

SIRIUS soft starter Values at 500 V, 40 °C Standard:
313 A, 200 kW Inside-delta: 542 A, 355 kW 400-600 V
AC, 230 V AC Screw terminals



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		Yes
Product component Motor brake output		Yes
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
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Operating current		
• at 40 °C rated value	A	313
• at 50 °C rated value	A	280
• at 60 °C rated value	A	250
Operating current for three-phase motors at inside-delta circuit		
• at 40 °C rated value	A	542
• at 50 °C rated value	A	485
• at 60 °C rated value	A	433
Mechanical power output for three-phase motors		
• at 400 V		
— at standard circuit at 40 °C rated value	W	160 000
— at inside-delta circuit at 40 °C rated value	W	315 000
• at 500 V		
— at standard circuit at 40 °C rated value	W	200 000
— at inside-delta circuit at 40 °C rated value	W	355 000
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	400 ... 600
Relative negative tolerance of the operating voltage at standard circuit	%	-15
Relative positive tolerance of the operating voltage at standard circuit	%	10
Operating voltage at inside-delta circuit rated value	V	400 ... 600
Relative negative tolerance of the operating voltage at inside-delta circuit	%	-15
Relative positive tolerance of the operating voltage at inside-delta circuit	%	10
Minimum load [%]	%	8
Adjustable motor current for motor overload protection minimum rated value	A	62
Continuous operating current [% of I_e] at 40 °C	%	115
Power loss [W] at operating current at 40 °C during operation typical	W	145
Control electronics		
Type of voltage of the control supply voltage		AC
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 • at 60 Hz rated value	V	230
	V	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
Display version for fault signal		Display

Mechanical data

Width	mm	210
Height	mm	230
Depth	mm	298
Mounting type		screw fixing
Mounting position		with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back
Required spacing with side-by-side mounting • upwards • at the side • downwards	mm	100
	mm	5
	mm	75
	mm	
Wire length maximum	m	500
Number of poles for main current circuit		3

Connections/Terminals

Type of electrical connection • for main current circuit • for auxiliary and control current circuit		busbar connection
		screw-type terminals
Number of NC contacts for auxiliary contacts		0
Number of NO contacts for auxiliary contacts		3
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 • finely stranded with core end processing • finely stranded without core end processing • stranded		70 ... 240 mm²
		70 ... 240 mm²
		95 ... 300 mm²
Type of connectable conductor cross-sections for main contacts for box terminal using the back clamping point • finely stranded with core end processing • finely stranded without core end processing • stranded		120 ... 185 mm²
		120 ... 185 mm²
		120 ... 240 mm²

Type of connectable conductor cross-sections for main contacts for box terminal using both clamping points <ul style="list-style-type: none"> • finely stranded with core end processing • finely stranded without core end processing • stranded 		min. 2x 50 mm ² , max. 2x 185 mm ² min. 2x 50 mm ² , max. 2x 185 mm ² max. 2x 70 mm ² , max. 2x 240 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 		250 ... 500 kcmil 3/0 ... 600 kcmil min. 2x 2/0, max. 2x 500 kcmil
Type of connectable conductor cross-sections for DIN cable lug for main contacts <ul style="list-style-type: none"> • finely stranded • stranded 		50 ... 240 mm ² 70 ... 240 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 		2/0 ... 500 kcmil 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	60 -25 ... +80
Derating temperature	°C	40
Protection class IP		IP00

Certificates/approvals

General Product Approval	EMC	Declaration of Conformity
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CCC



CSA



UL



C-Tick



EG-Konf.

Test Certificates	Shipping Approval
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[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



ABS



BUREAU VERITAS



LRS



PRS

other

[Confirmation](#)

UL/CSA ratings

Yielded mechanical performance [hp] for three-phase AC motor

- at 460/480 V

- at standard circuit at 50 °C rated value

hp

200

- at inside-delta circuit at 50 °C rated value

hp

400

- at 575/600 V

- at standard circuit at 50 °C rated value

hp

250

- at inside-delta circuit at 50 °C rated value

hp

500

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=3RW4445-6BC45>

Cax online generator

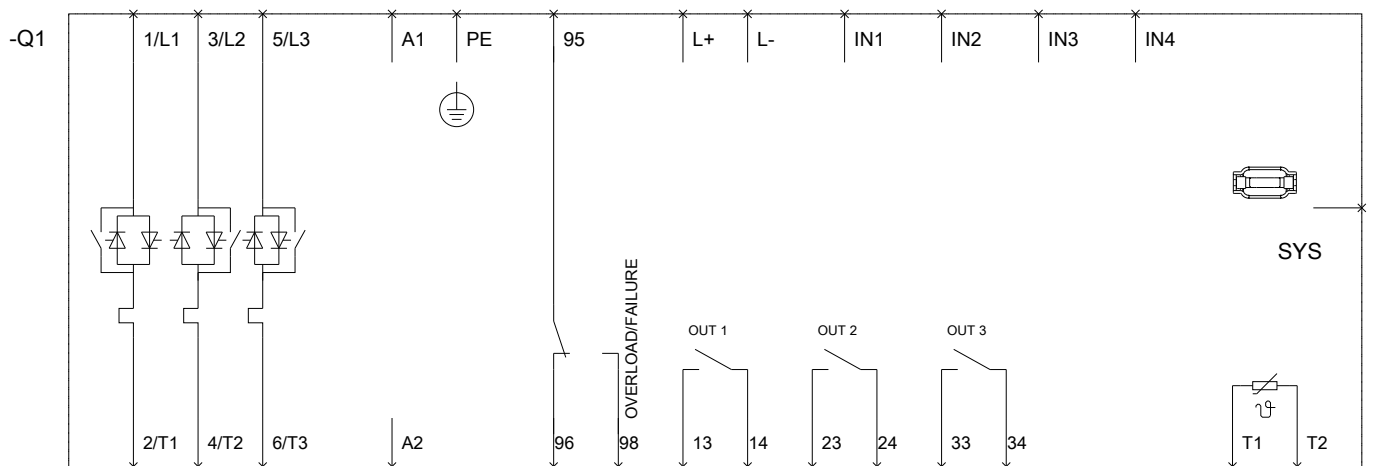
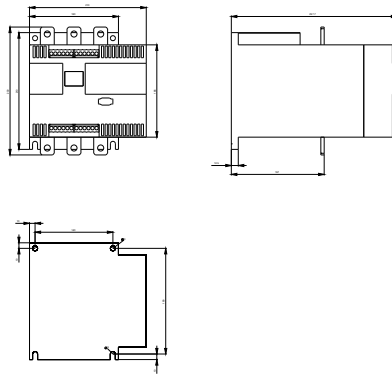
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW4445-6BC45>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW4445-6BC45>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW4445-6BC45&lang=en



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