SIEMENS

Data sheet 3RW4458-6BC45



SIRIUS soft starter Values at 500 V, 40 °C standard: 970 A, 710 kW Inside-delta: 1680 A, 1200 kW 400-600 V AC, 230 V AC Screw terminals !!! Phased-out product !!! Successor is SIRIUS 3RW5, Preferred successor type is >>3RW5556-6HA16<<

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 acc. to DIN EN 61346-2		Q
reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750		G
Power Electronics		
product designation		Soft starter
operational current		
 at 40 °C rated value 	Α	970
 at 50 °C rated value 	Α	850
at 60 °C rated value	Α	760
operational current for 3-phase motors at inside-delta circuit		
 at 40 °C rated value 	Α	1 680
 at 50 °C rated value 	Α	1 472
• at 60 °C rated value	Α	1 316
yielded mechanical performance for 3-phase motors		
• at 400 V		
 — at standard circuit at 40 °C rated value 	W	560 000
 — at inside-delta circuit at 40 °C rated value 	W	1 000 000
• at 500 V		
 — at standard circuit at 40 °C rated value 	W	710 000
— at inside-delta circuit at 40 °C rated value	W	1 200 000
operating frequency rated value	Hz	50 60
relative negative tolerance of the operating frequency	%	-10

control supply voltage frequency 1 rated value control supply voltage frequency 2 rated value control supply voltage frequency 2 rated value control supply voltage frequency 3 rated value control supply voltage 1 at AC et 60 Nr Teated value et 60 Nr Teated value control supply voltage 1 at AC et 60 Nr Teated value et 60 Nr Teated value control supply voltage 1 at AC et 60 Nr Teated value et 60			12
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inside-delta circuit minimum load [5]		%	-15
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relative negative tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency control supply voltage frequency 2 230 2 230 2 230 2 2 230 2 2	control supply voltage frequency 1 rated value	Hz	50
voltage frequency relative positive tolerance of the control supply voltage frequency control supply voltage 1 at AC • at 50 Hz rated value • at 60 Hz rated value • at 60 Hz rated value • at 50 Hz rated value • at 50 Hz rated value • at 50 Hz rated value • at 50 Hz rated value v 230 relative negative tolerance of the control supply voltage at AC at 50 Hz relative positive tolerance of the control supply voltage at AC at 50 Hz relative positive tolerance of the control supply voltage at AC at 60 Hz relative positive tolerance of the control supply voltage at AC at 60 Hz relative positive tolerance of the control supply voltage at AC at 60 Hz relative positive tolerance of the control supply voltage at AC at 60 Hz display version for fault signal Mechanical data width mm 510 height depth amm 290 fastening method mounting position mm 440 dopth amm 290 fastening method 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 at the side • downwards mm 500 number of poles for main current circuit connections/ ferminals type of electrical connection • for main current circuit • for auxiliary and control circuit screw-type terminals number of NC contacts for auxiliary contacts number of NC contacts for auxiliary contacts number of NO contacts for auxiliary contacts number of NO contacts for auxiliary contacts number of CO contacts for auxiliary contacts 1 type of connectable conductor cross-sections for DIN cable lug for main contacts • finely stranded	control supply voltage frequency 2 rated value	Hz	60
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voltage at AC at 60 Hz display version for fault signal Mochanical data width height depth fastening method mounting position required spacing with side-by-side mounting • upwards • at the side • downwards • downwards wire length maximum number of poles for main current circuit connections/ Terminals type of electrical connection • for auxiliary and control circuit number of NC contacts for auxiliary contacts number of CO contacts for auxiliary contacts number of CO contacts for auxiliary contacts type of connectable conductor cross-sections for DIN cable lug for main contacts • finely stranded mm 510 mm 640 mm 640 mm 640 with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/-90°		%	-15
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 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 o • for auxiliary and control circuit busbar connection • for auxiliary and control circuit screw-type terminals number of NC contacts for auxiliary contacts 0 number of CO 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 50 240 mm²		%	10
width height mm 640 depth mm 290 fastening method screw fixing 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 wire length maximum number of poles for main current circuit connections/ Terminals type of electrical connection • for main current circuit • for auxiliary and control circuit number of NC contacts for auxiliary contacts number of CO contacts for auxiliary contacts type of connectable conductor cross-sections for DIN cable lug for main contacts • finely stranded mm 500 number of CO contacts number of NC contacts for auxiliary contacts 1 type of connectable conductor cross-sections for DIN cable lug for main contacts • finely stranded	display version for fault signal		Display
height depth mm 290 fastening method screw fixing 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 mm 5 • downwards mm 5 wire length maximum m 500 number of poles for main current circuit 3 Connections/ Terminals type of electrical connection • for auxiliary and control circuit screw-type terminals number of NO contacts for auxiliary contacts number of CO contacts for auxiliary contacts number of CO contacts for auxiliary contacts number of CO contacts for auxiliary contacts number of CO contacts for auxiliary contacts number of CO contacts for auxiliary contacts number of CO contacts for auxiliary contacts number of CO contacts for auxiliary contacts 1 50 240 mm²	Mechanical data		
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fastening method screw fixing mounting position required spacing with side-by-side mounting • upwards • at the side • downwards mm 5 wire length maximum number of poles for main current circuit • for auxiliary and control circuit number of NC contacts for auxiliary contacts number of CO contacts for auxiliary contacts type of connectable conductor cross-sections for DIN cable lug for main contacts • finely stranded screw fixing with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/-90° r	height	mm	640
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required spacing with side-by-side mounting • upwards • at the side • downwards wire length maximum number of poles for main current circuit **Connections/ Terminals** type of electrical connection • for main current circuit **number of NC contacts for auxiliary contacts number of CO contacts for auxiliary contacts type of connectable conductor cross-sections for DIN cable lug for main contacts • finely stranded **vertical mounting surface +/- 22.5° tiltable to the front and back **mm** 100 **mm** 500 **solution**	fastening method	_	screw fixing
 upwards at the side downwards mm downwards mm mm<th>mounting position</th><th></th><th>vertical mounting surface +/- 22.5° tiltable to the front and</th>	mounting position		vertical mounting surface +/- 22.5° tiltable to the front and
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wire length maximum m 500 number of poles for main current circuit 3 Connections/ Terminals type of electrical connection • for main current circuit busbar connection • for auxiliary and control circuit 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 DIN cable lug for main contacts • finely stranded 50 240 mm²	•	mm	5
number of poles for main current circuit Connections/ Terminals type of electrical connection • for main current circuit • for auxiliary and control circuit number of NC contacts for auxiliary contacts number of NO contacts for auxiliary contacts number of CO contacts for auxiliary contacts type of connectable conductor cross-sections for DIN cable lug for main contacts • finely stranded 50 240 mm²	downwards	mm	75
type of electrical connection • for main current circuit • for auxiliary and control circuit number of NC contacts for auxiliary contacts number of CO contacts for auxiliary contacts number of CO contacts for auxiliary contacts type of connectable conductor cross-sections for DIN cable lug for main contacts • finely stranded busbar connection screw-type terminals 0 1 type terminals 1 type of connectable conductor contacts 1 type of connectable conductor cross-sections for DIN cable lug for main contacts	wire length maximum	m	500
type of electrical connection • for main current circuit • for auxiliary and control circuit number of NC contacts for auxiliary contacts number of CO contacts for auxiliary contacts 1 type of connectable conductor cross-sections for DIN cable lug for main contacts • finely stranded busbar connection busbar connection screw-type terminals 0 1 1 1 1 1 1 1 1 1 1 1 1	number of poles for main current circuit		3
 for main current circuit for auxiliary and control circuit number of NC contacts for auxiliary contacts number of NO contacts for auxiliary contacts number of CO contacts for auxiliary contacts type of connectable conductor cross-sections for DIN cable lug for main contacts finely stranded busbar connection 3 1 50 240 mm² 	Connections/ Terminals		
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number of NC contacts for auxiliary contacts number of NO contacts for auxiliary contacts number of CO contacts for auxiliary contacts type of connectable conductor cross-sections for DIN cable lug for main contacts • finely stranded 50 240 mm²	 for auxiliary and control circuit 		screw-type terminals
number of NO contacts for auxiliary contacts number of CO contacts for auxiliary contacts type of connectable conductor cross-sections for DIN cable lug for main contacts • finely stranded 50 240 mm²			0
number of CO contacts for auxiliary contacts type of connectable conductor cross-sections for DIN cable lug for main contacts • finely stranded 50 240 mm²			3
type of connectable conductor cross-sections for DIN cable lug for main contacts • finely stranded 50 240 mm²			1
	type of connectable conductor cross-sections for DIN		
	 finely stranded 		50 240 mm²
• stranded 70 240 mm ²	stranded		70 240 mm²

	_	
type of connectable conductor cross-sections for auxiliary contacts		
• solid		2x (0.5 2.5 mm²)
 finely stranded with core end processing 		2x (0.5 1.5 mm²)
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 acc. to IEC 60721 		2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)
 during storage acc. to IEC 60721 		1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4
 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
ambient temperature		
 during operation 	°C	60
during storage	°C	-25 +80
derating temperature	°C	40
protection class IP on the front acc. to IEC 60529		IP00
Cartificates/approvals		

Certificates/ approvals

General Product Approval

EMC

Declaration of Conformity













Test Certificates

Marine / Shipping

Special Test Certificate











other

Confirmation

yielded mechanical performance [hp] for 3-phase AC motor		
• at 460/480 V		
 at standard circuit at 50 °C rated value 	hp	750
 at inside-delta circuit at 50 °C rated value 	hp	1 300
• at 575/600 V		
 at standard circuit at 50 °C rated value 	hp	950
 at inside-delta circuit at 50 °C rated value 	hp	1 650
contact rating of auxiliary contacts according to UL		B300 / R300

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=3RW4458-6BC45

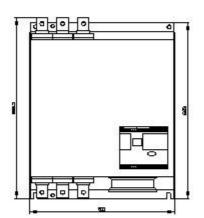
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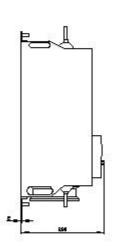
 $\underline{\text{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RW4458-6BC45}$

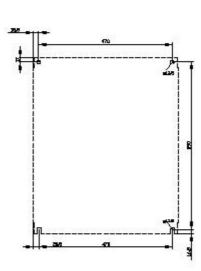
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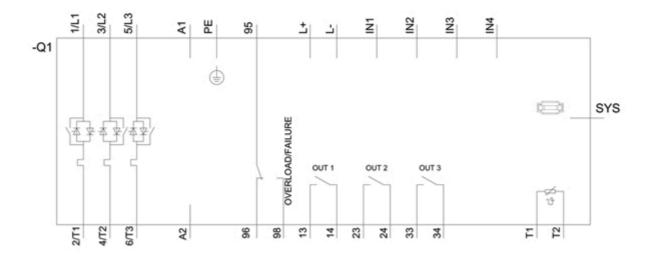
https://support.industry.siemens.com/cs/ww/en/ps/3RW4458-6BC45

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW4458-6BC45&lang=en









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