

SIRIUS SOFT STARTER, S3, 80A, 45KW/400V, 40 DEGR., AC 200-480V, AC/DC 24V, SCREW TERMINALS



General technical data

product brandname		SIRIUS
<ul style="list-style-type: none"> • Product equipment Integrated bypass contact system 		Yes
<ul style="list-style-type: none"> • Product feature Thyristors 		Yes
Product function		
<ul style="list-style-type: none"> • Intrinsic device protection 		Yes
<ul style="list-style-type: none"> • motor overload protection 		Yes
<ul style="list-style-type: none"> • Evaluation of thermistor motor protection 		No
<ul style="list-style-type: none"> • External reset 		Yes
<ul style="list-style-type: none"> • Adjustable current limitation 		Yes
<ul style="list-style-type: none"> • Inside-delta circuit 		No
Product component Motor brake output		No
Equipment marking acc. to DIN EN 61346-2		Q
Equipment marking acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750		G

Power Electronics

Product designation		Soft starter
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Operating current		
• at 40 °C rated value	A	80
• at 50 °C rated value	A	73
• at 60 °C rated value	A	66
Mechanical power output for three-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	45 000
Yielded mechanical performance [hp] for three-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 standard circuit	%	10
Minimum load [% of IM]	%	20
Adjustable motor current for motor overload protection minimum rated value	A	43
Continuous operating current [% of I_e] at 40 °C	%	115
Power loss [W] at operating current at 40 °C during operation typical	W	12

Control electronics		
Type of voltage of the control supply voltage		AC/DC
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	24
• at 60 Hz rated value	V	24
Relative negative tolerance of the control supply voltage at AC at 60 Hz	%	-20
Relative positive tolerance of the control supply voltage at AC at 60 Hz	%	20
Control supply voltage 1 at DC rated value	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		S3
Width	mm	70
Height	mm	170
Depth	mm	190
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	30
• 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		screw-type terminals
• for auxiliary and control current circuit		screw-type 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 (2.5 ... 16 mm ²)
• finely stranded with core end processing		2.5 ... 35 mm ²
• stranded		4 ... 70 mm ²
Type of connectable conductor cross-sections for main contacts for box terminal using the back clamping point		
• solid		2x (2.5 ... 16 mm ²)
• finely stranded with core end processing		2.5 ... 50 mm ²
• stranded		10 ... 70 mm ²
Type of connectable conductor cross-sections for main contacts for box terminal using both clamping points		

<ul style="list-style-type: none"> • solid • finely stranded with core end processing • stranded 		<p>2x (2.5 ... 16 mm²)</p> <p>2x (2.5 ... 35 mm²)</p> <p>2x (10 ... 50 mm²)</p>
Type of connectable conductor cross-sections at AWG conductors for main contacts for box terminal <ul style="list-style-type: none"> • using the back clamping point • using the front clamping point • using both clamping points 		<p>2x (10 ... 1/0)</p> <p>2x (10 ... 1/0)</p> <p>10 ... 2/0</p>
Type of connectable conductor cross-sections for DIN cable lug for main contacts <ul style="list-style-type: none"> • finely stranded • stranded 		<p>2 x (10 ... 50 mm²)</p> <p>2x (10 ... 70 mm²)</p>
Type of connectable conductor cross-sections for auxiliary contacts <ul style="list-style-type: none"> • solid • finely stranded with core end processing 		<p>2x (0.5 ... 2.5 mm²)</p> <p>2x (0.5 ... 1.5 mm²)</p>
Type of connectable conductor cross-sections at AWG conductors <ul style="list-style-type: none"> • for main contacts • for auxiliary contacts • for auxiliary contacts finely stranded with core end processing 		<p>2x (7 ... 1/0)</p> <p>2x (20 ... 14)</p> <p>2x (20 ... 16)</p>

Ambient conditions

Installation altitude at height above sea level	m	5 000
Environmental category <ul style="list-style-type: none"> • during transport acc. to IEC 60721 • during storage acc. to IEC 60721 • during operation acc. to IEC 60721 		<p>3K6 (no formation of ice, no condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6</p> <p>3K6 (no formation of ice, no condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6</p> <p>3K6 (no formation of ice, no condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6</p>
Ambient temperature <ul style="list-style-type: none"> • during operation • during storage 	<p>°C</p> <p>°C</p>	<p>-25 ... +60</p> <p>-40 ... +80</p>
Derating temperature	°C	40
Protection class IP		IP00

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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[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



other	Railway
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[Environmental Confirmations](#)

[Confirmation](#)

[Vibration and Shock](#)

UL/CSA ratings

Yielded mechanical performance [hp] for three-phase AC motor		
<ul style="list-style-type: none"> at 220/230 V <ul style="list-style-type: none"> at standard circuit at 50 °C rated value 	hp	25
<ul style="list-style-type: none"> at 460/480 V <ul style="list-style-type: none"> at standard circuit at 50 °C rated value 	hp	50
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=3RW4046-1BB04>

Cax online generator

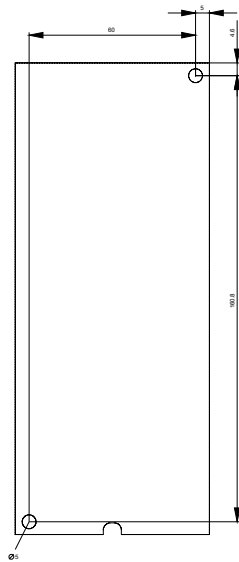
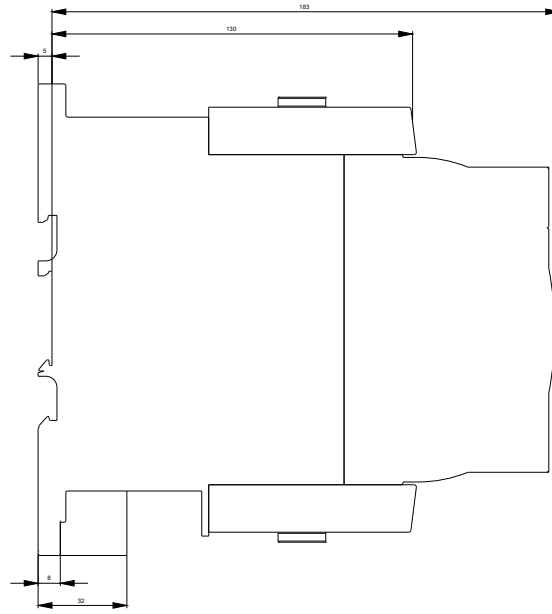
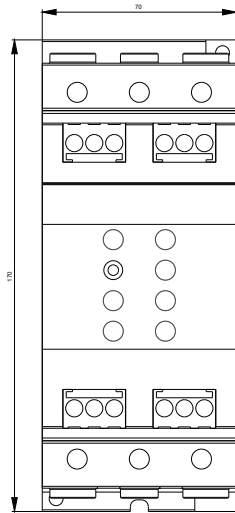
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW4046-1BB04>

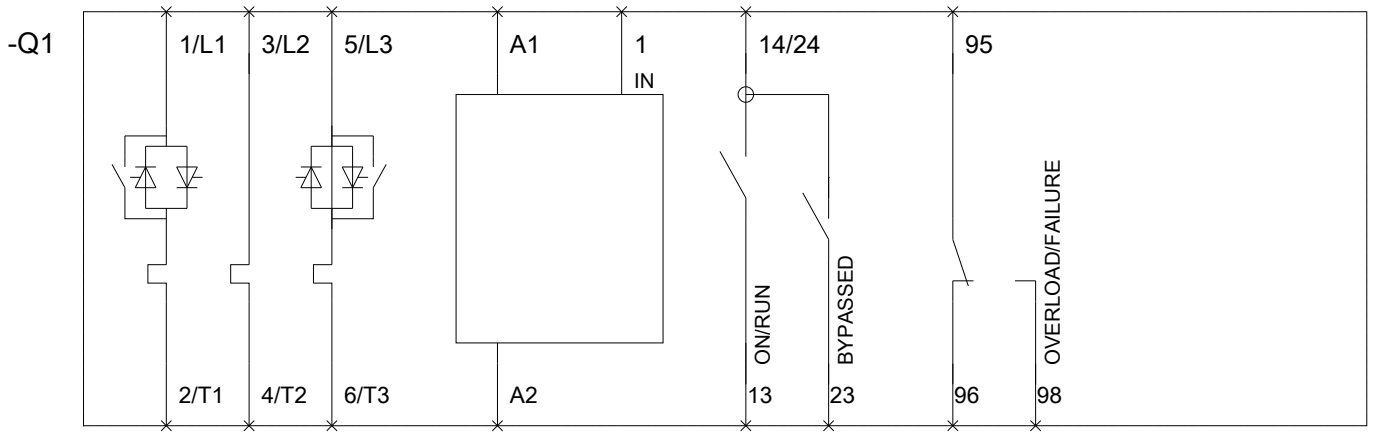
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RW4046-1BB04>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW4046-1BB04&lang=en





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