## **SIEMENS**

Data sheet 3RW4445-2BC45



SIRIUS soft starter Values at 500 V, 40 °C standard: 313 A, 200 kW Inside-delta: 542 A, 355 kW 400-600 V AC, 230 V AC spring-type terminals !!! Phased-out product !!! Successor is SIRIUS 3RW5, Preferred successor type is >>3RW5545-2HA16<<

General technical data		
product brand name		SIRIUS
product feature		
<ul> <li>integrated bypass contact system</li> </ul>		Yes
<ul><li>thyristors</li></ul>		Yes
product function		
<ul> <li>intrinsic device protection</li> </ul>		Yes
<ul> <li>motor overload protection</li> </ul>		Yes
<ul> <li>evaluation of thermistor motor protection</li> </ul>		Yes
<ul> <li>external reset</li> </ul>		Yes
<ul> <li>adjustable current limitation</li> </ul>		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		
<ul> <li>at 40 °C rated value</li> </ul>	Α.	
	Α	313
• at 50 °C rated value	A	313 280
• at 50 °C rated value	Α	280
at 50 °C rated value     at 60 °C rated value     operational current for 3-phase motors at inside-delta	Α	280
at 50 °C rated value     at 60 °C rated value     operational current for 3-phase motors at inside-delta circuit	A A	280 250
at 50 °C rated value     at 60 °C rated value  operational current for 3-phase motors at inside-delta circuit     at 40 °C rated value	A A	280 250 542
at 50 °C rated value     at 60 °C rated value  operational current for 3-phase motors at inside-delta circuit     at 40 °C rated value     at 50 °C rated value	A A A	280 250 542 485
<ul> <li>at 50 °C rated value</li> <li>at 60 °C rated value</li> </ul> operational current for 3-phase motors at inside-delta circuit <ul> <li>at 40 °C rated value</li> <li>at 50 °C rated value</li> <li>at 60 °C rated value</li> </ul>	A A A	280 250 542 485
at 50 °C rated value  at 60 °C rated value  operational current for 3-phase motors at inside-delta circuit  at 40 °C rated value  at 50 °C rated value  at 60 °C rated value  yielded mechanical performance for 3-phase motors	A A A	280 250 542 485
at 50 °C rated value  at 60 °C rated value  operational current for 3-phase motors at inside-delta circuit  at 40 °C rated value  at 50 °C rated value  at 60 °C rated value  yielded mechanical performance for 3-phase motors  at 400 V	A A A A	280 250 542 485 433
at 50 °C rated value  at 60 °C rated value  operational current for 3-phase motors at inside-delta circuit  at 40 °C rated value  at 50 °C rated value  at 60 °C rated value  at 60 °C rated value  yielded mechanical performance for 3-phase motors  at 400 V  at standard circuit at 40 °C rated value	A A A A	280 250 542 485 433
at 50 °C rated value  at 60 °C rated value  operational current for 3-phase motors at inside-delta circuit  at 40 °C rated value  at 50 °C rated value  at 60 °C rated value  yielded mechanical performance for 3-phase motors  at 400 V  at standard circuit at 40 °C rated value  at inside-delta circuit at 40 °C rated value	A A A A	280 250 542 485 433
at 50 °C rated value  at 60 °C rated value  operational current for 3-phase motors at inside-delta circuit  at 40 °C rated value  at 50 °C rated value  at 60 °C rated value  tielded mechanical performance for 3-phase motors  at 400 V  at standard circuit at 40 °C rated value  at inside-delta circuit at 40 °C rated value  at 500 V	A A A A W	280 250 542 485 433 160 000 315 000
at 50 °C rated value  at 60 °C rated value  operational current for 3-phase motors at inside-delta circuit  at 40 °C rated value  at 50 °C rated value  at 60 °C rated value  tielded mechanical performance for 3-phase motors  at 400 V  at standard circuit at 40 °C rated value  at inside-delta circuit at 40 °C rated value  at 500 V  at standard circuit at 40 °C rated value	A A A A W W	280 250 542 485 433 160 000 315 000

	-	
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	62
continuous operating current [% of le] at 40 °C	%	115
power loss [W] at operational current at 40 °C during operation typical	W	145
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		
<ul> <li>at 50 Hz rated value</li> </ul>	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		
<ul> <li>for main current circuit</li> </ul>		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

inely stranded without core end processing     stranded  type of connectable conductor cross-sections for main contacts for box terminal using the back clamping point     inely stranded with core end processing     inely stranded without core end processing     stranded		70 240 mm <sup>2</sup> 95 300 mm <sup>2</sup> 120 185 mm <sup>2</sup> 120 185 mm <sup>2</sup> 120 240 mm <sup>2</sup>
type of connectable conductor cross-sections for main contacts for box terminal using the back clamping point  • finely stranded with core end processing • finely stranded without core end processing • stranded		120 185 mm² 120 185 mm²
<ul> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>stranded</li> </ul>		120 185 mm²
<ul><li>finely stranded without core end processing</li><li>stranded</li></ul>		
		120 240 mm²
type of connectable conductor cross-sections for main contacts for box terminal using both clamping points		
<ul> <li>finely stranded with core end processing</li> </ul>		min. 2x 50 mm², max. 2x 185 mm²
<ul> <li>finely stranded without core end processing</li> </ul>		min. 2x 50 mm², max. 2x 185 mm²
stranded		max. 2x 70 mm², max. 2x 240 mm²
type of connectable conductor cross-sections at AWG cables for main contacts for box terminal		
<ul> <li>using the back clamping point</li> </ul>		250 500 kcmil
<ul> <li>using the front clamping point</li> </ul>		3/0 600 kcmil
<ul> <li>using both clamping points</li> </ul>		min. 2x 2/0, max. 2x 500 kcmil
type of connectable conductor cross-sections for DIN cable lug for main contacts		
<ul> <li>finely stranded</li> </ul>		50 240 mm²
stranded		70 240 mm²
type of connectable conductor cross-sections for auxiliary contacts		
• solid		2x (0.25 1.5 mm²)
<ul> <li>finely stranded with core end processing</li> </ul>		2x (0.25 1.5 mm²)
type of connectable conductor cross-sections at AWG cables		
<ul> <li>for main contacts</li> </ul>		2/0 500 kcmil
<ul> <li>for auxiliary contacts</li> </ul>		2x (24 16)
Ambient conditions		
installation altitude at height above sea level	m	5 000
environmental category		
<ul> <li>during transport acc. to IEC 60721</li> </ul>		2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)
• during storage acc. to IEC 60721		1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4
• 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		
<ul> <li>during operation</li> </ul>	°C	60
during storage	°C	-25 +80
derating temperature	°C	40
protection class IP on the front acc. to IEC 60529		IP00; IP20 with box terminal/cover
touch protection on the front acc. to IEC 60529		finger-safe, for vertical contact from the front with box terminal/cover
Certificates/ approvals		

**Declaration of General Product Approval EMC** Conformity













**Test Certificates** 

Marine / Shipping









Marine / Shipping

other



## Confirmation

UL/CSA ratings				
yielded mechanical performance [hp] for 3-phase AC motor				
• at 460/480 V				
<ul> <li>at standard circuit at 50 °C rated value</li> </ul>	hp	200		
<ul> <li>at inside-delta circuit at 50 °C rated value</li> </ul>	hp	400		
● at 575/600 V				
<ul> <li>at standard circuit at 50 °C rated value</li> </ul>	hp	250		
<ul> <li>at inside-delta circuit at 50 °C rated value</li> </ul>	hp	500		
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,...)

https://www.siemens.com/ic10

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RW4445-2BC45

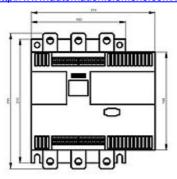
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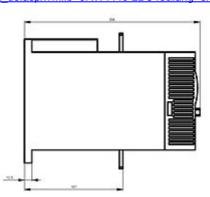
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW4445-2BC45

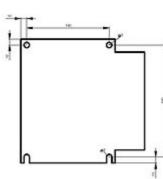
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

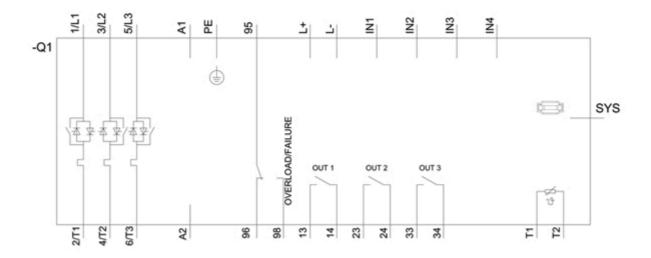
https://support.industry.siemens.com/cs/ww/en/ps/3RW4445-2BC45

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) <a href="http://www.automation.siemens.com/bilddb/cax">http://www.automation.siemens.com/bilddb/cax</a> de.aspx?mlfb=3RW4445-2BC45&lang=en









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