



SIRIUS soft starter S0 12.5 A, 7.5 kW/500 V, 40 °C 400-600 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 400 V	
— at standard circuit at 40 °C rated value	5.5 kW
• at 500 V	
— at standard circuit at 40 °C rated value	7.5 kW
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	400 ... 600 V
relative negative tolerance of the operating voltage at standard circuit	-15 %
relative positive tolerance of the operating voltage at	10 %

<b>standard circuit</b>	
<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> </ul>	2x (0.5 ... 2.5 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>• finely stranded with core end processing</li> </ul>	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> </ul>	2x (20 ... 14)
<ul style="list-style-type: none"> <li>• for auxiliary contacts finely stranded with core end processing</li> </ul>	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> </ul>	2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)
<ul style="list-style-type: none"> <li>• during storage according to IEC 60721</li> </ul>	1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4
<ul style="list-style-type: none"> <li>• during operation according 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>	-25 ... +60 °C
<ul style="list-style-type: none"> <li>• during storage</li> </ul>	-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 460/480 V</li> </ul>	
<ul style="list-style-type: none"> <li>— at standard circuit at 50 °C rated value</li> </ul>	7.5 hp
<ul style="list-style-type: none"> <li>• at 575/600 V</li> </ul>	
<ul style="list-style-type: none"> <li>— at standard circuit at 50 °C rated value</li> </ul>	10 hp
<b>contact rating of auxiliary contacts according to UL</b>	B300 / R300

### Approvals Certificates

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

### Environment

[Environmental Confirmations](#)



### General Product Approval

### General Product Approval



### Test Certificates

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



[Confirmation](#)

### other

Railway



## 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=3RW4024-1BB15>

## Cax online generator

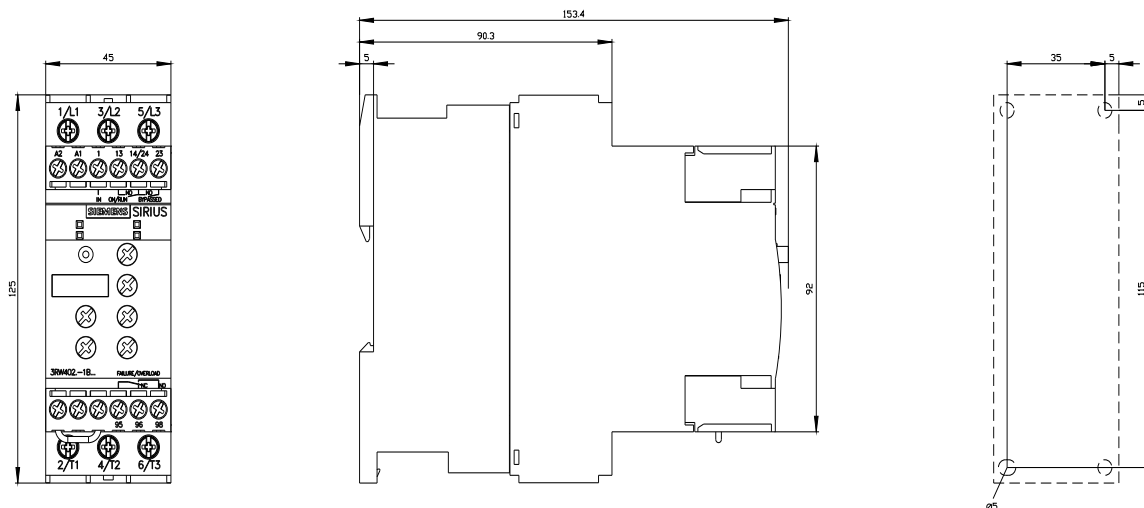
<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW4024-1BB15>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW4024-1BB15>

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

[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RW4024-1BB15&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW4024-1BB15&lang=en)





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