

SIRIUS soft starter Values at 400 V, 40 °C standard: 551 A, 315 kW Inside-delta: 954 A, 560 kW 200-460 V AC, 230 V AC Screw terminals !!! Phased-out product !!! Successor is SIRIUS 3RW5, Preferred successor type is >>3RW5548-6HA14<<

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
insulation voltage rated value	V	690
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		
• at 40 °C rated value	A	551
• at 50 °C rated value	A	494
• at 60 °C rated value	A	438
operational current for 3-phase motors at inside-delta circuit		
• at 40 °C rated value	A	954
• at 50 °C rated value	A	856
• at 60 °C rated value	A	759
yielded mechanical performance for 3-phase motors		
• at 230 V		
— at standard circuit at 40 °C rated value	kW	160
— at inside-delta circuit at 40 °C rated value	kW	315
• at 400 V		
— at standard circuit at 40 °C rated value	kW	315
— at inside-delta circuit at 40 °C rated value	kW	560
yielded mechanical performance [hp] for 3-phase AC motor at 200/208 V at standard circuit at 50 °C rated value	hp	150
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 ... 460
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	200 ... 460
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	110
continuous operating current [% of I _e] at 40 °C	%	115
power loss [W] at operational current at 40 °C during operation typical	W	159

Control circuit/ Control

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	V	230
• at 60 Hz rated value	V	230
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
display version for fault signal		Display

Mechanical data

width	mm	510
height	mm	640
depth	mm	290
fastening method		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	mm	100
• at the side	mm	5
• downwards	mm	75
wire length maximum	m	500
number of poles for main current circuit		3

Connections/ Terminals

type of electrical connection		busbar connection screw-type terminals
• for main current circuit		
• for auxiliary and control circuit		
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 DIN cable lug for main contacts		
• finely stranded		50 ... 240 mm ²
• stranded		70 ... 240 mm ²
type of connectable conductor cross-sections for auxiliary contacts		
• solid		2x (0.5 ... 2.5 mm ²)
• finely stranded with core end processing		2x (0.5 ... 1.5 mm ²)
type of connectable conductor cross-sections at AWG cables		
• for main contacts		2/0 ... 500 kcmil
• for auxiliary contacts		2x (20 ... 14)
• for auxiliary contacts finely stranded with core end processing		2x (20 ... 16)

Ambient conditions

installation altitude at height above sea level	m	5 000
environmental category		
• during transport according to IEC 60721		2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)
• during storage according to IEC 60721		1K6 (only occasional condensation), 1C2 (no salt mist).

- during operation according to IEC 60721

ambient temperature

- during operation
- during storage

derating temperature

protection class IP on the front according to IEC 60529

	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
°C	60
°C	-25 ... +80
°C	40
	IP00

Certificates/ approvals

General Product Approval

EMC



[Confirmation](#)



Declaration of Conformity

Test Certificates

Marine / Shipping



[Special Test Certificate](#)



other

[Confirmation](#)

UL/CSA ratings

yielded mechanical performance [hp] for 3-phase AC motor

• at 200/208 V			
— at inside-delta circuit at 50 °C rated value	hp	300	
• at 220/230 V			
— at standard circuit at 50 °C rated value	hp	200	
— at inside-delta circuit at 50 °C rated value	hp	350	
• at 460/480 V			
— at standard circuit at 50 °C rated value	hp	400	
— at inside-delta circuit at 50 °C rated value	hp	750	

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=3RW4453-6BC44>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW4453-6BC44>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW4453-6BC44>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW4453-6BC44&lang=en

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