

SIRIUS SOFT STARTER, S6, 145 A, 100 HP/460 V, 50 DEG., 200-460 V AC, 115 V AC, SCREW TERMINALS



General technical data:

product brand name		SIRIUS
Product feature		
<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
Product function		
<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>		No
<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>		No
Product component Motor brake output		No
Equipment marking acc. to DIN EN 61346-2		Q
Equipment marking acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750		G

Power Electronics:

Product designation		soft starters for standard applications
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<b>Operating current</b>		
• at 40 °C rated value	A	162
• at 50 °C rated value	A	145
• at 60 °C rated value	A	125
<b>Mechanical power output for three-phase motors</b>		
• at 230 V		
— at standard circuit at 40 °C rated value	W	45 000
• at 400 V		
— at standard circuit at 40 °C rated value	W	90 000
<b>Yielded mechanical performance [hp] for three-phase AC motor at 200/208 V at standard circuit at 50 °C rated value</b>	hp	40
Operating frequency rated value	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>Minimum load [% of IM]</b>	%	20
<b>Adjustable motor current for motor overload protection minimum rated value</b>	A	87
<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	75

#### Control electronics:

<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
<b>Relative negative tolerance of the control supply voltage frequency</b>	%	-10
<b>Relative positive tolerance of the control supply voltage frequency</b>	%	10
<b>Control supply voltage 1 at AC</b>		
• at 50 Hz rated value	V	115
• at 60 Hz rated value	V	115
<b>Relative negative tolerance of the control supply voltage at AC at 60 Hz</b>	%	-15
<b>Relative positive tolerance of the control supply voltage at AC at 60 Hz</b>	%	10
<b>Display version for fault signal</b>		red

#### Mechanical data:

<b>Size of engine control device</b>		S6
<b>Width</b>	mm	120
<b>Height</b>	mm	198
<b>Depth</b>	mm	250
<b>Mounting type</b>		screw fixing
<b>Mounting position</b>		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
<b>Required spacing with side-by-side mounting</b>		
• upwards	mm	100
• at the side	mm	5
• downwards	mm	75
<b>Installation altitude at height above sea level</b>	m	5 000
<b>Wire length maximum</b>	m	300
<b>Number of poles for main current circuit</b>		3

#### Connections/ Terminals:

<b>Type of electrical connection</b>		
• for main current circuit		busbar connection
• for auxiliary and control current circuit		screw-type terminals
<b>Number of NC contacts for auxiliary contacts</b>		0
<b>Number of NO contacts for auxiliary contacts</b>		2
<b>Number of CO contacts for auxiliary contacts</b>		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>
• stranded		max. 2x 70 mm <sup>2</sup>
Type of connectable conductor cross-sections at AWG conductors for main contacts for box terminal		

<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>	16 ... 95 mm <sup>2</sup> 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 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>	4 ... 250 kcmil 2x (20 ... 14) 2x (20 ... 16)

**Ambient conditions:**

<b>Ambient temperature</b>		
<ul style="list-style-type: none"> <li>• during operation</li> <li>• during storage</li> </ul>	°C	-25 ... +60 -40 ... +80
<b>Derating temperature</b>	°C	40
<b>Protection class IP</b>		IP00

**Certificates/ approvals:**

<b>General Product Approval</b>	<b>EMC</b>	<b>For use in hazardous locations</b>
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<b>Declaration of Conformity</b>	<b>Test Certificates</b>	<b>Shipping Approval</b>	<b>other</b>
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**UL/CSA ratings:**

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

- at 220/230 V
  - at standard circuit at 50 °C rated value
- at 460/480 V
  - at standard circuit at 50 °C rated value

hp	50
hp	100
<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)

<http://www.siemens.com/industrymall>

#### Cax online generator

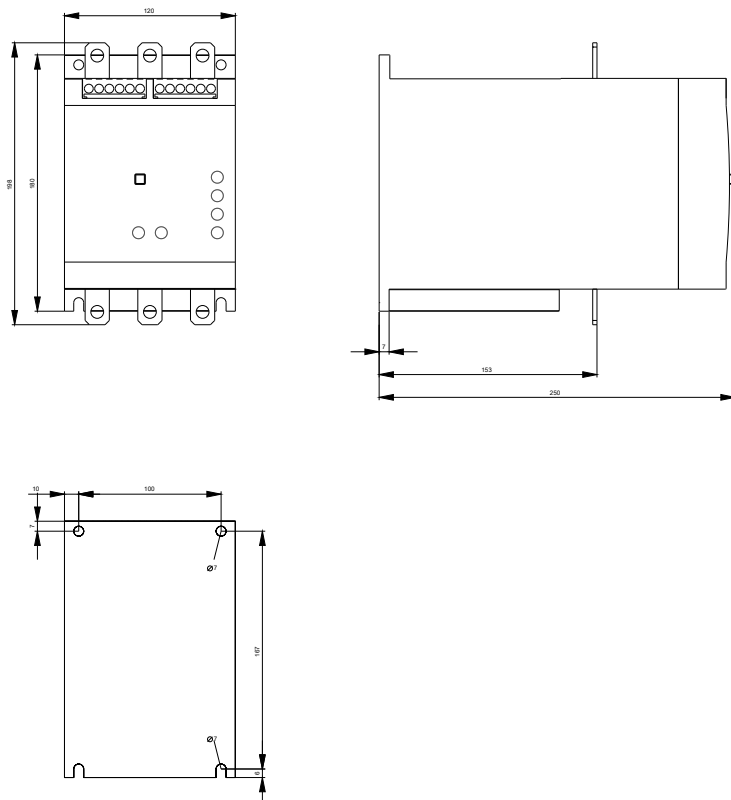
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW40566BB34>

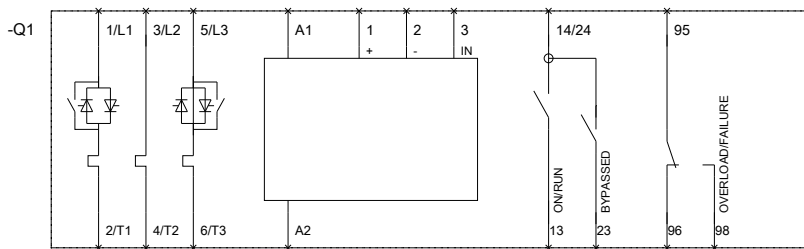
#### Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RW40566BB34>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RW40566BB34&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW40566BB34&lang=en)





last modified:

29.02.2016