

SIRIUS soft starter S3 80 A, 45 kW/400 V, 40 °C 200-480 V AC, 110-230 V AC/DC Screw terminals



General technical data

Product brand name		SIRIUS
Product feature		
<ul style="list-style-type: none"> • integrated bypass contact system 		Yes
<ul style="list-style-type: none"> • 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
Reference identifier acc. to DIN EN 61346-2		Q
Reference identifier acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750		G

Power Electronics

Product designation		Soft starter
----------------------------	--	--------------

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 [%]	%	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	V	110 ... 230
Control supply voltage 1 at AC at 60 Hz	V	110 ... 230
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	V	110 ... 230
Relative negative tolerance of the control supply voltage at DC	%	-15

Relative positive tolerance of the control supply voltage at DC	%	10
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		
• solid		2x (2.5 ... 16 mm ²)

<ul style="list-style-type: none"> finely stranded with core end processing stranded 		2x (2.5 ... 35 mm ²) 2x (10 ... 50 mm ²)
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 		2x (10 ... 1/0) 2x (10 ... 1/0) 10 ... 2/0
Type of connectable conductor cross-sections for DIN cable lug for main contacts <ul style="list-style-type: none"> finely stranded stranded 		2 x (10 ... 50 mm ²) 2x (10 ... 70 mm ²)
Type of connectable conductor cross-sections for auxiliary contacts <ul style="list-style-type: none"> solid finely stranded with core end processing 		2x (0.5 ... 2.5 mm ²) 2x (0.5 ... 1.5 mm ²)
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 		2x (7 ... 1/0) 2x (20 ... 14) 2x (20 ... 16)

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 		3K6 (no formation of ice, no condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 3K6 (no formation of ice, no condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 3K6 (no formation of ice, no condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6
Ambient temperature <ul style="list-style-type: none"> during operation during storage 	°C °C	-25 ... +60 -40 ... +80
Derating temperature	°C	40
Protection class IP		IP00

Certificates/approvals

General Product Approval	EMC	For use in hazardous locations
--------------------------	-----	--------------------------------



Declaration of Conformity	Test Certificates	Shipping Approval
---------------------------	-------------------	-------------------



[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



other	Railway
-------	---------

[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=3RW4046-1BB14>

Cax online generator

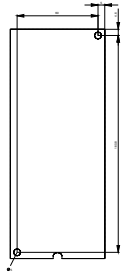
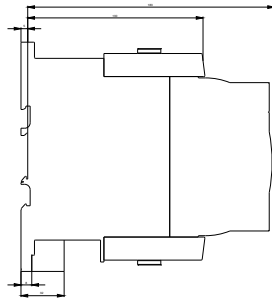
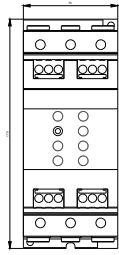
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW4046-1BB14>

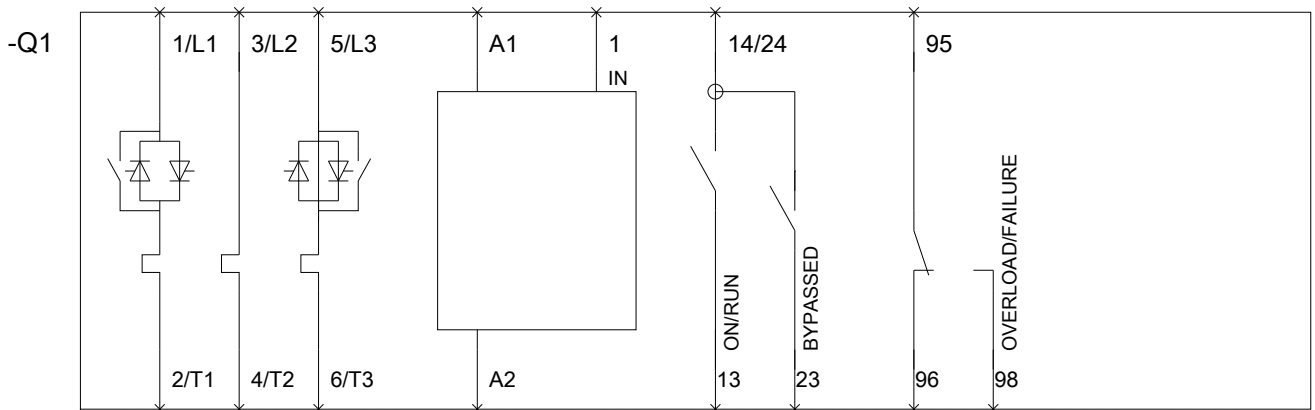
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RW4046-1BB14>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW4046-1BB14&lang=en





last modified:

09/21/2018