SIEMENS

Data sheet 3RW4446-6BC44



SIRIUS soft starter Values at 400 V, 40 °C standard: 356 A, 200 kW Inside-delta: 617 A, 355 kW 200-460 V AC, 230 V AC Screw terminals !!! Phased-out product !!! Successor is SIRIUS 3RW5, Preferred successor type is >>3RW5546-6HA14<<

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		
insulation voltage rated value	V	690		
degree of pollution		3, acc. to IEC 60947-4-2		
reference code according to EN 61346-2		Q		
reference code according to DIN 40719 extended according to IEC 204-2 according to IEC 750		G		
Power Electronics				
product designation		Soft starter		
operational current				
 at 40 °C rated value 	Α	356		
 at 50 °C rated value 	Α	315		
at 60 °C rated value	Α	280		
operational current for 3-phase motors at inside-delta circuit				
 at 40 °C rated value 	Α	617		
• at 50 °C rated value	Α	546		
at 60 °C rated value	Α	485		
yielded mechanical performance for 3-phase motors				
• at 230 V				
 at standard circuit at 40 °C rated value 	kW	110		
 at inside-delta circuit at 40 °C rated value 	kW	200		
• at 400 V				
— at standard circuit at 40 °C rated value	kW	200		
— at inside-delta circuit at 40 °C rated value	kW	355		
yielded mechanical performance [hp] for 3-phase AC motor at 200/208 V at standard circuit at 50 °C rated value	hp	100		
operating frequency rated value	Hz	50 60		
relative negative tolerance of the operating frequency	%	-10		
relative positive tolerance of the operating frequency	%	10		

		000 100
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 [%]	%	8
adjustable motor current for motor overload protection minimum rated value	Α	71
continuous operating current [% of le] at 40 °C	%	115
power loss [W] at operational current at 40 °C during operation typical	W	174
Control circuit/ Control		
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
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 50 Hz	%	-15
relative positive tolerance of the control supply voltage at AC at 50 Hz	%	10
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
fastening method		screw fixing
		with vertical mounting surface +/-90° rotatable, with vertical
mounting position		mounting surface +/- 22.5° tiltable to the front and back
required spacing with side-by-side mounting		
	mm	
required spacing with side-by-side mounting	mm mm	mounting surface +/- 22.5° tiltable to the front and back
required spacing with side-by-side mounting • upwards		mounting surface +/- 22.5° tiltable to the front and back
required spacing with side-by-side mounting • upwards • at the side	mm	mounting surface +/- 22.5° tiltable to the front and back 100 5
required spacing with side-by-side mounting • upwards • at the side • downwards	mm mm	mounting surface +/- 22.5° tiltable to the front and back 100 5 75
required spacing with side-by-side mounting • upwards • at the side • downwards wire length maximum	mm mm	mounting surface +/- 22.5° tiltable to the front and back 100 5 75 500
required spacing with side-by-side mounting • upwards • at the side • downwards wire length maximum number of poles for main current circuit	mm mm	mounting surface +/- 22.5° tiltable to the front and back 100 5 75 500
required spacing with side-by-side mounting • upwards • at the side • downwards wire length maximum number of poles for main current circuit Connections/ Terminals	mm mm	mounting surface +/- 22.5° tiltable to the front and back 100 5 75 500
required spacing with side-by-side mounting • upwards • at the side • downwards wire length maximum number of poles for main current circuit Connections/ Terminals type of electrical connection	mm mm	mounting surface +/- 22.5° tiltable to the front and back 100 5 75 500 3
required spacing with side-by-side mounting • upwards • at the side • downwards wire length maximum number of poles for main current circuit Connections/ Terminals type of electrical connection • for main current circuit	mm mm	mounting surface +/- 22.5° tiltable to the front and back 100 5 75 500 3 busbar connection
required spacing with side-by-side mounting • upwards • at the side • downwards wire length maximum number of poles for main current circuit Connections/ Terminals type of electrical connection • for main current circuit • for auxiliary and control circuit	mm mm	mounting surface +/- 22.5° tiltable to the front and back 100 5 75 500 3 busbar connection screw-type terminals
required spacing with side-by-side mounting • upwards • at the side • downwards wire length maximum number of poles for main current circuit Connections/ Terminals type of electrical connection • for main current circuit • for auxiliary and control circuit number of NC contacts for auxiliary contacts	mm mm	mounting surface +/- 22.5° tiltable to the front and back 100 5 75 500 3 busbar connection screw-type terminals 0
required spacing with side-by-side mounting • upwards • at the side • downwards wire length maximum number of poles for main current circuit Connections/ Terminals type of electrical connection • for main current circuit • for auxiliary and control circuit number of NC contacts for auxiliary contacts number of NO contacts for auxiliary contacts	mm mm	mounting surface +/- 22.5° tiltable to the front and back 100 5 75 500 3 busbar connection screw-type terminals 0 3
required spacing with side-by-side mounting • upwards • at the side • downwards wire length maximum number of poles for main current circuit Connections/ Terminals type of electrical connection • for main current circuit • for auxiliary and control circuit number of NC contacts for auxiliary contacts number of NO contacts for auxiliary contacts number of CO contacts for auxiliary contacts type of connectable conductor cross-sections for main	mm mm	mounting surface +/- 22.5° tiltable to the front and back 100 5 75 500 3 busbar connection screw-type terminals 0 3
required spacing with side-by-side mounting • upwards • at the side • downwards wire length maximum number of poles for main current circuit Connections/ Terminals type of electrical connection • for main current circuit • for auxiliary and control circuit number of NC contacts for auxiliary contacts number of NO contacts for auxiliary contacts type of connectable conductor cross-sections for main contacts for box terminal using the front clamping point	mm mm	mounting surface +/- 22.5° tiltable to the front and back 100 5 75 500 3 busbar connection screw-type terminals 0 3 1
required spacing with side-by-side mounting • upwards • at the side • downwards wire length maximum number of poles for main current circuit Connections/ Terminals type of electrical connection • for main current circuit • for auxiliary and control circuit number of NC contacts for auxiliary contacts number of NO contacts for auxiliary contacts number of CO contacts for auxiliary contacts type of connectable conductor cross-sections for main contacts for box terminal using the front clamping point • finely stranded with core end processing	mm mm	mounting surface +/- 22.5° tiltable to the front and back 100 5 75 500 3 busbar connection screw-type terminals 0 3 1
required spacing with side-by-side mounting • upwards • at the side • downwards wire length maximum number of poles for main current circuit Connections/ Terminals type of electrical connection • for main current circuit • for auxiliary and control circuit number of NC contacts for auxiliary contacts number of NO contacts for auxiliary contacts number of CO contacts for auxiliary contacts type of connectable conductor cross-sections for main contacts for box terminal using the front clamping point • finely stranded without core end processing • finely stranded without core end processing	mm mm	mounting surface +/- 22.5° tiltable to the front and back 100 5 75 500 3 busbar connection screw-type terminals 0 3 1 70 240 mm² 70 240 mm²
required spacing with side-by-side mounting • upwards • at the side • downwards wire length maximum number of poles for main current circuit Connections/ Terminals type of electrical connection • for main current circuit • for auxiliary and control circuit number of NC contacts for auxiliary contacts number of NO contacts for auxiliary contacts number of CO contacts for auxiliary contacts type of connectable conductor cross-sections for main contacts for box terminal using the front clamping point • finely stranded with core end processing • finely stranded conductor cross-sections for main	mm mm	mounting surface +/- 22.5° tiltable to the front and back 100 5 75 500 3 busbar connection screw-type terminals 0 3 1 70 240 mm² 70 240 mm²

stranded		120 240 mm²
type of connectable conductor cross-sections 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-sections for AWG cables 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-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 for AWG cables		
• 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 according to IEC 60721 		2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)
 during storage according to IEC 60721 		1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4
during operation according 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 on the front according to IEC 60529		IP00; IP20 with box terminal/cover
touch protection on the front according to IEC 60529		finger-safe, for vertical contact from the front with box terminal/cover

Certificates/ approvals

General Product Approval









Confirmation



General Product Approval

EMV

Test Certificates

Marine / Shipping





Type Test Certificates/Test Report

Special Test Certificate





Marine / Shipping

other







Confirmation

UL/CSA ratings		
yielded mechanical performance [hp] for 3-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	125
 at inside-delta circuit at 50 °C rated value 	hp	200
• at 460/480 V		
 at standard circuit at 50 °C rated value 	hp	250
 at inside-delta circuit at 50 °C rated value 	hp	450
contact rating of auxiliary contacts according to UL		B300 / R300
= 4 : 6 : 6		

Further information

Simulation Tool for Soft Starters (STS)

https://support.industry.siemens.com/cs/ww/en/view/101494917

Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

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

https://www.siemens.com/ic10

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RW4446-6BC44

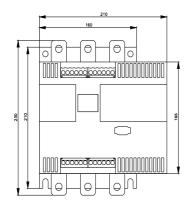
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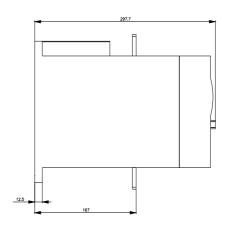
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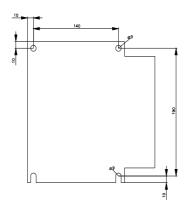
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

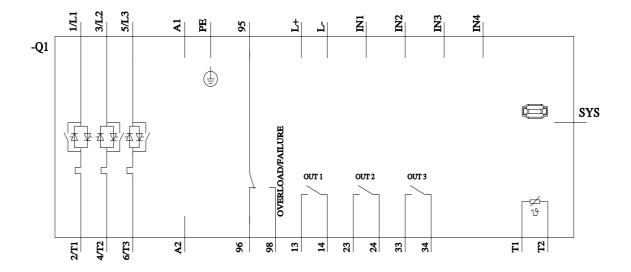
https://support.industry.siemens.com/cs/ww/en/ps/3RW4446-6BC44

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW4446-6BC44&lang=en









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