## **SIEMENS**

Data sheet 3RW4425-3BC45



SIRIUS soft starter Values at 500 V, 40 °C standard: 57 A, 37 kW Inside-delta: 99 A, 55 kW 400-600 V AC, 230 V AC spring-type terminals !!! Phased-out product !!! Successor is SIRIUS 3RW5, Preferred successor type is >>3RW5525-3HA16<<

General technical data				
product brand name		SIRIUS		
product feature				
<ul> <li>integrated bypass contact system</li> </ul>		Yes		
• thyristors		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	57		
<ul> <li>at 50 °C rated value</li> </ul>	Α	51		
at 60 °C rated value	Α	45		
operational current for 3-phase motors at inside-delta circuit				
<ul> <li>at 40 °C rated value</li> </ul>	Α	99		
<ul> <li>at 50 °C rated value</li> </ul>	Α	88		
at 60 °C rated value	Α	78		
yielded mechanical performance for 3-phase motors				
• at 400 V				
<ul> <li>at standard circuit at 40 °C rated value</li> </ul>	W	30 000		
<ul> <li>— at inside-delta circuit at 40 °C rated value</li> </ul>	W	55 000		
● at 500 V				
<ul> <li>at standard circuit at 40 °C rated value</li> </ul>	W	37 000		
— at inside-delta circuit at 40 °C rated value	W	55 000		
operating frequency rated value	Hz	50 60		
relative negative tolerance of the operating frequency	%	-10		

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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	Α	11
continuous operating current [% of le] at 40 °C	%	115
power loss [W] at operational current at 40 °C during operation typical	W	36
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	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
• 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>		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

<ul> <li>finely stranded with core end processing</li> </ul>		2.5 35 mm²
<ul> <li>finely stranded without core end processing</li> </ul>		4 50 mm²
• stranded		4 70 mm²
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)
<ul><li>stranded</li></ul>		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
<ul> <li>using both clamping points</li> </ul>		2x (10 1/0)
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 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)
<ul> <li>during storage acc. to IEC 60721</li> </ul>		1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4
<ul> <li>during operation acc. to IEC 60721</li> </ul>		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		

Certificates/ approvals

**General Product Approval** 

**EMC** 

Declaration of Conformity













**Test Certificates** 

Marine / Shipping

Special Test Certificate

Type Test Certificates/Test Report











## 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	30
<ul> <li>at inside-delta circuit at 50 °C rated value</li> </ul>	hp	60
● at 575/600 V		
<ul> <li>at standard circuit at 50 °C rated value</li> </ul>	hp	40
<ul> <li>at inside-delta circuit at 50 °C rated value</li> </ul>	hp	75
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=3RW4425-3BC45

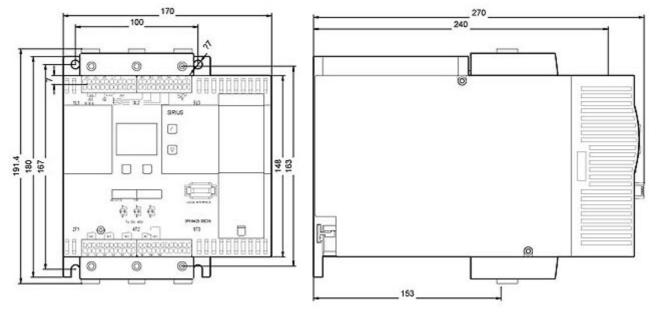
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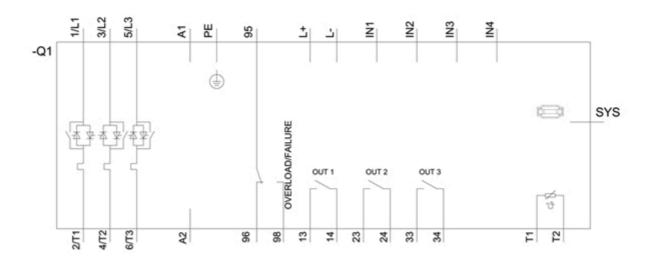
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW4425-3BC45

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

https://support.industry.siemens.com/cs/ww/en/ps/3RW4425-3BC45

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RW4425-3BC45&lang=en





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