

SIRIUS soft starter Values at 400 V, 40 °C Standard: 47 A, 22 kW Inside-delta: 81 A, 45 kW 200-460 V AC, 230 V AC spring-type terminals



## General technical data

<b>Product brand name</b>		SIRIUS
<b>Product feature</b>		
<ul style="list-style-type: none"> <li>integrated bypass contact system</li> </ul>		Yes
<ul style="list-style-type: none"> <li>Thyristors</li> </ul>		Yes
<b>Product function</b>		
<ul style="list-style-type: none"> <li>Intrinsic device protection</li> </ul>		Yes
<ul style="list-style-type: none"> <li>motor overload protection</li> </ul>		Yes
<ul style="list-style-type: none"> <li>Evaluation of thermistor motor protection</li> </ul>		Yes
<ul style="list-style-type: none"> <li>External reset</li> </ul>		Yes
<ul style="list-style-type: none"> <li>Adjustable current limitation</li> </ul>		Yes
<ul style="list-style-type: none"> <li>inside-delta circuit</li> </ul>		Yes
<b>Product component Motor brake output</b>		Yes
<b>Reference identifier acc. to DIN EN 61346-2</b>		Q
<b>Reference identifier acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750</b>		G

## Power Electronics

<b>Product designation</b>		Soft starter
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<b>Operating current</b>		
• at 40 °C rated value	A	47
• at 50 °C rated value	A	42
• at 60 °C rated value	A	37
<b>Operating current for three-phase motors at inside-delta circuit</b>		
• at 40 °C rated value	A	81
• at 50 °C rated value	A	73
• at 60 °C rated value	A	64
<b>Mechanical power output for three-phase motors</b>		
• at 230 V		
— at standard circuit at 40 °C rated value	W	11 000
— at inside-delta circuit at 40 °C rated value	W	22 000
• at 400 V		
— at standard circuit at 40 °C rated value	W	22 000
— at inside-delta circuit at 40 °C rated value	W	45 000
<b>Yielded mechanical performance [hp] for three-phase AC motor at 200/208 V at standard circuit at 50 °C rated value</b>	hp	10
<b>Operating frequency rated value</b>	Hz	50 ... 60
<b>Relative negative tolerance of the operating frequency</b>	%	-10
<b>Relative positive tolerance of the operating frequency</b>	%	10
<b>Operating voltage at standard circuit rated value</b>	V	200 ... 460
<b>Relative negative tolerance of the operating voltage at standard circuit</b>	%	-15
<b>Relative positive tolerance of the operating voltage at standard circuit</b>	%	10
<b>Operating voltage at inside-delta circuit rated value</b>	V	200 ... 460
<b>Relative negative tolerance of the operating voltage at inside-delta circuit</b>	%	-15
<b>Relative positive tolerance of the operating voltage at inside-delta circuit</b>	%	10
<b>Minimum load [%]</b>	%	8
<b>Adjustable motor current for motor overload protection minimum rated value</b>	A	9
<b>Continuous operating current [% of I<sub>e</sub>] at 40 °C</b>	%	115
<b>Power loss [W] at operating current at 40 °C during operation typical</b>	W	32
<b>Control electronics</b>		
<b>Type of voltage of the control supply voltage</b>		AC
<b>Control supply voltage frequency 1 rated value</b>	Hz	50
<b>Control supply voltage frequency 2 rated value</b>	Hz	60

Relative negative tolerance of the control supply voltage frequency	%	-10
Relative positive tolerance of the control supply voltage frequency	%	10
<b>Control supply voltage 1 at AC</b>		
• 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 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
Mounting type		screw fixing
Mounting position		with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back
<b>Required spacing with side-by-side mounting</b>		
• 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		
<b>Type of electrical connection</b>		
• for main current circuit		box terminal
• for auxiliary and control current 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
<b>Type of connectable conductor cross-sections for main contacts for box terminal using the front clamping point</b>		
• solid		2.5 ... 16 mm <sup>2</sup>
• finely stranded with core end processing		2.5 ... 35 mm <sup>2</sup>
• finely stranded without core end processing		4 ... 50 mm <sup>2</sup>
• stranded		4 ... 70 mm <sup>2</sup>
<b>Type of connectable conductor cross-sections for main contacts for box terminal using the back clamping point</b>		

<ul style="list-style-type: none"> <li>• solid</li> <li>• finely stranded with core end processing</li> <li>• finely stranded without core end processing</li> <li>• stranded</li> </ul>		2,5 ... 16 mm <sup>2</sup> 2.5 ... 50 mm <sup>2</sup> 10 ... 50 mm <sup>2</sup> 10 ... 70 mm <sup>2</sup>
<b>Type of connectable conductor cross-sections for main contacts for box terminal using both clamping points</b> <ul style="list-style-type: none"> <li>• solid</li> <li>• finely stranded with core end processing</li> <li>• finely stranded without core end processing</li> <li>• stranded</li> </ul>		2x (2.5 ... 16 mm <sup>2</sup> ) 2x (2.5 ... 35 mm <sup>2</sup> ) 2x (4 ... 35 mm <sup>2</sup> ) 2x (4 ... 50 mm <sup>2</sup> )
<b>Type of connectable conductor cross-sections at AWG conductors for main contacts for box terminal</b> <ul style="list-style-type: none"> <li>• using the back clamping point</li> <li>• using the front clamping point</li> <li>• using both clamping points</li> </ul>		10 ... 2/0 10 ... 2/0 2x (10 ... 1/0)
<b>Type of connectable conductor cross-sections for auxiliary contacts</b> <ul style="list-style-type: none"> <li>• solid</li> <li>• finely stranded with core end processing</li> </ul>		2x (0.25 ... 1.5 mm <sup>2</sup> ) 2x (0.25 ... 1.5 mm <sup>2</sup> )
<b>Type of connectable conductor cross-sections at AWG conductors</b> <ul style="list-style-type: none"> <li>• for auxiliary contacts</li> </ul>		2x (24 ... 16)

Ambient conditions		
<b>Installation altitude at height above sea level</b>	m	5 000
<b>Environmental category</b> <ul style="list-style-type: none"> <li>• during transport acc. to IEC 60721</li> <li>• during storage acc. to IEC 60721</li> <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 3K6 (no formation of ice, no condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 3K6 (no formation of ice, no condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6
<b>Ambient temperature</b> <ul style="list-style-type: none"> <li>• during operation</li> <li>• during storage</li> </ul>	°C °C	60 -25 ... +80
<b>Derating temperature</b>	°C	40
<b>Protection class IP</b>		IP00

### Certificates/approvals

General Product Approval	EMC	Declaration of Conformity
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Test Certificates	Shipping Approval
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[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



other
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[Confirmation](#)

### UL/CSA ratings

<b>Yielded mechanical performance [hp] for three-phase AC motor</b>		
<ul style="list-style-type: none"> <li>• at 200/208 V <ul style="list-style-type: none"> <li>— at inside-delta circuit at 50 °C rated value</li> </ul> </li> <li>• at 220/230 V <ul style="list-style-type: none"> <li>— at standard circuit at 50 °C rated value</li> <li>— at inside-delta circuit at 50 °C rated value</li> </ul> </li> <li>• at 460/480 V <ul style="list-style-type: none"> <li>— at standard circuit at 50 °C rated value</li> <li>— at inside-delta circuit at 50 °C rated value</li> </ul> </li> </ul>	hp	20 15 25 25 50
<b>Contact rating of auxiliary contacts according to UL</b>		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,...)**

<http://www.siemens.com/industrial-controls/catalogs>

**Industry Mall (Online ordering system)**

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RW4424-3BC44>

**Cax online generator**

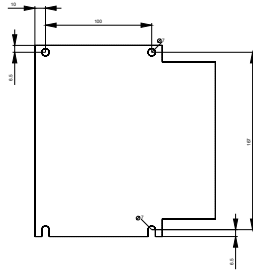
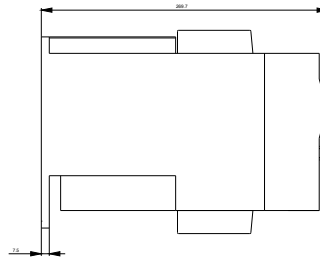
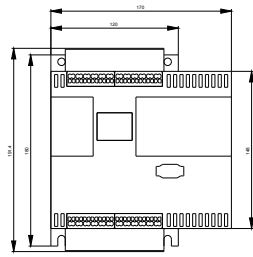
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW4424-3BC44>

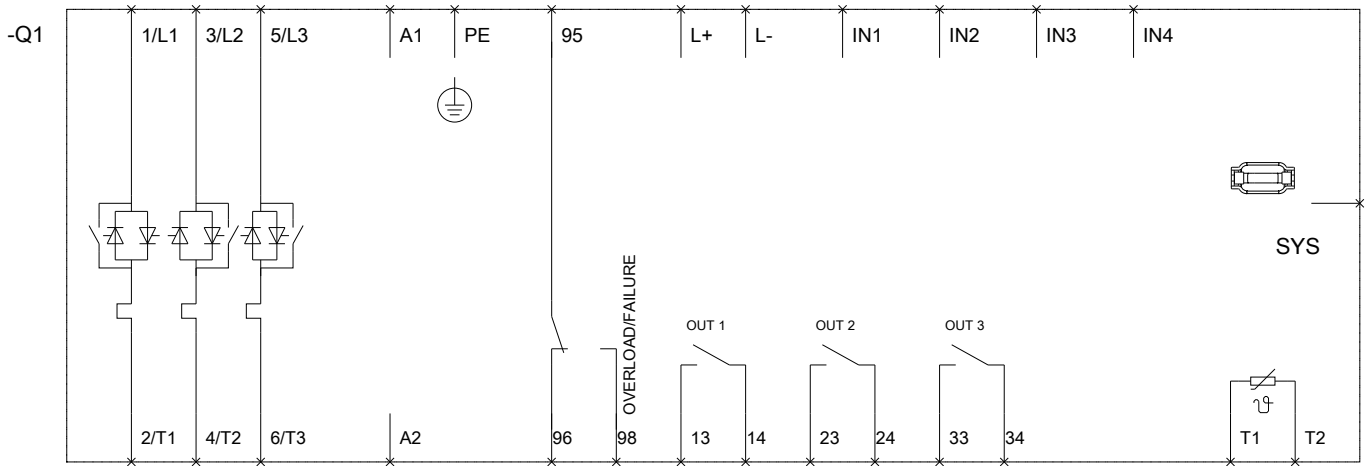
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

<https://support.industry.siemens.com/cs/ww/en/ps/3RW4424-3BC44>

**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RW4424-3BC44&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW4424-3BC44&lang=en)





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