



SIRIUS SOFT STARTER, VALUES WITH 500 V, 40 DEG., STANDARD: 356A, 250KW, INSIDE-DELTA CIRCUIT 3: 617A, 450KW, 400-600 V AC, 230 V AC, CAGE CLAMP TERMINALS

General technical data:

<b>product brand name</b>		SIRIUS
<b>Product feature</b>		
• integrated bypass contact system		Yes
• Thyristors		Yes
<b>Product function</b>		
• 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
<b>Product component Motor brake output</b>		Yes
<b>Equipment marking acc. to DIN EN 61346-2</b>		Q
<b>Equipment marking acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750</b>		G

Power Electronics:

<b>Product designation</b>		soft starters for high feature applications
<b>Operating current</b>		
• at 40 °C Rated value	A	356
• at 50 °C Rated value	A	315
• at 60 °C Rated value	A	280
<b>Operating current for three-phase motors at 3-phase root switching</b>		
• at 40 °C Rated value	A	617

• at 50 °C Rated value	A	546
• at 60 °C Rated value	A	485
<b>Mechanical power output for three-phase motors</b>		
• at 400 V		
— at standard circuit at 40 °C Rated value	W	200 000
— at 3-phase root switching at 40 °C Rated value	W	355 000
• at 500 V		
— at standard circuit at 40 °C Rated value	W	250 000
— at 3-phase root switching at 40 °C Rated value	W	450 000
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	400 ... 600
<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 3-phase root switching Rated value</b>	V	400 ... 600
<b>Relative negative tolerance of the operating voltage at 3-phase root switching</b>	%	-15
<b>Relative positive tolerance of the operating voltage at 3-phase root switching</b>	%	10
<b>Minimum load in % of I<sub>M</sub></b>	%	8
<b>Adjustable motor current for motor overload protection minimum rated value</b>	A	71
<b>Continuous operating current in % of I<sub>e</sub> at 40 °C</b>	%	115
<b>Active power loss at operating current at 40 °C during operation typical</b>	W	174

#### 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 with AC</b>		
• at 50 Hz Rated value	V	230
• at 60 Hz Rated value	V	230

Relative negative tolerance of the control supply voltage with AC at 60 Hz	%	-15
Relative positive tolerance of the control supply voltage with 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		bei senkrechter Montageebene +/-90° drehbar, bei senkrechter Montageebene +/- 22,5° nach vorne und hinten kippbar
Required spacing with side-by-side mounting		
• upwards	mm	100
• at the side	mm	5
• downwards	mm	75
Installation altitude at height above sea level	m	5 000
Cable length maximum	m	500
Number of poles for main current circuit		3

#### Connections/ Terminals:

Type of electrical connection		busbar connection spring-loaded terminals
• for main current circuit		
• for auxiliary and control current circuit		
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-section 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-section for main contacts for box terminal using the back clamping point		
• finely stranded with core end processing		120 ... 185 mm <sup>2</sup>
• finely stranded without core end processing		120 ... 185 mm <sup>2</sup>
• stranded		120 ... 240 mm <sup>2</sup>
Type of connectable conductor cross-section for main contacts for box terminal using both clamping points		
• finely stranded with core end processing		min. 2x 50 mm <sup>2</sup> , max. 2x 185 mm <sup>2</sup>

<ul style="list-style-type: none"> <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> max. 2x 70 mm <sup>2</sup> , max. 2x 240 mm <sup>2</sup>
Type of connectable conductor cross-section for 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>		250 ... 500 kcmil 3/0 ... 600 kcmil min. 2x 2/0, max. 2x 500 kcmil
Type of connectable conductor cross-section for DIN cable lug for main contacts <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>
Type of connectable conductor cross-section for auxiliary contacts <ul style="list-style-type: none"> <li>solid</li> <li>finely stranded with core end processing</li> </ul>		2x (0.25 ... 1.5 mm <sup>2</sup> ) 2x (0.25 ... 1.5 mm <sup>2</sup> )
Type of connectable conductor cross-section for AWG conductors <ul style="list-style-type: none"> <li>for main contacts</li> <li>for auxiliary contacts</li> </ul>		2/0 ... 500 kcmil 2x (24 ... 16)

**Ambient conditions:**

<b>Ambient temperature</b>		
<ul style="list-style-type: none"> <li>during operation</li> <li>during storage</li> </ul>	°C	60
	°C	-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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Test Certificates	Shipping Approval
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[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



Shipping Approval	other
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[Environmental Confirmations](#)

**UL/CSA ratings:**

<p>yielded mechanical performance [hp] for three-phase AC motor</p> <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 3-phase root switching 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 3-phase root switching at 50 °C Rated value</li> </ul> </li> </ul>	metric hp	250
	metric hp	450
	metric hp	300
	metric hp	600
Contact rating of the auxiliary contacts acc. to UL		B300 / R300

**Further information**

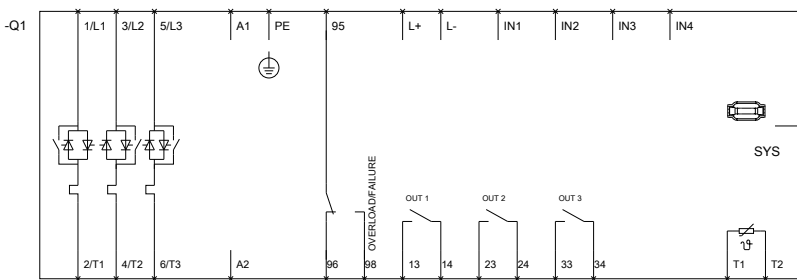
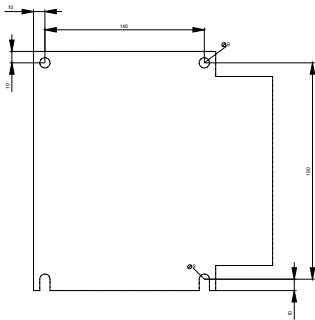
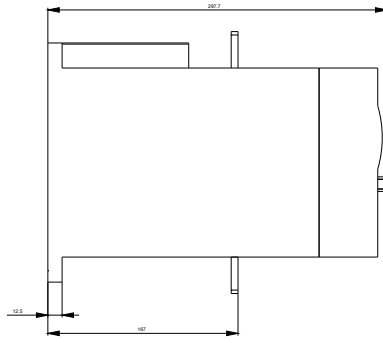
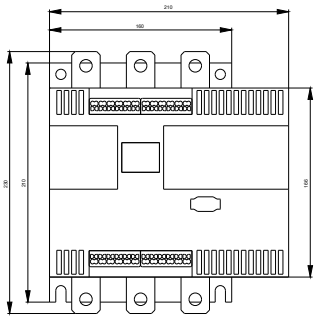
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15.01.2015