

SIRIUS SOFT STARTER, S0, 12.5A, 5.5KW/400V, 40 DEGR., AC 200-480V, AC/DC 24V, SPRING-LOADED TERMINALS



## General technical data

<b>product brandname</b>		SIRIUS
<ul style="list-style-type: none"> <li>• Product equipment Integrated bypass contact system</li> </ul>		Yes
<ul style="list-style-type: none"> <li>• Product feature Thyristors</li> </ul>		Yes
<b>Product function</b>		
<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
<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 starter
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<b>Operating current</b>		
• at 40 °C rated value	A	12.5
• at 50 °C rated value	A	11
• at 60 °C rated value	A	10
<b>Mechanical power output for three-phase motors</b>		
• at 230 V		
— at standard circuit at 40 °C rated value	W	3 000
• at 400 V		
— at standard circuit at 40 °C rated value	W	5 500
<b>Yielded mechanical performance [hp] for three-phase AC motor at 200/208 V at standard circuit at 50 °C rated value</b>	hp	3
<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 ... 480
<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	5
<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	2

<b>Control electronics</b>		
<b>Type of voltage of the control supply voltage</b>		AC/DC
<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	24
• at 60 Hz rated value	V	24
<b>Relative negative tolerance of the control supply voltage at AC at 60 Hz</b>	%	-20
<b>Relative positive tolerance of the control supply voltage at AC at 60 Hz</b>	%	20
<b>Control supply voltage 1 at DC rated value</b>	V	24

Relative negative tolerance of the control supply voltage at DC	%	-20
Relative positive tolerance of the control supply voltage at DC	%	20
Display version for fault signal		red

### Mechanical data

Size of engine control device		S0
Width	mm	45
Height	mm	150
Depth	mm	155
Mounting type		screw and snap-on mounting
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	60
• at the side	mm	15
• downwards	mm	40
Wire length maximum	m	300
Number of poles for main current circuit		3

### Connections/Terminals

Type of electrical connection		
• for main current circuit		spring-loaded terminals
• for auxiliary and control current circuit		spring-loaded 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		
• solid		2x (1 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 6 mm <sup>2</sup> ), max. 1x 10 mm <sup>2</sup>
• finely stranded with core end processing		2x (1 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 6 mm <sup>2</sup> )
Type of connectable conductor cross-sections at AWG conductors for main contacts for box terminal		
• using the front clamping point		1x 8, 2x (16 ... 10)
Type of connectable conductor cross-sections for main contacts		
• solid		1 ... 10 mm <sup>2</sup>
• finely stranded with core end processing		1 ... 6 mm <sup>2</sup>
Type of connectable conductor cross-sections for auxiliary contacts		
• solid		2x (0.25 ... 2.5 mm <sup>2</sup> )

<ul style="list-style-type: none"> <li>finely stranded with core end processing</li> </ul>		2x (0.25 ... 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> </ul>		16 ... 10, 1x 8
<ul style="list-style-type: none"> <li>for auxiliary contacts</li> </ul>		2x (24 ... 14)
<b>Ambient conditions</b>		
<b>Installation altitude at height above sea level</b>	m	5 000
<b>Environmental category</b>		
<ul style="list-style-type: none"> <li>during transport acc. to IEC 60721</li> </ul>		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 storage acc. to IEC 60721</li> </ul>		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 operation acc. to IEC 60721</li> </ul>		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> </ul>	°C	-25 ... +60
<ul style="list-style-type: none"> <li>during storage</li> </ul>	°C	-40 ... +80
<b>Derating temperature</b>	°C	40
<b>Protection class IP</b>		IP20

#### Certificates/approvals

General Product Approval	EMC	For use in hazardous locations
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Declaration of Conformity	Test Certificates	Shipping Approval
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[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



**other**

[Environmental Confirmations](#)

[Confirmation](#)

**UL/CSA ratings**

Yielded mechanical performance [hp] for three-phase AC motor		
<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	3  7.5
Contact rating of auxiliary contacts according to UL		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)**

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RW4024-2BB04>

**Cax online generator**

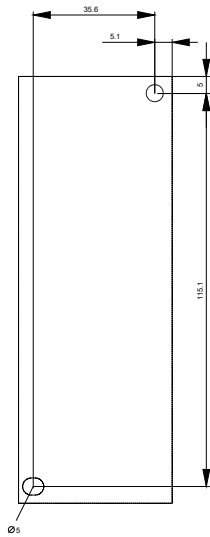
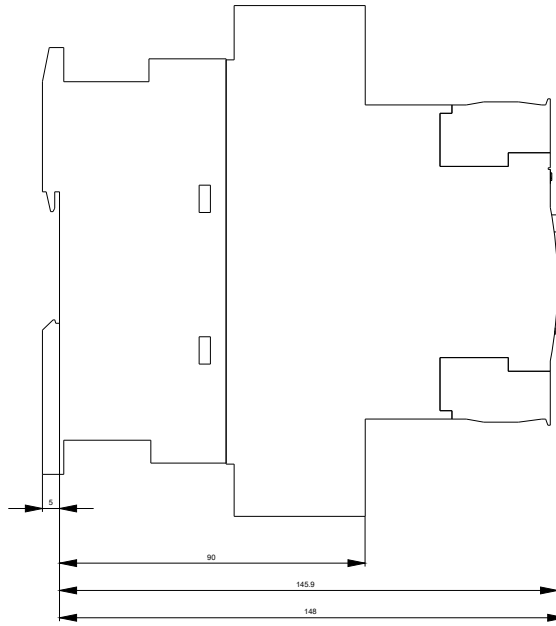
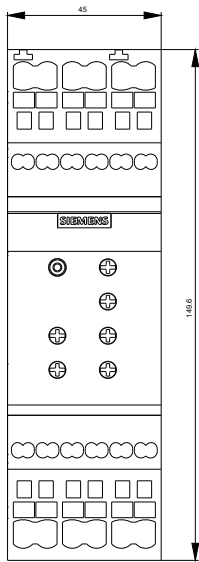
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW4024-2BB04>

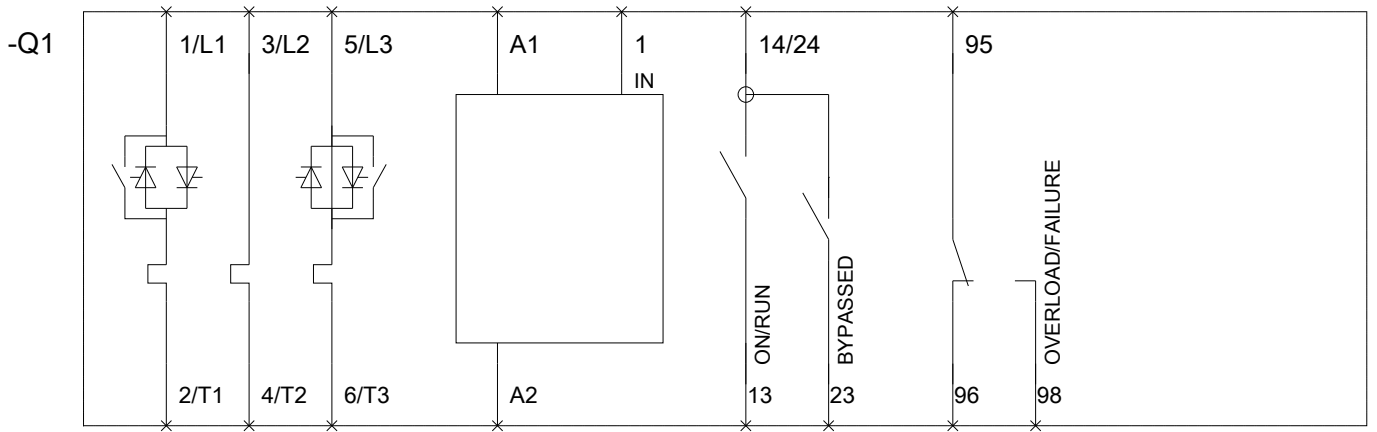
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

<https://support.industry.siemens.com/cs/ww/en/ps/3RW4024-2BB04>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RW4024-2BB04&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW4024-2BB04&lang=en)





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