



SIRIUS soft starter Values at 690 V, 40 °C standard: 615 A, 630 kW Inside-delta: only up to 600 V 400-690 V AC, 230 V AC spring-type terminals !!! Phased-out product !!! Successor is SIRIUS 3RW5, Preferred successor type is >>3RW5552-2HA16<<

General technical data	
<b>product brand name</b>	SIRIUS
<b>product designation</b>	Soft starter
<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>	690 V
<b>degree of pollution</b>	3, acc. to IEC 60947-4-2
<b>reference code according to EN 61346-2</b>	Q
<b>reference code according to DIN 40719 extended according to IEC 204-2 according to IEC 750</b>	G
Power Electronics	
<b>operational current</b>	
<ul style="list-style-type: none"> <li>at 40 °C rated value</li> </ul>	615 A
<ul style="list-style-type: none"> <li>at 50 °C rated value</li> </ul>	551 A
<ul style="list-style-type: none"> <li>at 60 °C rated value</li> </ul>	489 A
<b>operational current for 3-phase motors at inside-delta circuit</b>	
<ul style="list-style-type: none"> <li>at 40 °C rated value</li> </ul>	1 065 A
<ul style="list-style-type: none"> <li>at 50 °C rated value</li> </ul>	954 A
<ul style="list-style-type: none"> <li>at 60 °C rated value</li> </ul>	847 A
<b>yielded mechanical performance for 3-phase motors</b>	
<ul style="list-style-type: none"> <li>at 400 V                             <ul style="list-style-type: none"> <li>at standard circuit at 40 °C rated value</li> <li>at inside-delta circuit at 40 °C rated value</li> </ul> </li> </ul>	355 kW 630 kW
<ul style="list-style-type: none"> <li>at 500 V                             <ul style="list-style-type: none"> <li>at standard circuit at 40 °C rated value</li> <li>at inside-delta circuit at 40 °C rated value</li> </ul> </li> </ul>	400 kW 710 kW
<ul style="list-style-type: none"> <li>at 690 V at standard circuit at 40 °C rated value</li> </ul>	630 kW
<b>operating frequency rated value</b>	50 ... 60 Hz
<b>relative negative tolerance of the operating frequency</b>	-10 %
<b>relative positive tolerance of the operating frequency</b>	10 %

operating voltage at standard circuit rated value	400 ... 690 V
relative negative tolerance of the operating voltage at standard circuit	-15 %
relative positive tolerance of the operating voltage at standard circuit	10 %
operating voltage at inside-delta circuit rated value	400 ... 600 V
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 protection minimum rated value	123 A
continuous operating current [% of I <sub>e</sub> ] at 40 °C	115 %
power loss [W] at operational current at 40 °C during operation typical	186 W
<b>Control circuit/ Control</b>	
type of voltage of the control supply voltage	AC
control supply voltage frequency 1 rated value	50 Hz
control supply voltage frequency 2 rated value	60 Hz
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	230 V
• at 60 Hz rated value	230 V
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
<b>Mechanical data</b>	
width	510 mm
height	640 mm
depth	290 mm
fastening method	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	100 mm
• at the side	5 mm
• downwards	75 mm
wire length maximum	500 m
number of poles for main current circuit	3
<b>Connections/ Terminals</b>	
type of electrical connection	
• for main current circuit	busbar connection
• for auxiliary and control 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
type of connectable conductor cross-sections for DIN cable lug for main contacts	
• finely stranded	50 ... 240 mm <sup>2</sup>
• stranded	70 ... 240 mm <sup>2</sup>
type of connectable conductor cross-sections for auxiliary contacts	
• solid	2x (0.25 ... 1.5 mm <sup>2</sup> )

<ul style="list-style-type: none"> <li>finely stranded with core end processing</li> </ul>	2x (0.25 ... 1.5 mm <sup>2</sup> )
<b>type of connectable conductor cross-sections for AWG cables</b> <ul style="list-style-type: none"> <li>for main contacts</li> <li>for auxiliary contacts</li> </ul>	2/0 ... 500 kcmil 2x (24 ... 16)

<b>Ambient conditions</b>	
installation altitude at height above sea level	5 000 m
<b>environmental category</b> <ul style="list-style-type: none"> <li>during transport according to IEC 60721</li> <li>during storage according to IEC 60721</li> <li>during operation according 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> <li>during storage</li> </ul>	60 °C -25 ... +80 °C
derating temperature	40 °C
protection class IP on the front according to IEC 60529	IP00

<b>UL/CSA ratings</b>	
<b>yielded mechanical performance [hp] for 3-phase AC motor</b> <ul style="list-style-type: none"> <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> <li>at 575/600 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>	450 hp 850 hp 600 hp 1 050 hp
contact rating of auxiliary contacts according to UL	B300 / R300

<b>Approvals Certificates</b>	
Environment	General Product Approval

[Environmental Confirmations](#)



EMV	Test Certificates	Maritime application
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[Special Test Certificate](#)



other
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[Confirmation](#)

[Confirmation](#)



<b>Further information</b>
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- 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 for data generation and storage  
<https://support.industry.siemens.com/cs/ww/en/view/109995012>
- 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=3RW4454-2BC46>
- Cax online generator  
<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW4454-2BC46>
- Service&Support (Manuals, Certificates, Characteristics, FAQs,...)



