## **SIEMENS**

Data sheet 3RW4422-3BC46



SIRIUS soft starter Values at 690 V, 40 °C standard: 29 A, 30 kW Inside-delta: only up to 600 V 400-690 V AC, 230 V AC spring-type terminals !!! Phased-out product !!! Successor is SIRIUS 3RW5, Preferred successor type is >>3RW5524-3HA16<<

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	29
<ul> <li>at 50 °C rated value</li> </ul>	Α	26
at 60 °C rated value	Α	23
operational current for 3-phase motors at inside-delta circuit		
<ul> <li>at 40 °C rated value</li> </ul>	Α	50
<ul> <li>at 50 °C rated value</li> </ul>	Α	45
at 60 °C rated value	Α	40
yielded mechanical performance for 3-phase motors		
• at 400 V		
<ul> <li>at standard circuit at 40 °C rated value</li> </ul>	W	15 000
<ul> <li>at inside-delta circuit at 40 °C rated value</li> </ul>	W	22 000
● at 500 V		
<ul> <li>at standard circuit at 40 °C rated value</li> </ul>	W	18 500
— at inside-delta circuit at 40 °C rated value	W	30 000
<ul> <li>at 690 V at standard circuit at 40 °C rated value</li> </ul>	W	30 000
operating frequency rated value	Hz	50 60

	0/	10
relative negative tolerance of the operating frequency	- %	-10
relative positive tolerance of the operating frequency	%	10
operating voltage at standard circuit rated value	V	400 690
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	5
continuous operating current [% of le] at 40 °C	%	115
power loss [W] at operational current at 40 °C during	W	8
operation typical		
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	%	-10
voltage frequency	-	
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	170
height	mm	192
depth	mm	270
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
<ul><li>downwards</li></ul>	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		box terminal
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		

• solid		2.5 16 mm²		
		2.5 35 mm <sup>2</sup>		
finely stranded with core end processing     finely stranded without core and processing		4 50 mm <sup>2</sup>		
finely stranded without core end processing		4 70 mm <sup>2</sup>		
• stranded		4 / U MMF		
type of connectable conductor cross-sections for main contacts for box terminal using the back clamping point				
• solid		2,5 16 mm²		
<ul> <li>finely stranded with core end processing</li> </ul>		2.5 50 mm <sup>2</sup>		
<ul> <li>finely stranded without core end processing</li> </ul>		10 50 mm²		
stranded		10 70 mm²		
type of connectable conductor cross-sections for main contacts for box terminal using both clamping points				
• solid		2x (2.5 16 mm²)		
<ul> <li>finely stranded with core end processing</li> </ul>		2x (2.5 35 mm²)		
<ul> <li>finely stranded without core end processing</li> </ul>		2x (4 35 mm²)		
stranded		2x (4 50 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>		10 2/0		
<ul> <li>using the front clamping point</li> </ul>		10 2/0		
using both clamping points		2x (10 1/0)		
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 cables				
for auxiliary contacts		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		IP20		
touch protection on the front acc. to IEC 60529		finger-safe, for vertical contact from the front		
Certificates/ approvals				
Declaration of				

**General Product Approval** 

EMC

Declaration of Conformity













**Test Certificates** 

Marine / Shipping

Type Test Certificates/Test Report

Special Test Certificate











## 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	15		
<ul> <li>at inside-delta circuit at 50 °C rated value</li> </ul>	hp	30		
● at 575/600 V				
<ul> <li>at standard circuit at 50 °C rated value</li> </ul>	hp	20		
<ul> <li>at inside-delta circuit at 50 °C rated value</li> </ul>	hp	40		
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=3RW4422-3BC46

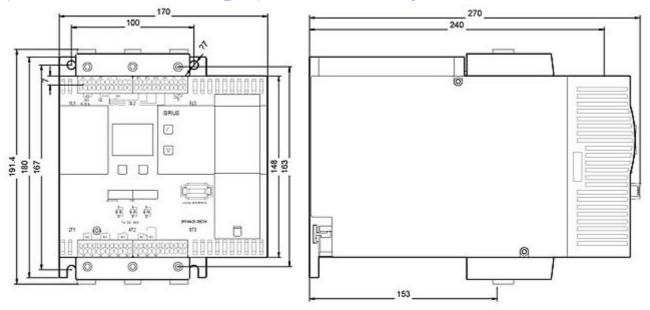
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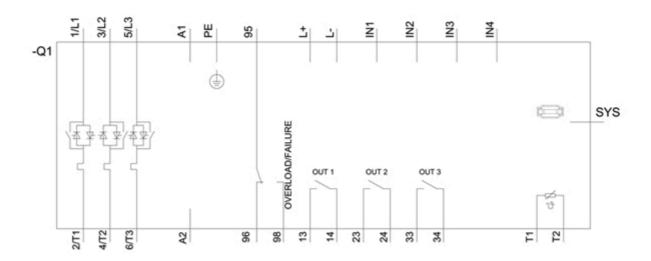
 $\underline{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RW4422-3BC46}$ 

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

https://support.industry.siemens.com/cs/ww/en/ps/3RW4422-3BC46

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=3RW4422-3BC46&lang=en





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