## SIEMENS

## Data sheet

## 3RW4424-1BC35



SIRIUS soft starter Values at 575 V, 50 °C standard: 42 A, 30 hp Inside-delta: 73 A, 60 hp 400-600 V AC, 115 V AC Screw terminals !!! Phased-out product !!! Successor is SIRIUS 3RW5, Preferred successor type is >>3RW5524-1HA16<<

General technical data		
product brand name		SIRIUS
product feature		X
<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
<ul> <li>inside-delta circuit</li> </ul>		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		G
according to IEC 204-2 according to IEC 750		
Power Electronics		
product designation		Soft starter
operational current		
<ul> <li>at 40 °C rated value</li> </ul>	А	47
<ul> <li>at 50 °C rated value</li> </ul>	А	42
<ul> <li>at 60 °C rated value</li> </ul>	А	37
operational current for 3-phase motors at inside-delta circuit		
<ul> <li>at 40 °C rated value</li> </ul>	А	81
<ul> <li>at 50 °C rated value</li> </ul>	А	73
<ul> <li>at 60 °C rated value</li> </ul>	А	64
yielded mechanical performance for 3-phase motors		
• at 400 V		
- at standard circuit at 40 °C rated value	kW	22
— at inside-delta circuit at 40 °C rated value	kW	45
• at 500 V		
at standard circuit at 40 °C rated value	kW	30
— at inside-delta circuit at 40 °C rated value	kW	45
operating frequency rated value	Hz	50 60
relative negative tolerance of the operating frequency	%	-10
	%	10
relative positive tolerance of the operating frequency	70 V	400 600
operating voltage at standard circuit rated value	V %	
relative negative tolerance of the operating voltage at standard circuit	70	-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	A	9
protection minimum rated value		
continuous operating current [% of le] at 40 °C	%	115
power loss [W] at operational current at 40 °C during operation typical	W	32
Control circuit/ Control	_	
	_	10
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	115
<ul> <li>at 60 Hz rated value</li> </ul>	V	115
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
Mashanian Islata		
Mechanical data		
Mechanical data width	mm	170
width	mm	170
width height	mm	192
width height depth		192 270
width height depth fastening method	mm	192 270 screw fixing
width height depth	mm	192 270
width height depth fastening method mounting position	mm	192 270 screw fixing with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and
width height depth fastening method mounting position required spacing with side-by-side mounting	mm	192 270 screw fixing with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and
width height depth fastening method mounting position	mm mm	192 270 screw fixing with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back
width height depth fastening method mounting position required spacing with side-by-side mounting • upwards	mm mm mm	<ul> <li>192</li> <li>270</li> <li>screw fixing</li> <li>with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back</li> <li>100</li> </ul>
width height depth fastening method mounting position required spacing with side-by-side mounting • upwards • at the side • downwards	mm mm	<ul> <li>192</li> <li>270</li> <li>screw fixing</li> <li>with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back</li> <li>100</li> <li>5</li> </ul>
width height depth fastening method mounting position required spacing with side-by-side mounting • upwards • at the side	mm mm mm mm	<ul> <li>192</li> <li>270</li> <li>screw fixing</li> <li>with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back</li> <li>100</li> <li>5</li> <li>75</li> </ul>
width height 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	mm mm mm mm	<ul> <li>192</li> <li>270</li> <li>screw fixing</li> <li>with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back</li> <li>100</li> <li>5</li> <li>75</li> <li>500</li> </ul>
width height 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 Connections/ Terminals	mm mm mm mm	<ul> <li>192</li> <li>270</li> <li>screw fixing</li> <li>with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back</li> <li>100</li> <li>5</li> <li>75</li> <li>500</li> </ul>
width height 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 Connections/ Terminals type of electrical connection	mm mm mm mm	<ul> <li>192</li> <li>270</li> <li>screw fixing</li> <li>with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back</li> <li>100</li> <li>5</li> <li>75</li> <li>500</li> <li>3</li> </ul>
width height 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 <u>Connections/ Terminals</u> type of electrical connection • for main current circuit	mm mm mm mm	192 270 screw fixing with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back 100 5 75 500 3 box terminal
width height 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 <u>Connections/ Terminals</u> type of electrical connection • for main current circuit • for auxiliary and control circuit	mm mm mm mm	192 270 screw fixing with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back 100 5 75 500 3 box terminal screw-type terminals
width height 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 Connections/ Terminals type of electrical connection • for main current circuit • for auxiliary and control circuit number of NC contacts for auxiliary contacts	mm mm mm mm	192 270 screw fixing with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back 100 5 75 500 3 box terminal screw-type terminals 0
width height 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 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	mm mm mm mm	192 270 screw fixing with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back 100 5 75 500 3 box terminal screw-type terminals 0 3
width height 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 Connections/ Terminals type of electrical connection • for main current circuit • for auxiliary and control circuit number of NC contacts for auxiliary contacts number of CO contacts for auxiliary contacts	mm mm mm mm	192 270 screw fixing with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back 100 5 75 500 3 box terminal screw-type terminals 0
width height 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 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	mm mm mm mm	192 270 screw fixing with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back 100 5 75 500 3 box terminal screw-type terminals 0 3 1
width height 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 Connections/ Terminals type of electrical connection • for main current circuit • for auxiliary and control circuit number of NC contacts for auxiliary contacts 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	mm mm mm mm	192 270 screw fixing with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back 100 5 75 500 3 box terminal screw-type terminals 0 3 1 2.5 16 mm <sup>2</sup>
width         height         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         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         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	mm mm mm mm	192 270 screw fixing with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back 100 5 75 500 3 box terminal screw-type terminals 0 3 1 2.5 16 mm <sup>2</sup> 2.5 35 mm <sup>2</sup>
width height 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 Connections/ Terminals type of electrical connection • for main current circuit • for auxiliary and control circuit number of NC contacts for auxiliary contacts 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	mm mm mm mm	192 270 screw fixing with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back 100 5 75 500 3 box terminal screw-type terminals 0 3 1 2.5 16 mm <sup>2</sup>
<ul> <li>width <ul> <li>height</li> <li>depth</li> <li>fastening method</li> <li>mounting position</li> </ul> </li> <li>required spacing with side-by-side mounting <ul> <li>upwards</li> <li>at the side</li> <li>downwards</li> </ul> </li> <li>wire length maximum <ul> <li>number of poles for main current circuit</li> </ul> </li> <li>Connections/ Terminals</li> <li>type of electrical connection <ul> <li>for auxiliary and control circuit</li> <li>number of NC contacts for auxiliary contacts</li> <li>number of CO 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 <ul> <li>solid</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> </ul> </li> </ul></li></ul>	mm mm mm mm	192 270 screw fixing with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back 100 5 75 500 3 1 box terminal 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>
width         height         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         Connections/ Terminals         type of electrical connection         • for main current circuit         • for auxiliary and control circuit         number of NC contacts for auxiliary contacts         number of NC contacts for auxiliary contacts         number of CO 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         type of connectable conductor cross-sections for         main contacts for box terminal using the back	mm mm mm mm	192 270 screw fixing with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back 100 5 75 500 3 1 box terminal 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>finely stranded without core end processing</li> <li>stranded</li> <li>type of connectable conductor cross-sections main contacts for box terminal using both clapoints         <ul> <li>solid</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>finely stranded without core end processing</li> <li>stranded</li> </ul> </li> <li>type of connectable conductor cross-sections cables for main contacts for box terminal         <ul> <li>using the back clamping point</li> <li>using the front clamping point</li> <li>using both clamping points</li> </ul> </li> <li>type of connectable conductor cross-sections cables for main contacts for box terminal</li> <li>using the front clamping point</li> <li>using both clamping points</li> </ul> <li>type of connectable conductor cross-sections cables</li> <li>solid</li> <li>finely stranded with core end processing</li> <li>type of connectable conductor cross-sections cables</li> <li>of connectable conductor cross-sections cables</li> <ul> <li>of connectable conductor cross-sections cables</li> <li>of connectable conductor cross-sections cables</li> <li>of auxiliary contacts</li> <li>of auxiliary contacts</li> <li>of auxiliary contacts</li> <li>of auxiliary contacts finely stranded with core processing</li> </ul>	s for mping g s at AWG s for s at AWG	10 50 mm <sup>2</sup> 10 70 mm <sup>2</sup> 2x (2.5 16 m 2x (2.5 35 m 2x (4 35 m 2x (4 50 mm 10 2/0 10 2/0 2x (10 1/0) 2x (0.5 2.5 m 2x (0.5 1.5 m 2x (20 14) 2x (20 16)	nm²) n²) n²)	
Ambient conditions				
installation altitude at height above sea level environmental category • during transport according to IEC 60721 • during storage according to IEC 60721 • during operation according to IEC 60721 ambient temperature • during operation • during storage derating temperature protection class IP on the front according to IE 60529 touch protection on the front according to IEC Certificates/ approvals	°( °(	2K2, 2C1, 2S 1K6 (only occ 1S2 (sand mu 3K6 (no forma mist), 3S2 (sa C 60 C -25 +80 C 40 IP20	1, 2M2 (max. fall height asional condensation), ist not get inside the de tition of ice, no condens nd must not get into the r vertical contact from t	1C2 (no salt mist), vices), 1M4 sation), 3C3 (no salt e devices), 3M6
General Product Approval				EMC
Confirmation CSA	CCC		EAC	RCM
Declaration of Conformity T	est Certificates		Marine / Shipping	
	<u>ype Test Certific-</u> ates/Test Report	<u>Special Test Certific-</u> <u>ate</u>	ABS	BUREAU VERITAS
Marine / Shipping		other		
LRS PRS	DNV-GL DMV-GL DMVLEDKAP	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	25
<ul> <li>— at inside-delta circuit at 50 °C rated value</li> </ul>	hp	50
• at 575/600 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
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 on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

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=3RW4424-1BC35

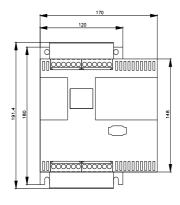
Cax online generator

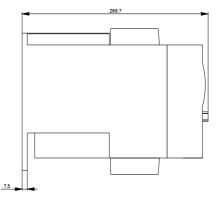
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW4424-1BC35

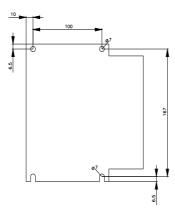
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

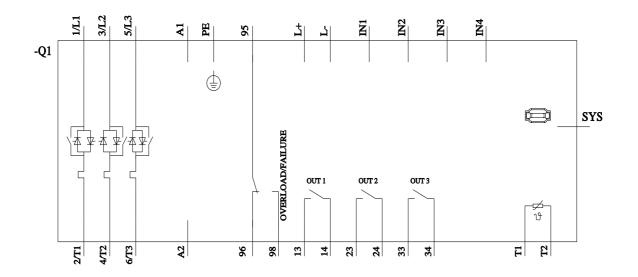
https://support.industry.siemens.com/cs/ww/en/ps/3RW4424-1BC35

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) <u>http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RW4424-1BC35&lang=en</u>









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