SIEMENS

Data sheet



SIRIUS soft starter Values at 500 V, 40 °C standard: 356 A, 250 kW Inside-delta: 617 A, 450 kW 400-600 V AC, 230 V AC spring-type terminals !!! Phased-out product !!! Successor is SIRIUS 3RW5, Preferred successor type is >>3RW5546-2HA16<<

3RW4446-2BC45

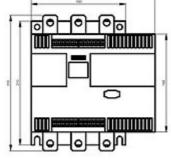
General technical data		
product brand name		SIRIUS
product feature		
 integrated bypass contact system 		Yes
thyristors		Yes
product function		
 intrinsic device protection 		Yes
 motor overload protection 		Yes
 evaluation of thermistor motor protection 		Yes
external reset		Yes
 adjustable current 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 acc. to DIN EN 61346-2		Q
reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750		G
Power Electronics		
product designation		Soft starter
operational current		
 at 40 °C rated value 	А	356
 at 50 °C rated value 	А	315
 at 60 °C rated value 	А	280
operational current for 3-phase motors at inside-delta circuit		
 at 40 °C rated value 	А	617
 at 50 °C rated value 	А	546
 at 60 °C rated value 	А	485
yielded mechanical performance for 3-phase motors ● at 400 V		
— at standard circuit at 40 °C rated value	W	200 000
— at inside-delta circuit at 40 °C rated value	W	355 000
• at 500 V		
— at standard circuit at 40 °C rated value	W	250 000
— at inside-delta circuit at 40 °C rated value	W	450 000
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	400 600
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	400 600
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	А	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
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 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-sections for main contacts for box terminal using the front clamping point		
 finely stranded with core end processing 		70 240 mm²

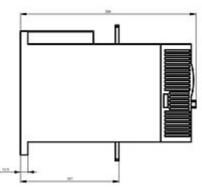
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General Product Approval		EMC	Declaration of Conformity
Certificates/ approvals			
touch protection on the front acc. to IEC 60529		finger-safe, for vertical contact terminal/cover	from the from with box
•		· ·	
derating temperature protection class IP on the front acc. to IEC 60529		40 IP00; IP20 with box terminal/co	Wer
during storage	0°	-25 +80 40	
during operation	°C	60 -25 +80	
	°C	60	
during operation acc. to IEC 60721 ambient temperature		mist), 3S2 (sand must not get i	
during storage acc. to IEC 60721		1K6 (only occasional condensa 1S2 (sand must not get inside 3K6 (no formation of ice, no co	the devices), 1M4
during transport acc. to IEC 60721		2K2, 2C1, 2S1, 2M2 (max. fall	- /
environmental category			
installation altitude at height above sea level	m	5 000	
Ambient conditions			
for auxiliary contacts		2x (24 16)	
• for main contacts		2/0 500 kcmil	
cables			
type of connectable conductor cross-sections at	AWG	· · · · · · · · · · · · · · · · · · ·	
 finely stranded with core end processing 		2x (0.25 1.5 mm ²)	
• solid		2x (0.25 1.5 mm²)	
auxiliary contacts			
type of connectable conductor cross-sections fo	r	70 240 mm	
 finely stranded stranded 		50 240 mm²	
cable lug for main contacts		50 240 mm²	
type of connectable conductor cross-sections fo	r DIN		
using both clamping points		min. 2x 2/0, max. 2x 500 kcmil	
 using the front clamping point 		3/0 600 kcmil	
 using the back clamping point 		250 500 kcmil	
cables for main contacts for box terminal			
type of connectable conductor cross-sections at	AWG	, max 2x 210 I	
stranded stranded		max. 2x 70 mm², max. 2x 240 i	
 finely stranded with core end processing finely stranded without core end processing 		min. 2x 50 mm ² , max. 2x 185 n min. 2x 50 mm ² , max. 2x 185 n	
main contacts for box terminal using both clamp points	ing	min 2y 50 mm² may 2y 185 n	2m ²
type of connectable conductor cross-sections fo			
stranded		120 240 mm²	
 finely stranded without core end processing 		120 185 mm²	
 finely stranded with core end processing 		120 185 mm²	
main contacts for box terminal using the back clamping point	•		
stranded type of connectable conductor cross-sections fo		95 300 mm²	
		05 200 marca?	
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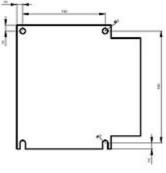
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Marine / Shipping	other				
. STROND AG	<u>Confirmation</u>				

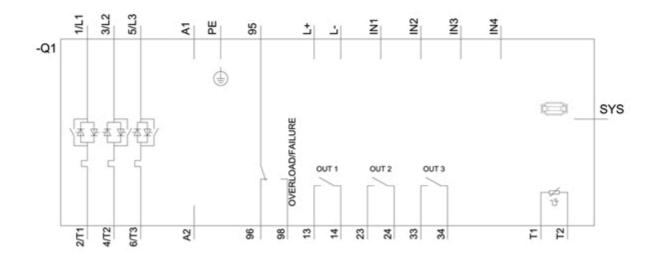
yielded mechanical performance [hp] for 3-phase AC motor		
● at 460/480 V		
 — at standard circuit at 50 °C rated value 	hp	250
 — at inside-delta circuit at 50 °C rated value 	hp	450
● at 575/600 V		
 — at standard circuit at 50 °C rated value 	hp	300
— at inside-delta circuit at 50 °C rated value	hp	600
contact rating of auxiliary contacts according to UL		B300 / R300
urther information		
Simulation Tool for Soft Starters (STS) https://support.industry.siemens.com/cs/ww/en/view/1014949	17	
Information- and Downloadcenter (Catalogs, Brochures, https://www.siemens.com/ic10		
Industry Mall (Online ordering system)		
Industry Mall (Online ordering system) https://mall.industry.siemens.com/mall/en/en/Catalog/produc	t?mlfb=3RW4	446-2BC45
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