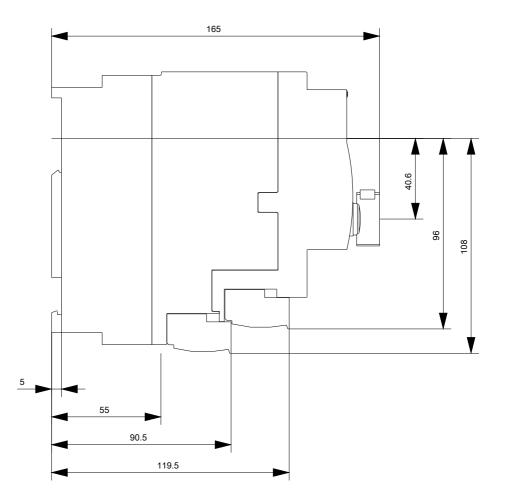
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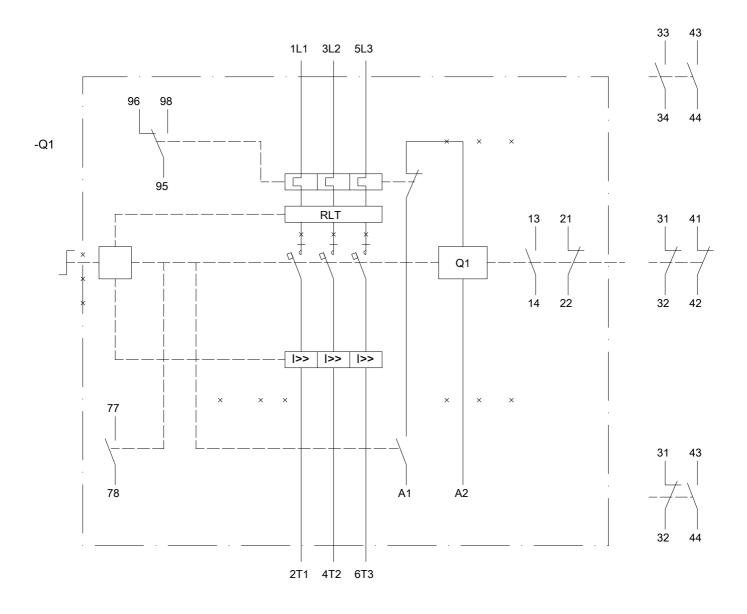
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Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3RA6120-2BP33

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA6120-2BP33&lang=en







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