SIEMENS

Data sheet 3RW44 45-2BC44



SIRIUS SOFT STARTER, VALUES WITH 400 V, 40 DEG., STANDARD: 313A, 160KW, INSIDE-DELTA CIRCUIT 3: 542A, 315KW, 200-460 V AC, 230 V AC, CAGE CLAMP TERMINALS

General technical data:		
product brand name		SIRIUS
Product feature		
• integrated bypass contact system		Yes
• 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 starters for high feature applications

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Operating current		
• at 40 °C rated value	A	313
• at 50 °C rated value	A	280
• at 60 °C rated value	A	250
Operating current for three-phase motors at inside-delta circuit		
• at 40 °C Rated value	A	542
• at 50 °C Rated value	A	485
• at 60 °C Rated value	A	433
Mechanical power output for three-phase motors		
• at 230 V		
— at standard circuit at 40 °C rated value	W	90 000
— at inside-delta circuit at 40 °C rated value	W	160 000
• at 400 V		
— at standard circuit at 40 °C rated value	W	160 000
— at inside-delta circuit at 40 °C rated value	W	315 000
yielded mechanical performance [hp] for three-phase AC motor at 200/208 V at standard circuit at 50 °C Rated value	hp	75
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	62
Continuous operating current [% of Ie] at 40 °C	%	115
Active power loss at operating current at 40 °C during operation typical	W	145

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	210
Height	mm	230
Depth	mm	298
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
Installation altitude at height above sea level	m	5 000
Cable 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		spring-loaded 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-section for main contacts for box terminal using the front clamping point		
• finely stranded with core end processing		70 ... 240 mm²
• finely stranded without core end processing		70 ... 240 mm²
• stranded		95 ... 300 mm²
Type of connectable conductor cross-section for main contacts for box terminal using the back clamping point		

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• finely stranded with core end processing		120 ... 185 mm²
• finely stranded without core end processing		120 ... 185 mm²
• stranded		120 ... 240 mm²
Type of connectable conductor cross-section for main contacts for box terminal using both clamping points		
• finely stranded with core end processing		min. 2x 50 mm², max. 2x 185 mm²
• finely stranded without core end processing		min. 2x 50 mm², max. 2x 185 mm²
• stranded		max. 2x 70 mm², max. 2x 240 mm²
Type of connectable conductor cross-section for AWG conductors for main contacts for box terminal		
• using the back clamping point		250 ... 500 kcmil
• using the front clamping point		3/0 ... 600 kcmil
• using both clamping points		min. 2x 2/0, max. 2x 500 kcmil
Type of connectable conductor cross-section 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 (0.25 ... 1.5 mm²)
• finely stranded with core end processing		2x (0.25 ... 1.5 mm²)
• Type of connectable conductor cross-sections at AWG conductors for main contacts		2/0 ... 500 kcmil
• Type of connectable conductor cross-sections at AWG conductors for auxiliary contacts		2x (24 ... 16)
Ambient conditions:		
Ambient temperature		
• during operation	°C	60
• during storage	°C	-25 ... +80
Derating temperature	°C	40
Protection class IP		IP00
Certificates/ approvals:		

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General Product Approval				EMC	Declaration of Conformity
CCC	CSA	UL		C-TICK	EG-Konf.

Test Certificates		Shipping Approval			
Typprüfbescheinigung/Werkszeugnis	spezielle Prüfbescheinigungen	ABS	BUREAU VERITAS	DNV	GL

Shipping Approval		other
LRS	PRS	Umweltbestätigung

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	150
• **at 220/230 V**		
— at standard circuit at 50 °C Rated value	hp	100
— at inside-delta circuit at 50 °C Rated value	hp	200
• **at 460/480 V**		
— at standard circuit at 50 °C Rated value	hp	200
— at inside-delta circuit at 50 °C Rated value	hp	400
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)
http://www.siemens.com/industrymall

Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW44452BC44

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3RW44452BC44

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW44452BC44&lang=en

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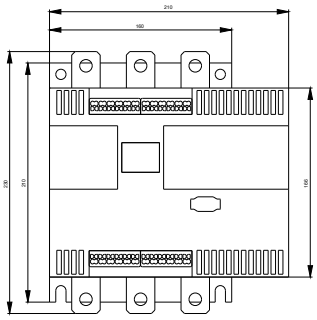

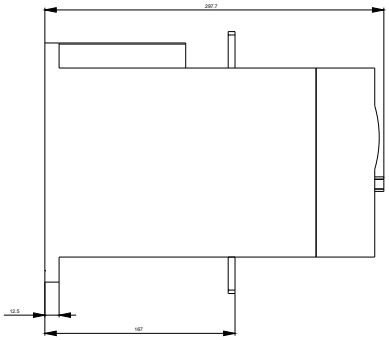

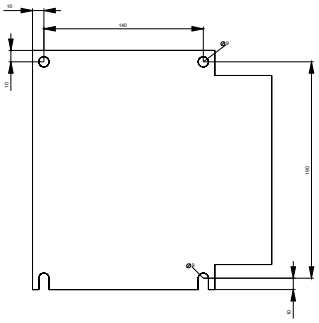

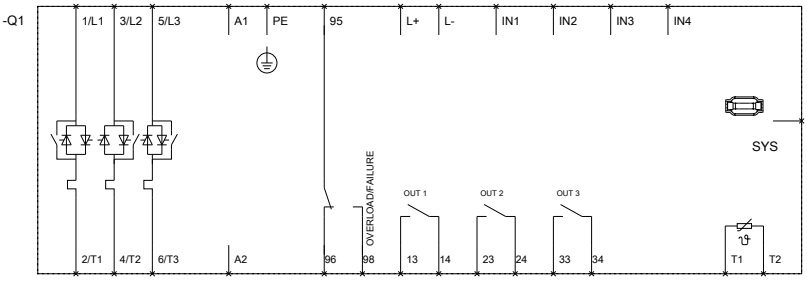

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