## **SIEMENS**

**Data sheet** 3RW4427-1BC44



SIRIUS soft starter Values at 400 V, 40 °C standard: 93 A, 45 kW Inside-delta: 161 A, 90 kW 200-460 V AC, 230 V AC Screw terminals !!! Phased-out product !!! Successor is SIRIUS 3RW5, Preferred successor type is >>3RW5527-1HA14<<

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 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		
<ul> <li>at 40 °C rated value</li> </ul>	Α	93
<ul> <li>at 50 °C rated value</li> </ul>	Α	82
<ul> <li>at 60 °C rated value</li> </ul>	Α	72
operational current for 3-phase motors at inside-delta circuit		
<ul> <li>at 40 °C rated value</li> </ul>	Α	161
<ul> <li>at 50 °C rated value</li> </ul>	Α	142
<ul> <li>at 60 °C rated value</li> </ul>	Α	125
yielded mechanical performance for 3-phase motors • at 230 V		
<ul> <li>at standard circuit at 40 °C rated value</li> </ul>	kW	22
<ul> <li>at inside-delta circuit at 40 °C rated value</li> </ul>	kW	45
● at 400 V		
<ul> <li>at standard circuit at 40 °C rated value</li> </ul>	kW	45
<ul> <li>at inside-delta circuit at 40 °C rated value</li> </ul>	kW	90
yielded mechanical performance [hp] for 3-phase AC motor at 200/208 V at standard circuit at 50 °C rated value	hp	25
operating frequency rated value	Hz	50 60
relative negative tolerance of the operating frequency	%	-10
relative positive tolerance of the operating frequency	%	10

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voltage at AC at 60 Hz display version for fault signal  Width height depth mm 192 depth fastening method mounting position  required spacing with side-by-side mounting  • upwards • at the side • downwards wire length maximum number of poles for main current circuit • for nauxiliary and control circuit number of NC 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 back  vidth mm 170 mm 270 screw fixing with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/-92.5° tiltable to the front and back  mm 5  5  • 00  nm 5  5  • 00  nm 75  sorew-type terminals  type of connectable conductor cross-sections for main contacts for box terminal using the back  polypoint of polypoint and po		%	-15
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mounting position  with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/-90° rotatable to the front and back  mm	depth	mm	270
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 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 • solid • finely stranded with core end processing • stranded type of connectable conductor cross-sections for main contacts for box terminal using the back  vertical mounting surface +/- 22.5° tiltable to the front and back  mm  100  **  **Do  **  **  **  **  **  **  **	fastening method		screw fixing
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 • solid • finely stranded with core end processing • stranded  • type of connectable conductor cross-sections for main contacts for box terminal using the back  **Type of connectable conductor cross-sections for main contacts for box terminal using the back  **Type of connectable conductor cross-sections for main contacts for box terminal using the back  **Type of connectable conductor cross-sections for main contacts for box terminal using the back  **Type of connectable conductor cross-sections for main contacts for box terminal using the back	mounting position		vertical mounting surface +/- 22.5° tiltable to the front and
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<ul> <li>at the side</li> <li>downwards</li> <li>mm</li> <li>75</li> <li>wire length maximum</li> <li>number of poles for main current circuit</li> <li>Connections/ Terminals</li> <li>type of electrical connection</li> <li>for main current circuit</li> <li>for auxiliary and control circuit</li> <li>number of NC contacts for auxiliary contacts</li> <li>number of NO contacts for auxiliary contacts</li> <li>number of CO contacts for auxiliary contacts</li> <li>type of connectable conductor cross-sections for main contacts for box terminal using the front clamping point</li> <li>solid</li> <li>solid</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>stranded</li> <li>type of connectable conductor cross-sections for main contacts for box terminal using the back</li> </ul>		mm	100
wire length maximum number of poles for main current circuit    Connections/ Terminals	at the side	mm	5
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  • solid  • finely stranded with core end processing • stranded  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 mm²  4 50 mm²  4 70 mm²  type of connectable conductor cross-sections for main contacts for box terminal using the back	<ul><li>downwards</li></ul>	mm	75
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<ul> <li>for main current circuit</li> <li>for auxiliary and control circuit</li> <li>number of NC contacts for auxiliary contacts</li> <li>number of NO contacts for auxiliary contacts</li> <li>number of CO contacts for auxiliary contacts</li> <li>type of connectable conductor cross-sections for main contacts for box terminal using the front clamping point</li> <li>solid</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>stranded</li> <li>type of connectable conductor cross-sections for main contacts for box terminal using the back</li> </ul>			
<ul> <li>for auxiliary and control circuit</li> <li>number of NC contacts for auxiliary contacts</li> <li>number of NO contacts for auxiliary contacts</li> <li>number of CO contacts for auxiliary contacts</li> <li>type of connectable conductor cross-sections for main contacts for box terminal using the front clamping point</li> <li>solid</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>stranded</li> <li>type of connectable conductor cross-sections for main contacts for box terminal using the back</li> </ul>	· ·		box terminal
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	<ul> <li>for auxiliary and control circuit</li> </ul>		
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			
number of CO contacts for auxiliary contacts  type of connectable conductor cross-sections for main contacts for box terminal using the front clamping point  • solid • finely stranded with core end processing • finely stranded without core end processing • stranded  • stranded  type of connectable conductor cross-sections for main contacts for box terminal using the back	•		screw-type terminals
type of connectable conductor cross-sections for main contacts for box terminal using the front clamping point  • solid  • finely stranded with core end processing  • finely stranded without core end processing  • stranded  • stranded  • type of connectable conductor cross-sections for main contacts for box terminal using the back	number of NC contacts for auxiliary contacts		screw-type terminals 0
<ul> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>stranded</li> <li>type of connectable conductor cross-sections for main contacts for box terminal using the back</li> </ul>	number of NC contacts for auxiliary contacts number of NO contacts for auxiliary contacts		screw-type terminals 0 3
<ul> <li>finely stranded without core end processing</li> <li>stranded</li> <li>type of connectable conductor cross-sections for main contacts for box terminal using the back</li> </ul>	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		screw-type terminals 0 3 1
• stranded  4 70 mm²  type of connectable conductor cross-sections for main contacts for box terminal using the back	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 • solid		screw-type terminals 0 3 1 2.5 16 mm <sup>2</sup>
type of connectable conductor cross-sections for main contacts for box terminal using the back	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		screw-type terminals 0 3 1 2.5 16 mm <sup>2</sup> 2.5 35 mm <sup>2</sup>
main contacts for box terminal using the back	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		screw-type terminals 0 3 1 2.5 16 mm <sup>2</sup> 2.5 35 mm <sup>2</sup> 4 50 mm <sup>2</sup>
	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  • solid • finely stranded with core end processing • finely stranded without core end processing • stranded		screw-type terminals 0 3 1 2.5 16 mm <sup>2</sup> 2.5 35 mm <sup>2</sup> 4 50 mm <sup>2</sup>

<ul><li>solid</li></ul>		2,5 16 mm²
<ul> <li>finely stranded with core end processing</li> </ul>		2.5 50 mm²
<ul> <li>finely stranded without core end processing</li> </ul>		10 50 mm²
<ul><li>stranded</li></ul>		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 (0.5 2.5 mm²)
<ul> <li>finely stranded with core end processing</li> </ul>		2x (0.5 1.5 mm²)
type of connectable conductor cross-sections at AWG cables		
<ul> <li>for auxiliary contacts</li> </ul>		2x (20 14)
<ul> <li>for auxiliary contacts finely stranded with core end</li> </ul>		2x (20 16)
processing		
Ambient conditions		
installation altitude at height above sea level	m	5 000
environmental category		
<ul> <li>during transport according to IEC 60721</li> </ul>		2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)
<ul> <li>during storage according 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 according 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
<ul><li>during storage</li></ul>	°C	-25 +80
derating temperature	°C	40
protection class IP on the front according to IEC 60529		IP20
touch protection on the front according to IEC 60529		finger-safe, for vertical contact from the front

Certificates/ approvals

**General Product Approval** 





Confirmation









**Declaration of Conformity** 

**Test Certificates** 

Marine / Shipping





**Special Test Certific-**<u>ate</u>

Type Test Certificates/Test Report





Marine / Shipping

other







Confirmation

## **UL/CSA** ratings yielded mechanical performance [hp] for 3-phase AC • at 200/208 V - at inside-delta circuit at 50 °C rated value 40 hp • at 220/230 V — at standard circuit at 50 °C rated value hp 25 at inside-delta circuit at 50 °C rated value hp 50 • at 460/480 V - at standard circuit at 50 °C rated value hp 60 - at inside-delta circuit at 50 °C rated value 100 hp 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=3RW4427-1BC44

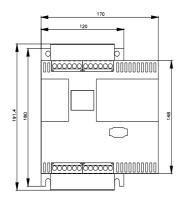
Cax online generator

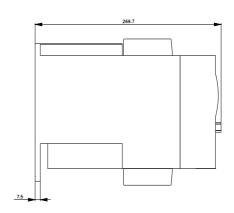
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW4427-1BC44

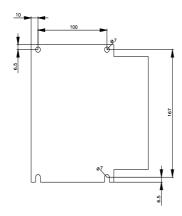
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

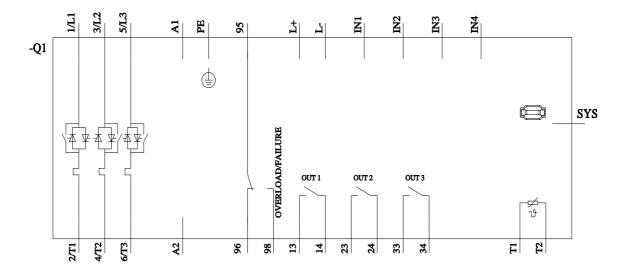
https://support.industry.siemens.com/cs/ww/en/ps/3RW4427-1BC44

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RW4427-1BC44&lang=en









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