



SIRIUS soft starter Values at 400 V, 40 °C standard:  
 313 A, 160 kW Inside-delta: 542 A, 315 kW 200-460 V  
 AC, 230 V AC Screw terminals !!! Phased-out product !!!  
 Successor is SIRIUS 3RW5, Preferred successor type  
 is >>3RW5545-6HA14<<

## 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>Insulation voltage rated value</b>	V	690
<b>Degree of pollution</b>		3, acc. to IEC 60947-4-2
<b>Reference code acc. to DIN EN 61346-2</b>		Q
<b>Reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750</b>		G

## Power Electronics

<b>Product designation</b>		Soft starter
<b>Operating current</b>		
• at 40 °C rated value	A	313
• at 50 °C rated value	A	280
• at 60 °C rated value	A	250
<b>Operating current for three-phase motors at inside-delta circuit</b>		
• at 40 °C rated value	A	542
• at 50 °C rated value	A	485
• at 60 °C rated value	A	433
<b>Mechanical power output for three-phase motors</b>		
• at 230 V		
— at standard circuit at 40 °C rated value	W	90 000
— at inside-delta circuit at 40 °C rated value	W	160 000
• at 400 V		
— at standard circuit at 40 °C rated value	W	160 000
— at inside-delta circuit at 40 °C rated value	W	315 000
<b>Yielded mechanical performance [hp] for three-phase AC motor at 200/208 V at standard circuit at 50 °C rated value</b>	hp	75
<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	62
<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	145

## Control circuit/ Control

<b>Type of voltage of the control supply voltage</b>		AC
<b>Control supply voltage frequency 1 rated value</b>	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	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>

<ul style="list-style-type: none"> <li>• stranded</li> </ul>		95 ... 300 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>• finely stranded with core end processing</li> <li>• finely stranded without core end processing</li> <li>• stranded</li> </ul>		120 ... 185 mm <sup>2</sup> 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>		2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m) 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4 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> </ul>	°C	60

• during storage	°C	-25 ... +80
Derating temperature	°C	40
Protection class IP		IP00

Certificates/ approvals

General Product Approval	EMC	Declaration of Conformity
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Declaration of Conformity	Test Certificates	Marine / Shipping
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[Miscellaneous](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



Marine / Shipping	other
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[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	150
• at 220/230 V		
— at standard circuit at 50 °C rated value	hp	100
— at inside-delta circuit at 50 °C rated value	hp	200
• at 460/480 V		
— at standard circuit at 50 °C rated value	hp	200
— at inside-delta circuit at 50 °C rated value	hp	400
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,...)

[www.siemens.com/sirius/catalogs](http://www.siemens.com/sirius/catalogs)

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RW4445-6BC44>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mfb=3RW4445-6BC44>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW4445-6BC44>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mfb=3RW4445-6BC44&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mfb=3RW4445-6BC44&lang=en)



