



SIRIUS soft starter S2 72 A, 37 kW/400 V, 40 °C 200-480 V AC, 24 V AC/DC spring-type terminals Thermistor motor protection

### General technical data

product brand name		SIRIUS
product feature		
• integrated bypass contact system		Yes
• thyristors		Yes
product function		
• intrinsic device protection		Yes
• motor overload protection		Yes
• evaluation of thermistor motor protection		Yes
• external reset		Yes
• adjustable current limitation		Yes
• inside-delta circuit		No
product component motor brake output		No
insulation voltage rated value	V	600
degree of pollution		3, acc. to IEC 60947-4-2
reference code acc. to DIN EN 61346-2		Q
reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750		G

### Power Electronics

product designation		Soft starter
operational current		
• at 40 °C rated value	A	72
• at 50 °C rated value	A	62
• at 60 °C rated value	A	60
yielded mechanical performance for 3-phase motors		
• at 230 V		
— at standard circuit at 40 °C rated value	W	22 000
• at 400 V		
— at standard circuit at 40 °C rated value	W	37 000
yielded mechanical performance [hp] for 3-phase AC motor at 200/208 V at standard circuit at 50 °C rated value	hp	20
operating frequency rated value	Hz	50 ... 60
relative negative tolerance of the operating frequency	%	-10
relative positive tolerance of the operating frequency	%	10
operating voltage at standard circuit rated value	V	200 ... 480
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>	A	35
<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>	W	15
<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>	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 50 Hz</b>	%	-20
<b>relative positive tolerance of the control supply voltage at AC at 50 Hz</b>	%	20
<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
<b>relative negative tolerance of the control supply voltage at DC</b>	%	-20
<b>relative positive tolerance of the control supply voltage at DC</b>	%	20
<b>display version for fault signal</b>		red
<b>Mechanical data</b>		
<b>size of engine control device</b>		S2
<b>width</b>	mm	55
<b>height</b>	mm	160
<b>depth</b>	mm	170
<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	mm	60
• at the side	mm	30
• downwards	mm	40
<b>wire length maximum</b>	m	300
<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		spring-loaded 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 (1.5 ... 16 mm²)
• finely stranded with core end processing		0.75 ... 25 mm²
• stranded		0.75 ... 35 mm²

<b>type of connectable conductor cross-sections for main contacts for box terminal using the back clamping point</b> <ul style="list-style-type: none"> <li>• solid</li> <li>• finely stranded with core end processing</li> <li>• stranded</li> </ul>		2x (1.5 ... 16 mm <sup>2</sup> ) 1.5 ... 25 mm <sup>2</sup> 1.5 ... 35 mm <sup>2</sup>
<b>type of connectable conductor cross-sections for main contacts for box terminal using both clamping points</b> <ul style="list-style-type: none"> <li>• solid</li> <li>• finely stranded with core end processing</li> <li>• stranded</li> </ul>		2x (1.5 ... 16 mm <sup>2</sup> ) 2x (1.5 ... 16 mm <sup>2</sup> ) 2x (1.5 ... 25 mm <sup>2</sup> )
<b>type of connectable conductor cross-sections at AWG cables for main contacts for box terminal</b> <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>		16 ... 2 18 ... 2 2x (16 ... 2)
<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 (0.25 ... 2.5 mm <sup>2</sup> ) 2x (0.25 ... 1.5 mm <sup>2</sup> )
<b>type of connectable conductor cross-sections at AWG cables</b> <ul style="list-style-type: none"> <li>• for auxiliary contacts</li> </ul>		2x (24 ... 14)

Ambient conditions		
<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> <li>• during storage acc. to IEC 60721</li> <li>• during operation acc. 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>	°C	-25 ... +60
	°C	-40 ... +80
<b>derating temperature</b>	°C	40
<b>protection class IP on the front acc. to IEC 60529</b>		IP20
<b>touch protection on the front acc. to IEC 60529</b>		finger-safe, for vertical contact from the front

Certificates/ approvals		
General Product Approval	EMC	For use in hazardous locations



Test Certificates	Marine / Shipping	other
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[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



[Confirmation](#)

Railway
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[Confirmation](#)

[Vibration and Shock](#)

#### UL/CSA ratings

yielded mechanical performance [hp] for 3-phase AC motor		
• at 220/230 V — at standard circuit at 50 °C rated value	hp	20
• at 460/480 V — at standard circuit at 50 °C rated value	hp	40
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,...)

<https://www.siemens.com/ic10>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RW4038-2TB04>

Cax online generator

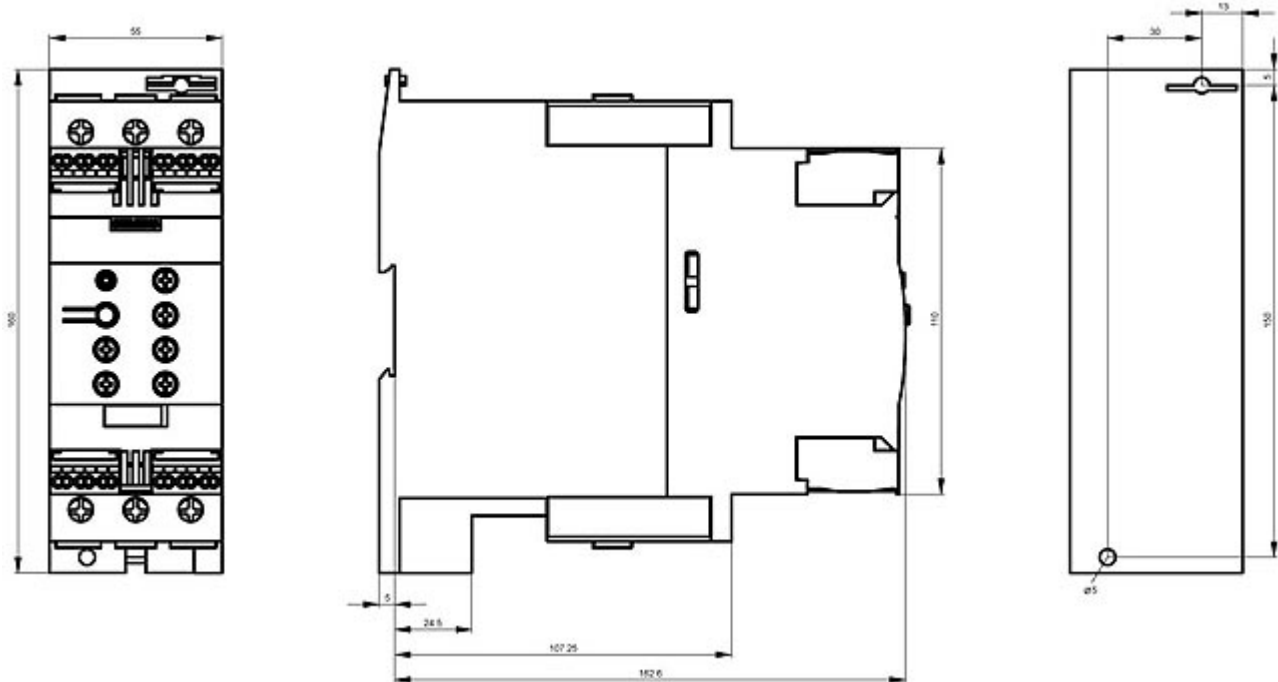
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW4038-2TB04>

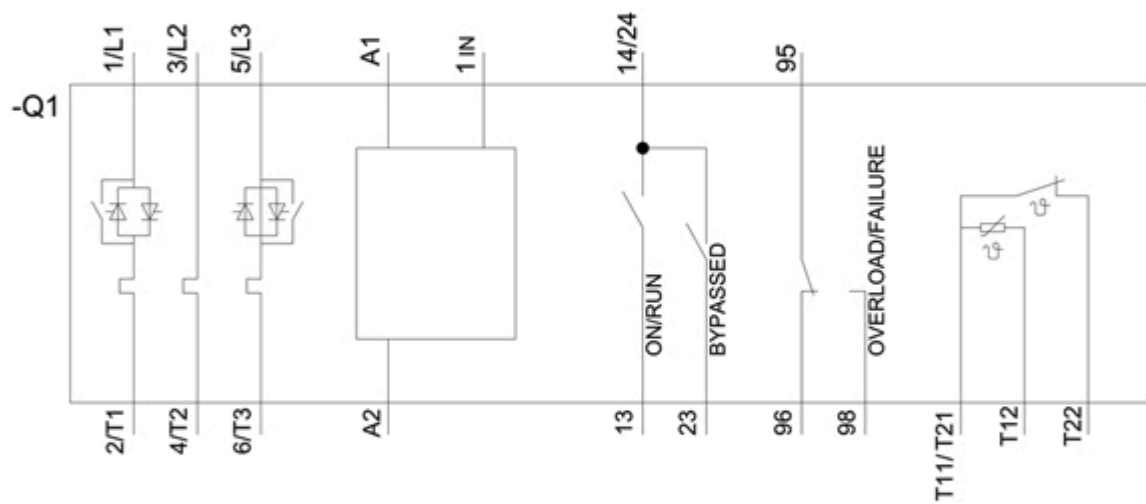
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RW4038-2TB04>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RW4038-2TB04&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW4038-2TB04&lang=en)





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