

SIRIUS soft starter Values at 400 V, 40 °C Standard:  
432 A, 250 kW Inside-delta: 748 A, 400 kW 200-460 V  
AC, 230 V AC Screw terminals



General technical data		
Product brand name		SIRIUS
Product feature		
• integrated bypass contact system		Yes
• Thyristors		Yes
Product function		
• Intrinsic device protection		Yes
• motor overload protection		Yes
• Evaluation of thermistor motor protection		Yes
• External reset		Yes
• Adjustable current limitation		Yes
• inside-delta circuit		Yes
Product component Motor brake output		Yes
Reference identifier acc. to DIN EN 61346-2		Q
Reference indentifier acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750		G
Power Electronics		
Product designation		Soft starter

<b>Operating current</b>		
• at 40 °C rated value	A	432
• at 50 °C rated value	A	385
• at 60 °C rated value	A	335
<b>Operating current for three-phase motors at inside-delta circuit</b>		
• at 40 °C rated value	A	748
• at 50 °C rated value	A	667
• at 60 °C rated value	A	580
<b>Mechanical power output for three-phase motors</b>		
• at 230 V		
— at standard circuit at 40 °C rated value	W	132 000
— at inside-delta circuit at 40 °C rated value	W	250 000
• at 400 V		
— at standard circuit at 40 °C rated value	W	250 000
— at inside-delta circuit at 40 °C rated value	W	400 000
<b>Yielded mechanical performance [hp] for three-phase AC motor at 200/208 V at standard circuit at 50 °C rated value</b>	hp	125
<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	86
<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	232
<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
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 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	210
Height	mm	230
Depth	mm	298
Mounting type		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		
• for main current circuit		busbar connection
• for auxiliary and control current circuit		screw-type 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		
• finely stranded with core end processing		70 ... 240 mm <sup>2</sup>
• finely stranded without core end processing		70 ... 240 mm <sup>2</sup>
• stranded		95 ... 300 mm <sup>2</sup>
Type of connectable conductor cross-sections for main contacts for box terminal using the back clamping point		
• finely stranded with core end processing		120 ... 185 mm <sup>2</sup>

<ul style="list-style-type: none"> <li>finely stranded without core end processing</li> <li>stranded</li> </ul>		120 ... 185 mm <sup>2</sup> 120 ... 240 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>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>stranded</li> </ul>		min. 2x 50 mm <sup>2</sup> , max. 2x 185 mm <sup>2</sup> min. 2x 50 mm <sup>2</sup> , max. 2x 185 mm <sup>2</sup> max. 2x 70 mm <sup>2</sup> , max. 2x 240 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>		250 ... 500 kcmil 3/0 ... 600 kcmil min. 2x 2/0, max. 2x 500 kcmil
<b>Type of connectable conductor cross-sections for DIN cable lug for main contacts</b> <ul style="list-style-type: none"> <li>finely stranded</li> <li>stranded</li> </ul>		50 ... 240 mm <sup>2</sup> 70 ... 240 mm <sup>2</sup>
<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 (0.5 ... 2.5 mm <sup>2</sup> ) 2x (0.5 ... 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 main contacts</li> <li>for auxiliary contacts</li> <li>for auxiliary contacts finely stranded with core end processing</li> </ul>		2/0 ... 500 kcmil 2x (20 ... 14) 2x (20 ... 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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CCC



CSA



UL



C-Tick



EG-Konf.

Test Certificates	Shipping Approval
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[Type Test  
Certificates/Test  
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[Special Test  
Certificate](#)



ABS



BUREAU  
VERITAS



LRS



PRS

## other

[Confirmation](#)

## UL/CSA ratings

Yielded mechanical performance [hp] for three-phase AC motor

- at 200/208 V

— at inside-delta circuit at 50 °C rated value

hp

200

- at 220/230 V

— at standard circuit at 50 °C rated value

hp

150

— at inside-delta circuit at 50 °C rated value

hp

250

- at 460/480 V

— at standard circuit at 50 °C rated value

hp

300

— at inside-delta circuit at 50 °C rated value

hp

600

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,...)**

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

**Industry Mall (Online ordering system)**

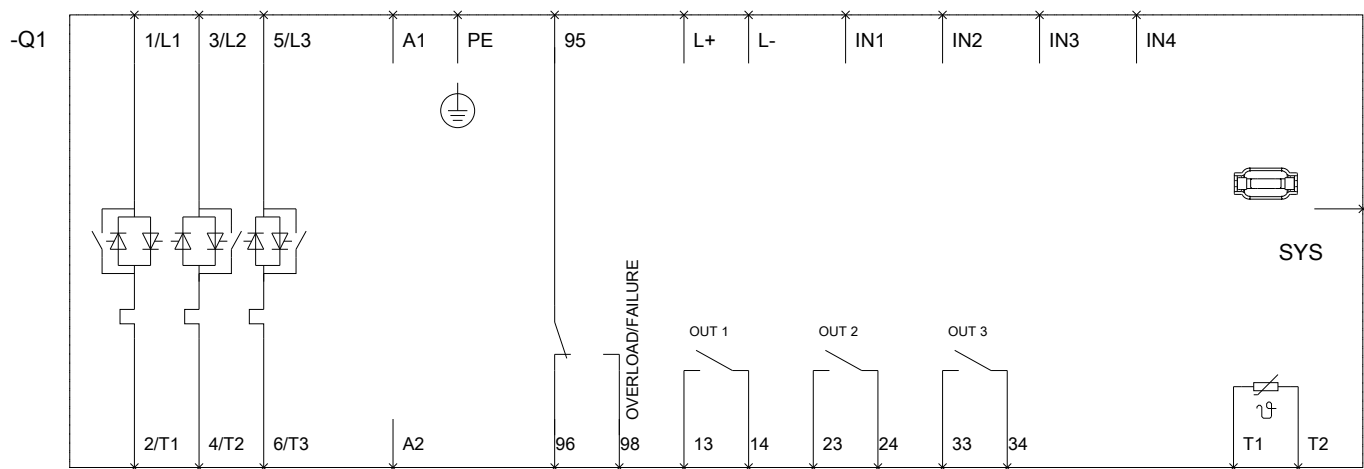
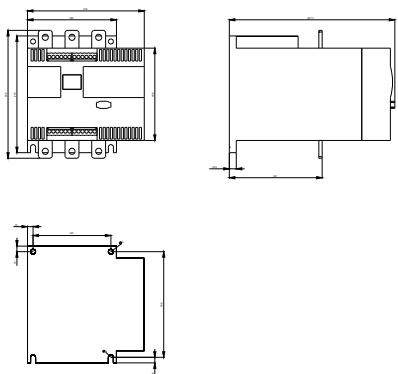
<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RW4447-6BC44>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW4447-6BC44>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW4447-6BC44>



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