



SIRIUS SOFT STARTER, S12, 280 A, 160 KW/400 V, 40 DEG., 200-460 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		No
• External reset		Yes
• Adjustable current limitation		Yes
• inside-delta circuit		No
<b>Product component Motor brake output</b>		No
<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 standard applications
<b>Operating current</b>		
• at 40 °C Rated value	A	280
• at 50 °C Rated value	A	248
• at 60 °C Rated value	A	215
<b>Mechanical power output for three-phase motors</b>		
• at 230 V		

— at standard circuit at 40 °C Rated value	W	90 000
• at 400 V		
— at standard circuit at 40 °C Rated value	W	160 000
<b>yielded mechanical performance [hp] for three-phase AC motor at 200/208 V at standard circuit at 50 °C Rated value</b>	metric hp	75
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
Operating voltage at standard circuit Rated value	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
Minimum load in % of I <sub>M</sub>	%	20
Adjustable motor current for motor overload protection minimum rated value	A	130
Continuous operating current in % of I <sub>e</sub> at 40 °C	%	115
Active power loss at operating current at 40 °C during operation typical	W	90

#### Control electronics:

Type of voltage of the control supply voltage		AC
Control supply voltage frequency 1 Rated value	Hz	50
Control supply voltage frequency 2 Rated value	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
Control supply voltage 1 with AC		
• at 50 Hz Rated value	V	230
• at 60 Hz Rated value	V	230
<b>Relative negative tolerance of the control supply voltage with AC at 60 Hz</b>	%	-15
<b>Relative positive tolerance of the control supply voltage with AC at 60 Hz</b>	%	10
Display version for fault signal		red

#### Mechanical data:

Size of engine control device		S12
Width	mm	160
Height	mm	230
Depth	mm	278
Mounting type		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>Cable length maximum</b>	m	300
<b>Number of poles for main current circuit</b>		3

#### Connections/ Terminals:

<b>Type of electrical connection</b>		busbar connection spring-loaded terminals
• for main current circuit		
• for auxiliary and control current circuit		
<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-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>
• finely stranded without core end processing		min. 2x 50 mm <sup>2</sup> , max. 2x 185 mm <sup>2</sup>
• stranded		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		
• using the back clamping point		250 ... 500 kcmil
• using the front clamping point		3/0 ... 600 kcmil
• using both clamping points		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>
<b>Type of connectable conductor cross-section for auxiliary contacts</b> <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> )
<b>Type of connectable conductor cross-section for AWG conductors</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)

**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>Test Certificates</b>	<b>Shipping Approval</b>	<b>other</b>
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[Special Test Certificate](#)



[Declaration of Conformity](#)

[Environmental Confirmations](#)

**UL/CSA ratings:**

<b>yielded mechanical performance [hp] for three-phase AC motor</b>		
<ul style="list-style-type: none"> <li>at 220/230 V <ul style="list-style-type: none"> <li>at standard circuit at 50 °C Rated value</li> </ul> </li> <li>at 460/480 V <ul style="list-style-type: none"> <li>at standard circuit at 50 °C Rated value</li> </ul> </li> </ul>	metric hp	100 200
<b>Contact rating of the auxiliary contacts acc. to UL</b>		B300 / R300

## Further information

### 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

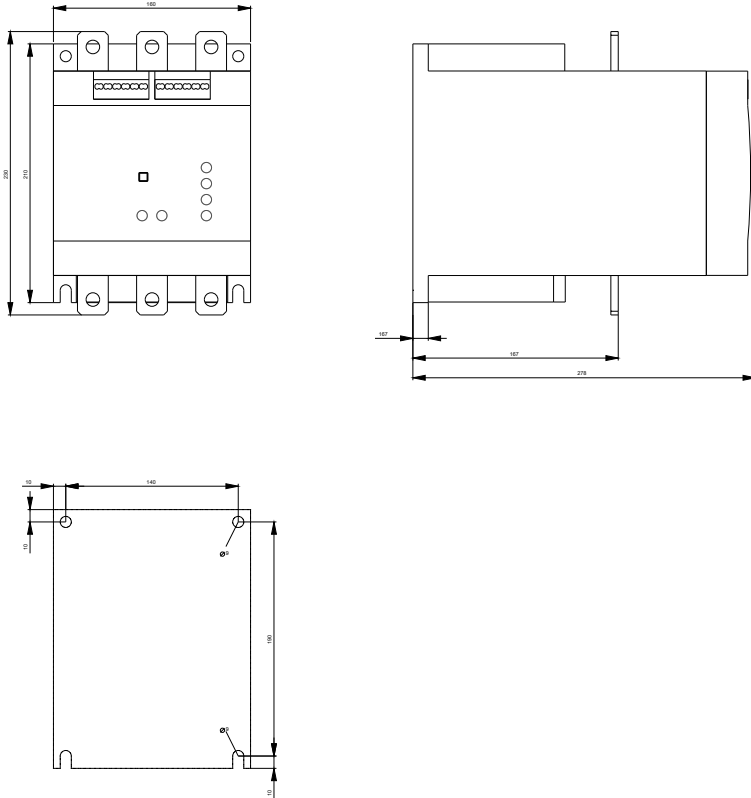
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW40742BB44>

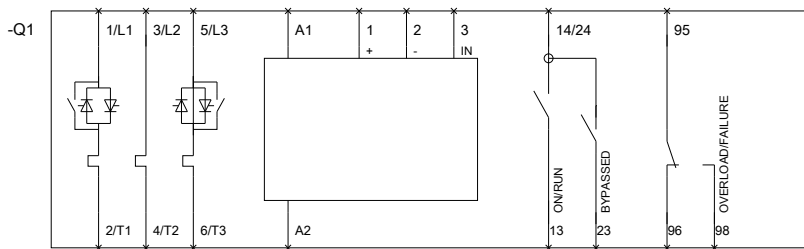
### Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<http://support.automation.siemens.com/WW/view/en/3RW40742BB44/all>

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

<http://www.automation.siemens.com/bilddb/index.aspx?attID9=3RW40742BB44&lang=en>





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