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Data sheet 3RW44 53-6BC44

SIRIUS SOFT STARTER, VALUES AT 400V, 40DEG., STANDARD: 551A, 315KW, INSIDE-DELTA CIRCUIT 3: 954A, 560KW, 200-460V AC, 230V AC, SCREW TERMINALS

General technical data		
product brandname		SIRIUS
• Product equipment Integrated bypass contact system		Yes
• Product feature Thyristors		Yes
Product function		
• Intrinsic device protection		Yes
• motor overload protection		Yes
• Evaluation of thermistor motor protection		Yes
• External reset		Yes
• Adjustable current limitation		Yes
• Inside-delta circuit		Yes
Product component Motor brake output		Yes
Equipment marking acc. to DIN EN 61346-2		Q
Equipment marking acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750		G

Power Electronics		
Product designation		Soft starter

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Operating current		
• at 40 °C rated value	A	551
• at 50 °C rated value	A	494
• at 60 °C rated value	A	438
Operating current for three-phase motors at inside-delta circuit		
• at 40 °C rated value	A	954
• at 50 °C rated value	A	856
• at 60 °C rated value	A	759
Mechanical power output for three-phase motors		
• at 230 V		
— at standard circuit at 40 °C rated value	W	160 000
— at inside-delta circuit at 40 °C rated value	W	315 000
• at 400 V		
— at standard circuit at 40 °C rated value	W	315 000
— at inside-delta circuit at 40 °C rated value	W	560 000
Yielded mechanical performance [hp] for three-phase AC motor at 200/208 V at standard circuit at 50 °C rated value	hp	150
Operating frequency rated value	Hz	50 ... 60
Relative negative tolerance of the operating frequency	%	-10
Relative positive tolerance of the operating frequency	%	10
Operating voltage at standard circuit rated value	V	200 ... 460
Relative negative tolerance of the operating voltage at standard circuit	%	-15
Relative positive tolerance of the operating voltage at standard circuit	%	10
Operating voltage at inside-delta circuit rated value	V	200 ... 460
Relative negative tolerance of the operating voltage at inside-delta circuit	%	-15
Relative positive tolerance of the operating voltage at inside-delta circuit	%	10
Minimum load [% of IM]	%	8
Adjustable motor current for motor overload protection minimum rated value	A	110
Continuous operating current [% of Ie] at 40 °C	%	115
Power loss [W] at operating current at 40 °C during operation typical	W	159

Control electronics		
Type of voltage of the control supply voltage		AC
Control supply voltage frequency 1 rated value	Hz	50
Control supply voltage frequency 2 rated value	Hz	60

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Relative negative tolerance of the control supply voltage frequency	%	-10
Relative positive tolerance of the control supply voltage frequency	%	10
Control supply voltage 1 at AC		
• at 50 Hz rated value	V	230
• at 60 Hz rated value	V	230
Relative negative tolerance of the control supply voltage at AC at 60 Hz	%	-15
Relative positive tolerance of the control supply voltage at AC at 60 Hz	%	10
Display version for fault signal		Display

Mechanical data

Width	mm	510
Height	mm	640
Depth	mm	290
Mounting type		screw fixing
Mounting position		with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back
Required spacing with side-by-side mounting		
• upwards	mm	100
• at the side	mm	5
• downwards	mm	75
Wire length maximum	m	500
Number of poles for main current circuit		3

Connections/Terminals

Type of electrical connection		
• for main current circuit		busbar connection
• for auxiliary and control current circuit		screw-type terminals
Number of NC contacts for auxiliary contacts		0
Number of NO contacts for auxiliary contacts		3
Number of CO contacts for auxiliary contacts		1
Type of connectable conductor cross-sections for DIN cable lug for main contacts		
• finely stranded		50 ... 240 mm²
• stranded		70 ... 240 mm²
Type of connectable conductor cross-sections for auxiliary contacts		
• solid		2x (0.5 ... 2.5 mm²)
• finely stranded with core end processing		2x (0.5 ... 1.5 mm²)
Type of connectable conductor cross-sections at AWG conductors		

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• for main contacts		2/0 ... 500 kcmil
• for auxiliary contacts		2x (20 ... 14)
• for auxiliary contacts finely stranded with core end processing		2x (20 ... 16)

Ambient conditions

Installation altitude at height above sea level	m	5 000
Environmental category		
• during transport acc. to IEC 60721		3K6 (no formation of ice, no condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6
• during storage acc. to IEC 60721		3K6 (no formation of ice, no condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6
• during operation acc. to IEC 60721		3K6 (no formation of ice, no condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6
Ambient temperature		
• during operation	°C	60
• during storage	°C	-25 ... +80
Derating temperature	°C	40
Protection class IP		IP00

Certificates/approvals

General Product Approval			EMC	Declaration of Conformity	Test Certificates
CCC	CSA	UL	C-Tick	EG-Konf.	Special Test Certificate

Shipping Approval		other
ABS	LRS	Confirmation

UL/CSA ratings

Yielded mechanical performance [hp] for three-phase AC motor		
• **at 200/208 V**		
— at inside-delta circuit at 50 °C rated value	hp	300
• **at 220/230 V**		
— at standard circuit at 50 °C rated value	hp	200

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— at inside-delta circuit at 50 °C rated value	hp	350
• **at 460/480 V**		
— at standard circuit at 50 °C rated value	hp	400
— at inside-delta circuit at 50 °C rated value	hp	750
Contact rating of auxiliary contacts according to UL		B300 / R300

Further information

Simulation Tool for Soft Starters (STS)
https://support.industry.siemens.com/cs/ww/en/view/101494917

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=3RW4453-6BC44

Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW4453-6BC44

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3RW4453-6BC44

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW4453-6BC44&lang=en

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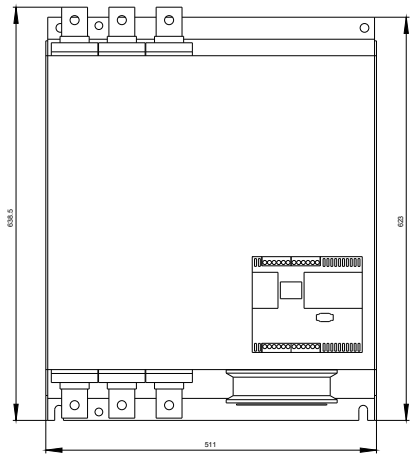

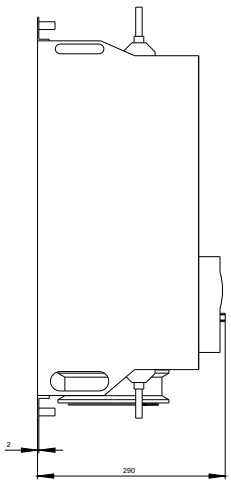

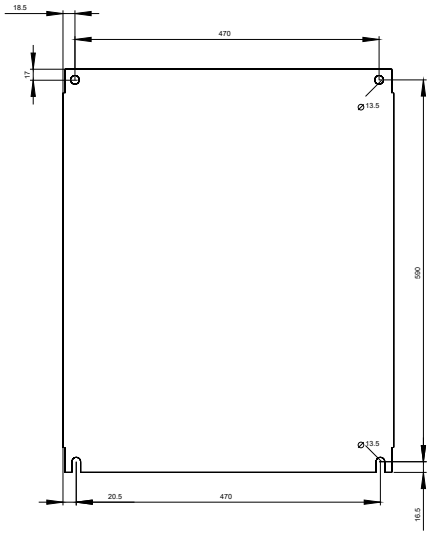

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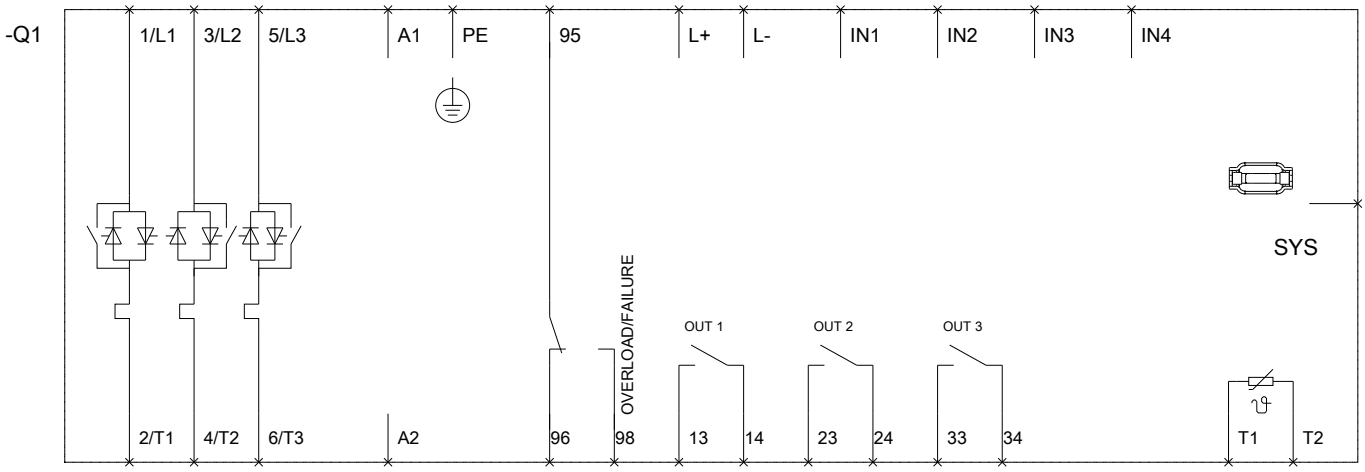

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