



SIRIUS soft starter S3 80 A, 45 kW/400 V, 40 °C 200-480 V AC, 24 V AC/DC Screw terminals

General technical data

product brand name		SIRIUS
product feature		
<ul style="list-style-type: none"> integrated bypass contact system thyristors 		Yes Yes
product function		
<ul style="list-style-type: none"> intrinsic device protection motor overload protection evaluation of thermistor motor protection external reset adjustable current limitation inside-delta circuit 		Yes Yes No Yes Yes 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 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

product designation		Soft starter
operational current		
<ul style="list-style-type: none"> at 40 °C rated value at 50 °C rated value at 60 °C rated value 	A	80 73 66
yielded mechanical performance for 3-phase motors		
<ul style="list-style-type: none"> at 230 V <ul style="list-style-type: none"> — at standard circuit at 40 °C rated value at 400 V <ul style="list-style-type: none"> — at standard circuit at 40 °C rated value 	kW	22 45
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 standard circuit	%	10
minimum load [%]	%	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 operational current at 40 °C during operation typical	W	12
Control circuit/ Control		
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 50 Hz	%	-15
relative positive tolerance of the control supply voltage at AC at 50 Hz	%	10
relative negative tolerance of the control supply voltage at AC at 60 Hz	%	-15
relative positive tolerance of the control supply voltage at AC at 60 Hz	%	10
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
fastening method		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 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>
<p>type of connectable conductor cross-sections at AWG cables for main contacts for box terminal</p> <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>
<p>type of connectable conductor cross-sections for DIN cable lug for main contacts</p> <ul style="list-style-type: none"> • finely stranded • stranded 	<p>2 x (10 ... 50 mm²)</p> <p>2x (10 ... 70 mm²)</p>
<p>type of connectable conductor cross-sections for auxiliary contacts</p> <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>
<p>type of connectable conductor cross-sections at AWG cables</p> <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

<p>installation altitude at height above sea level</p>	m	5 000
<p>environmental category</p> <ul style="list-style-type: none"> • during transport according to IEC 60721 • during storage according to IEC 60721 • during operation according to IEC 60721 		<p>2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)</p> <p>1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4</p> <p>3K6 (no formation of ice, no condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6</p>
<p>ambient temperature</p> <ul style="list-style-type: none"> • during operation • during storage 	°C	-25 ... +60
	°C	-40 ... +80
<p>derating temperature</p>	°C	40
<p>protection class IP on the front according to IEC 60529</p>		IP20
<p>touch protection on the front according to IEC 60529</p>		finger-safe, for vertical contact from the front

Certificates/ approvals

General Product Approval	EMC
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[Confirmation](#)



Declaration of Conformity	Test Certificates	Marine / Shipping
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[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



other	Railway
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[Confirmation](#)

[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
- at 460/480 V
 - at standard circuit at 50 °C rated value

hp	25
hp	50
B300 / R300	

contact rating of auxiliary contacts according to UL

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=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



