

Siemens  
EcoTech



SIRIUS soft starter S0 12.5 A, 5.5 kW/400 V, 40 °C 200-480 V AC, 110-230 V AC/DC Screw terminals



### General technical data

product brand name	SIRIUS
product designation	Soft starter
product feature	
• integrated bypass contact system	Yes
• thyristors	Yes
product function	
• 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
product component motor brake output	No
insulation voltage rated value	600 V
degree of pollution	3, acc. to IEC 60947-4-2
blocking voltage of the thyristor maximum	1 600 V
reference code according to EN 61346-2	Q
reference code according to DIN 40719 extended according to IEC 204-2 according to IEC 750	G

### Power Electronics

operational current	
• at 40 °C rated value	12.5 A
• at 50 °C rated value	11 A
• at 60 °C rated value	10 A
yielded mechanical performance for 3-phase motors	
• at 230 V	
— at standard circuit at 40 °C rated value	3 kW
• at 400 V	
— at standard circuit at 40 °C rated value	5.5 kW
yielded mechanical performance [hp] for 3-phase AC motor at 200/208 V at standard circuit at 50 °C rated value	3 hp
operating frequency rated value	50 ... 60 Hz
relative negative tolerance of the operating frequency	-10 %
relative positive tolerance of the operating frequency	10 %
operating voltage at standard circuit rated value	200 ... 480 V
relative negative tolerance of the operating voltage at	-15 %

<b>standard circuit</b>	
<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>	5 A
<b>continuous operating current [% of I<sub>e</sub>] at 40 °C</b>	115 %
<b>power loss [W] at operational current at 40 °C during operation typical</b>	2 W
<b>Control circuit/ Control</b>	
<b>type of voltage of the control supply voltage</b>	AC/DC
<b>control supply voltage frequency 1 rated value</b>	50 Hz
<b>control supply voltage frequency 2 rated value</b>	60 Hz
<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 at 50 Hz</b>	110 ... 230 V
<b>control supply voltage 1 at AC at 60 Hz</b>	110 ... 230 V
<b>relative negative tolerance of the control supply voltage at AC at 50 Hz</b>	-15 %
<b>relative positive tolerance of the control supply voltage at AC at 50 Hz</b>	10 %
<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>control supply voltage 1 at DC</b>	110 ... 230 V
<b>relative negative tolerance of the control supply voltage at DC</b>	-15 %
<b>relative positive tolerance of the control supply voltage at DC</b>	10 %
<b>display version for fault signal</b>	red
<b>Mechanical data</b>	
<b>size of engine control device</b>	S0
<b>width</b>	45 mm
<b>height</b>	125 mm
<b>depth</b>	155 mm
<b>fastening method</b>	screw and snap-on mounting
<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	60 mm
• at the side	15 mm
• downwards	40 mm
<b>wire length maximum</b>	300 m
<b>number of poles for main current circuit</b>	3
<b>Connections/ Terminals</b>	
<b>type of electrical connection</b>	
• for main current circuit	screw-type terminals
• for auxiliary and control 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
<b>type of connectable conductor cross-sections for main contacts for box terminal using the front clamping point</b>	
• 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> )
<b>type of connectable conductor cross-sections for AWG cables for main contacts for box terminal</b>	
• using the front clamping point	1x 8, 2x (16 ... 10)

<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 for AWG cables</b> <ul style="list-style-type: none"> <li>• for auxiliary contacts</li> <li>• for auxiliary contacts finely stranded with core end processing</li> </ul>	2x (20 ... 14) 2x (20 ... 16)

### Ambient conditions

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

### 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>	3 hp 7.5 hp
<b>contact rating of auxiliary contacts according to UL</b>	B300 / R300

### Approvals Certificates

<b>Environmental Product Declaration</b>	
<ul style="list-style-type: none"> <li>• global warming potential [CO2 eq] / during manufacturing</li> <li>• global warming potential [CO2 eq] / during sales</li> <li>• global warming potential [CO2 eq] / during operation</li> <li>• global warming potential [CO2 eq] / after end of life</li> <li>• global warming potential [CO2 eq] / total</li> </ul>	4.24 kg 0.207 kg 117 kg -0.229 kg 121 kg

<b>Environment</b>	<b>General Product Approval</b>
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[Environmental Confirmations](#)



<b>General Product Approval</b>	<b>EMV</b>	<b>For use in hazardous locations</b>
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<b>Test Certificates</b>	<b>Maritime application</b>	<b>other</b>
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[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



[Confirmation](#)

<b>other</b>	<b>Railway</b>
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## 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 for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

## 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?mlfb=3RW4024-1BB14>

## Cax online generator

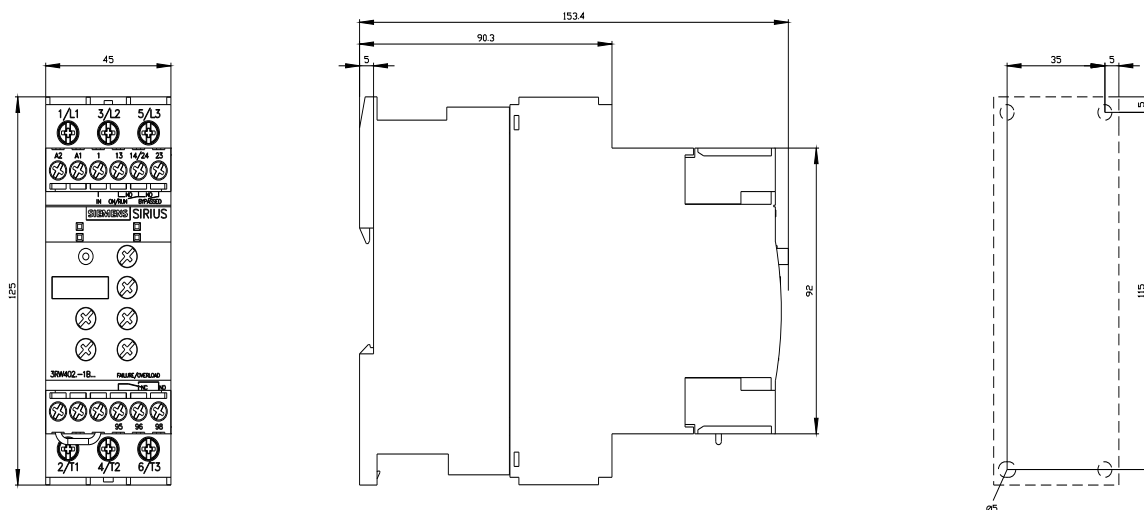
<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW4024-1BB14>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW4024-1BB14>

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

[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RW4024-1BB14&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW4024-1BB14&lang=en)





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