



SIRIUS soft starter S12 280 A, 160 kW/400 V, 40 °C 200-460 V AC, 230 V AC spring-type terminals !!! Phased-out product !!! Successor is SIRIUS 3RW5, Preferred successor type is >>3RW5074-2AB14<<

### General technical data

<b>product brand name</b>		SIRIUS
<b>product feature</b>		
<ul style="list-style-type: none"> <li>integrated bypass contact system</li> <li>thyristors</li> </ul>		Yes Yes
<b>product function</b>		
<ul style="list-style-type: none"> <li>intrinsic device protection</li> <li>motor overload protection</li> <li>evaluation of thermistor motor protection</li> <li>external reset</li> <li>adjustable current limitation</li> <li>inside-delta circuit</li> </ul>		Yes Yes No Yes Yes No
<b>product component motor brake output</b>		No
<b>insulation voltage rated value</b>	V	600
<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>product designation</b>		Soft starter
<b>operational current</b>		
<ul style="list-style-type: none"> <li>at 40 °C rated value</li> <li>at 50 °C rated value</li> <li>at 60 °C rated value</li> </ul>	A	280 248 215
<b>yielded mechanical performance for 3-phase motors</b>		
<ul style="list-style-type: none"> <li>at 230 V <ul style="list-style-type: none"> <li>— at standard circuit at 40 °C rated value</li> </ul> </li> <li>at 400 V <ul style="list-style-type: none"> <li>— at standard circuit at 40 °C rated value</li> </ul> </li> </ul>	kW	90 160
<b>yielded mechanical performance [hp] for 3-phase AC motor at 200/208 V at standard circuit at 50 °C rated value</b>	hp	75
<b>operating frequency rated value</b>	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 [%]</b>	%	20
<b>adjustable motor current for motor overload protection minimum rated value</b>	A	130

continuous operating current [% of I <sub>e</sub> ] at 40 °C	%	115
power loss [W] at operational current at 40 °C during operation typical	W	90

#### Control circuit/ Control

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
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	V	230
• at 60 Hz rated value	V	230
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

#### Mechanical data

size of engine control device		S12
width	mm	160
height	mm	230
depth	mm	278
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	mm	100
• at the side	mm	5
• downwards	mm	75
wire length maximum	m	300
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 circuit		
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		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-sections 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-sections 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-sections at AWG cables 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> <p><b>type of connectable conductor cross-sections for DIN cable lug for main contacts</b></p> <ul style="list-style-type: none"> <li>• finely stranded</li> <li>• stranded</li> </ul> <p><b>type of connectable conductor cross-sections for auxiliary contacts</b></p> <ul style="list-style-type: none"> <li>• solid</li> <li>• finely stranded with core end processing</li> </ul> <p><b>type of connectable conductor cross-sections at AWG cables</b></p> <ul style="list-style-type: none"> <li>• for main contacts</li> <li>• for auxiliary contacts</li> </ul>	<p>250 ... 500 kcmil 3/0 ... 600 kcmil min. 2x 2/0, max. 2x 500 kcmil</p> <p>50 ... 240 mm<sup>2</sup> 70 ... 240 mm<sup>2</sup></p> <p>2x (0.25 ... 1.5 mm<sup>2</sup>) 2x (0.25 ... 1.5 mm<sup>2</sup>)</p> <p>2/0 ... 500 kcmil 2x (24 ... 16)</p>
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### Ambient conditions

<b>installation altitude at height above sea level</b>	m	5 000
<b>environmental category</b>		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
<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>		
<b>ambient temperature</b>		
<ul style="list-style-type: none"> <li>• during operation</li> <li>• during storage</li> </ul>	°C	-25 ... +60
<b>derating temperature</b>	°C	-40 ... +80
<b>protection class IP on the front according to IEC 60529</b>	°C	40
<b>touch protection on the front according to IEC 60529</b>		IP00; IP20 with cover
		finger-safe, for vertical contact from the front with cover

### Certificates/ approvals

General Product Approval	EMC
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[Confirmation](#)



Declaration of Conformity	Test Certificates	Marine / Shipping	other
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EG-Konf.

[Special Test Certificate](#)



LRS



DNV-GL

[Confirmation](#)

### UL/CSA ratings

<b>yielded mechanical performance [hp] for 3-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>	hp	100
<b>contact rating of auxiliary contacts according to UL</b>	hp	200
		B300 / R300

### 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- and Downloadcenter (Catalogs, Brochures,...)**  
<https://www.siemens.com/ic10>  
**Industry Mall (Online ordering system)**  
<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mfb=3RW4074-2BB44>

Cax online generator

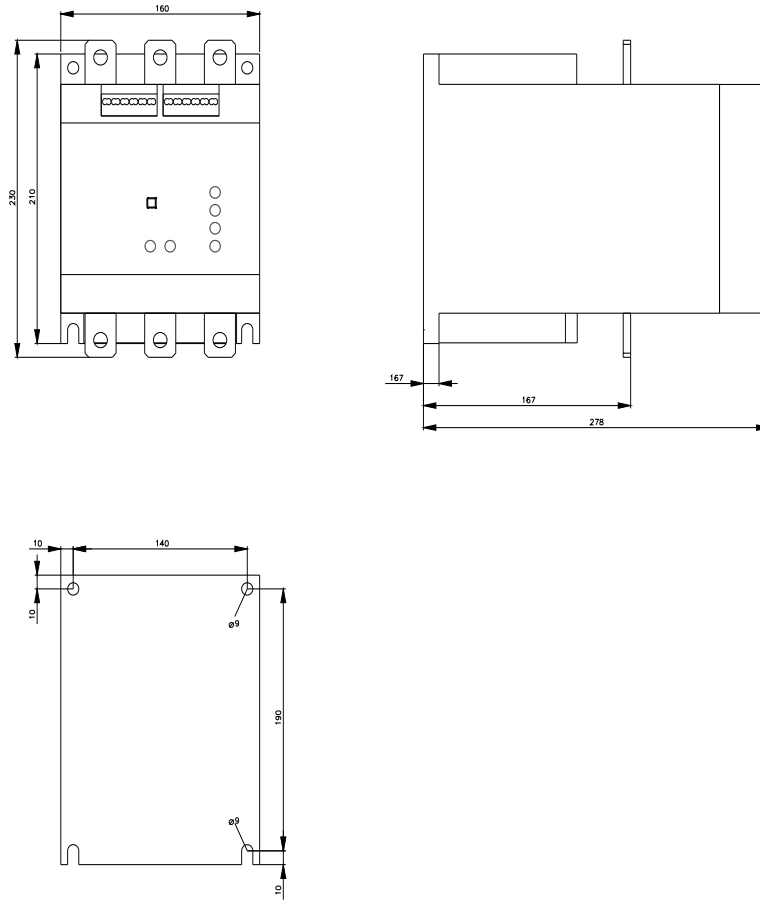
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW4074-2BB44>

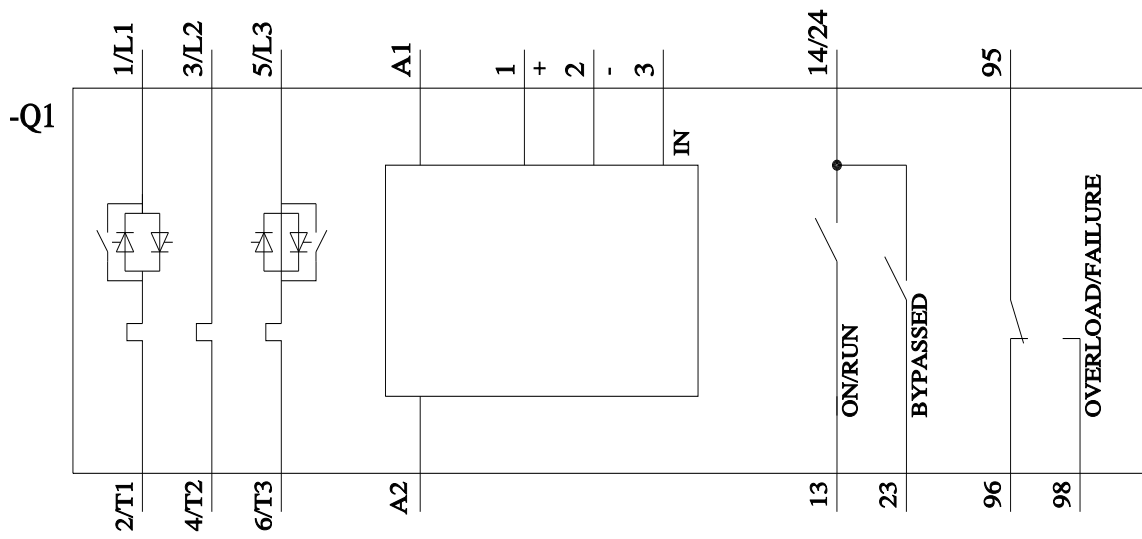
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RW4074-2BB44>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RW4074-2BB44&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW4074-2BB44&lang=en)





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