SIEMENS

Data sheet 3RW4458-6BC46



SIRIUS soft starter Values at 690 V, 40 °C standard: 970 A, 1000 kW Inside-delta: only up to 600 V 400-690 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 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 	Α	970	
 at 50 °C rated value 	Α	850	
• at 60 °C rated value	А	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	А	1 316	
yielded mechanical performance for 3-phase motors			
• at 400 V			
— at standard circuit at 40 °C rated value	kW	560	
— at inside-delta circuit at 40 °C rated value	kW	1 000	
• at 500 V			
 — at standard circuit at 40 °C rated value 	kW	710	
 at inside-delta circuit at 40 °C rated value 	kW	1 200	
 at 690 V at standard circuit at 40 °C rated value 	kW	1 000	
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	400 690	

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	А	194
continuous operating current [% of le] at 40 °C	%	115
power loss [W] at operational current at 40 °C during operation typical	W	270
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	%	10
AC at 60 Hz		
display version for fault signal		Display
display version for fault signal Mechanical data		
display version for fault signal Mechanical data width	mm	510
display version for fault signal Mechanical data width height	mm	510 640
display version for fault signal Mechanical data width height depth		510 640 290
display version for fault signal Mechanical data width height depth fastening method	mm	510 640 290 screw fixing
display version for fault signal Mechanical data width height depth fastening method mounting position	mm	510 640 290
display version for fault signal Mechanical data width height depth fastening method mounting position required spacing with side-by-side mounting	mm mm	510 640 290 screw fixing with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back
display version for fault signal Mechanical data width height depth fastening method mounting position required spacing with side-by-side mounting • upwards	mm mm	510 640 290 screw fixing with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back
display version for fault signal Mechanical data width height depth fastening method mounting position required spacing with side-by-side mounting • upwards • at the side	mm mm	510 640 290 screw fixing with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back 100 5
display version for fault signal Mechanical data width height depth fastening method mounting position required spacing with side-by-side mounting • upwards • at the side • downwards	mm mm mm mm	510 640 290 screw fixing with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back 100 5 75
display version for fault signal Mechanical data width height depth fastening method mounting position required spacing with side-by-side mounting • upwards • at the side • downwards wire length maximum	mm mm	510 640 290 screw fixing with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back 100 5 75 500
display version for fault signal Mechanical data width height depth fastening method mounting position required spacing with side-by-side mounting • upwards • at the side • downwards wire length maximum number of poles for main current circuit	mm mm mm mm	510 640 290 screw fixing with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back 100 5 75
display version for fault signal Mechanical data width height depth fastening method mounting position required spacing with side-by-side mounting • upwards • at the side • downwards wire length maximum number of poles for main current circuit Connections/ Terminals	mm mm mm mm	510 640 290 screw fixing with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back 100 5 75 500
display version for fault signal Mechanical data width height depth fastening method mounting position required spacing with side-by-side mounting	mm mm mm mm	510 640 290 screw fixing with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back 100 5 75 500 3
display version for fault signal Mechanical data width height depth fastening method mounting position 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	mm mm mm mm	510 640 290 screw fixing with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back 100 5 75 500 3
display version for fault signal Mechanical data width height depth fastening method mounting position required spacing with side-by-side mounting	mm mm mm mm	510 640 290 screw fixing with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back 100 5 75 500 3
display version for fault signal Mechanical data width height depth fastening method mounting position 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	mm mm mm mm	510 640 290 screw fixing with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back 100 5 75 500 3 busbar connection screw-type terminals
display version for fault signal Mechanical data width height depth fastening method mounting position 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	mm mm mm mm	510 640 290 screw fixing with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back 100 5 75 500 3 busbar connection screw-type terminals 0
display version for fault signal Mechanical data width height depth fastening method mounting position 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	mm mm mm mm	510 640 290 screw fixing with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back 100 5 75 500 3 busbar connection screw-type terminals 0 3
display version for fault signal Mechanical data width height depth fastening method mounting position 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	mm mm mm mm	510 640 290 screw fixing with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back 100 5 75 500 3 busbar connection screw-type terminals 0 3 1
display version for fault signal Mechanical data width height depth fastening method mounting position 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 mm mm mm	510 640 290 screw fixing with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back 100 5 75 500 3 busbar connection screw-type terminals 0 3 1
display version for fault signal Mechanical data width height depth fastening method mounting position 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 NO contacts for auxiliary contacts type of connectable conductor cross-sections for DIN cable lug for main contacts • finely stranded • stranded	mm mm mm mm	510 640 290 screw fixing with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back 100 5 75 500 3 busbar connection screw-type terminals 0 3 1
display version for fault signal Mechanical data width height depth fastening method mounting position 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 mm mm mm	510 640 290 screw fixing with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back 100 5 75 500 3 busbar connection screw-type terminals 0 3 1
display version for fault signal Mechanical data width height depth fastening method mounting position required spacing with side-by-side mounting	mm mm mm mm	510 640 290 screw fixing with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back 100 5 75 500 3 busbar connection screw-type terminals 0 3 1
display version for fault signal Mechanical data width height depth fastening method mounting position required spacing with side-by-side mounting	mm mm mm mm	510 640 290 screw fixing with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back 100 5 75 500 3 busbar connection screw-type terminals 0 3 1 50 240 mm² 70 240 mm²
display version for fault signal Mechanical data width height depth fastening method mounting position 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 NO contacts for auxiliary contacts type of connectable conductor cross-sections for DIN cable lug for main contacts • finely stranded • stranded type of connectable conductor cross-sections for auxiliary contacts • solid	mm mm mm mm	510 640 290 screw fixing with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back 100 5 75 500 3 busbar connection screw-type terminals 0 3 1 50 240 mm² 70 240 mm² 2x (0.5 2.5 mm²)

 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), 1S2 (sand must not get inside the devices), 1M4
during operation according 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 according to IEC 60529		IP00

Certificates/ approvals

General Product Approval









Confirmation



General Product Approval

EMV

Test Certificates

Marine / Shipping





Special Test Certificate







Marine / Shipping

other



LRS



Confirmation

UL/CSA ratings		
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
Further information		

Further information

Siemens has decided to exit the Russian market (see here).

https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

Simulation Tool for Soft Starters (STS)

https://support.industry.siemens.com/cs/ww/en/view/101494917

Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

Information- and Downloadcenter (Catalogs, Brochures,...)

https://www.siemens.com/ic10

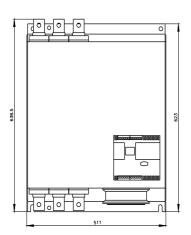
Industry Mall (Online ordering system)

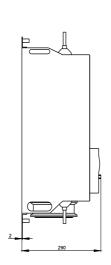
https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RW4458-6BC46

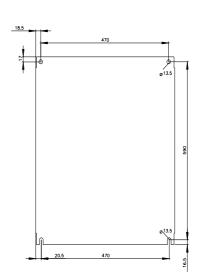
Cax online generator

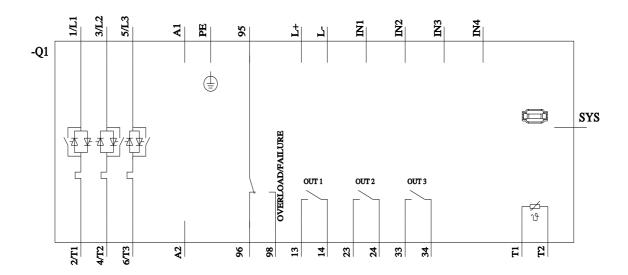
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW4458-6BC46

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW4458-6BC46&lang=en









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