



SIRIUS soft starter S6 162 A, 110 kW/500 V, 40 °C 400-600 V AC, 230 V AC  
Screw terminals !!! Phased-out product !!! Successor is SIRIUS 3RW5, Preferred  
successor type is >>3RW5056-6AB15<<

General technical data	
product brand name	SIRIUS
product designation	Soft starter
product feature	
• integrated bypass contact system	Yes
• thyristors	Yes
product function	
• intrinsic device protection	Yes
• motor overload protection	Yes
• evaluation of thermistor motor protection	No
• external reset	Yes
• adjustable current limitation	Yes
• inside-delta circuit	No
product component motor brake output	No
insulation voltage rated value	600 V
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 according to IEC 204-2 according to IEC 750	G
Power Electronics	
operational current	
• at 40 °C rated value	162 A
• at 50 °C rated value	145 A
• at 60 °C rated value	125 A
yielded mechanical performance for 3-phase motors	
• at 400 V	
— at standard circuit at 40 °C rated value	90 kW
• at 500 V	
— at standard circuit at 40 °C rated value	110 kW
operating frequency rated value	50 ... 60 Hz
relative negative tolerance of the operating frequency	-10 %
relative positive tolerance of the operating frequency	10 %
operating voltage at standard circuit rated value	400 ... 600 V
relative negative tolerance of the operating voltage at standard circuit	-15 %
relative positive tolerance of the operating voltage at standard circuit	10 %

minimum load [%]	20 %
adjustable motor current for motor overload protection minimum rated value	87 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	75 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	red
<b>Mechanical data</b>	
size of engine control device	S6
width	120 mm
height	198 mm
depth	250 mm
fastening method	screw fixing
mounting position	With additional fan: With vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back Without additional fan: With vertical mounting surface +/-10° rotatable, with vertical mounting surface +/- 10° t
required spacing with side-by-side mounting	
• upwards	100 mm
• at the side	5 mm
• downwards	75 mm
wire length maximum	300 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	screw-type terminals
number of NC contacts for auxiliary contacts	0
number of NO contacts for auxiliary contacts	2
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	16 ... 70 mm <sup>2</sup>
• finely stranded without core end processing	16 ... 70 mm <sup>2</sup>
• stranded	16 ... 70 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	16 ... 70 mm <sup>2</sup>
• finely stranded without core end processing	16 ... 70 mm <sup>2</sup>
• stranded	16 ... 70 mm <sup>2</sup>
type of connectable conductor cross-sections for main contacts for box terminal using both clamping points	
• finely stranded with core end processing	max. 1x 50 mm <sup>2</sup> , 1x 70 mm <sup>2</sup>
• finely stranded without core end processing	max. 1x 50 mm <sup>2</sup> , 1x 70 mm <sup>2</sup>

<ul style="list-style-type: none"> <li>• stranded</li> </ul>	max. 2x 70 mm <sup>2</sup>
<b>type of connectable conductor cross-sections for AWG cables 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>	6 ... 2/0 6 ... 2/0 max. 2x 1/0
<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>	2x (16 ... 95 mm <sup>2</sup> ) 2x (25 ... 120 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 for AWG cables</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>	4 ... 250 kcmil 2x (20 ... 14) 2x (20 ... 16)

<b>Ambient conditions</b>	
<b>installation altitude at height above sea level</b>	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>	-25 ... +60 °C -40 ... +80 °C
<b>derating temperature</b>	40 °C
<b>protection class IP on the front according to IEC 60529</b>	IP00; IP20 with cover
<b>touch protection on the front according to IEC 60529</b>	finger-safe, for vertical contact from the front with cover

<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> </ul> </li> <li>• at 575/600 V           <ul style="list-style-type: none"> <li>— at standard circuit at 50 °C rated value</li> </ul> </li> </ul>	100 hp 150 hp
<b>contact rating of auxiliary contacts according to UL</b>	B300 / R300

**Approvals Certificates**

<b>Environment</b>	<b>General Product Approval</b>
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[Environmental Con-  
firmations](#)



<b>EMV</b>	<b>For use in hazard- ous locations</b>	<b>Test Certificates</b>	<b>Maritime application</b>
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[Special Test Certifi-  
cate](#)



other

Confirmation

Confirmation



#### 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 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=3RW4056-6BB45>

##### Cax online generator

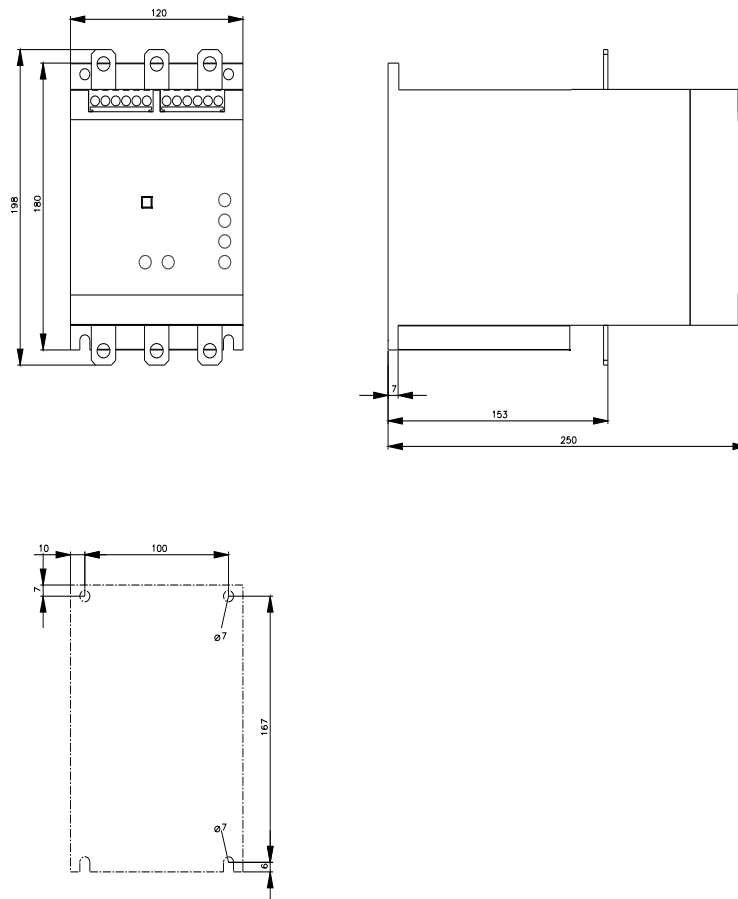
<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW4056-6BB45>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW4056-6BB45>

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

[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RW4056-6BB45&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW4056-6BB45&lang=en)





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