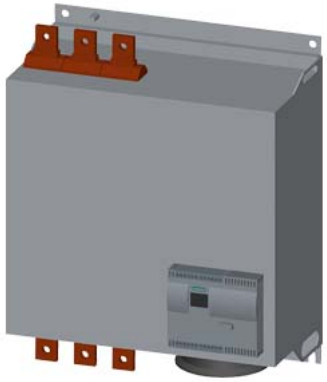
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Data sheet 3RW4456-6BC45



SIRIUS soft starter Values at 500 V, 40 °C standard: 780 A, 560 kW Inside-delta: 1351 A, 900 kW 400-600 V AC, 230 V AC Screw terminals !!! Phased-out product !!! Successor is SIRIUS 3RW5, Preferred successor type is >>3RW5554-6HA16<<

General technical data	
product brand name	SIRIUS
product designation	Soft starter
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	690 V
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	
operational current	
● at 40 °C rated value	780 A
● at 50 °C rated value	693 A
● at 60 °C rated value	615 A
operational current for 3-phase motors at inside-delta circuit	
● at 40 °C rated value	1 351 A
● at 50 °C rated value	1 200 A
● at 60 °C rated value	1 065 A
yielded mechanical performance for 3-phase motors	
● at 400 V	
— at standard circuit at 40 °C rated value	450 kW
— at inside-delta circuit at 40 °C rated value	800 kW
● at 500 V	
— at standard circuit at 40 °C rated value	560 kW
— at inside-delta circuit at 40 °C rated value	900 kW
operating frequency rated value	50 ... 60 Hz
relative negative tolerance of the operating frequency	-10 %
relative positive tolerance of the operating frequency	10 %
operating voltage at standard circuit rated value	400 ... 600 V

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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	400 ... 600 V
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	156 A
continuous operating current [% of Ie] at 40 °C	115 %
power loss [W] at operational current at 40 °C during operation typical	214 W
Control circuit/ Control	
type of voltage of the control supply voltage	AC
control supply voltage frequency 1 rated value	50 Hz
control supply voltage frequency 2 rated value	60 Hz
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	230 V
● at 60 Hz rated value	230 V
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	510 mm
height	640 mm
depth	290 mm
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	100 mm
● at the side	5 mm
● downwards	75 mm
wire length maximum	500 m
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
● 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)

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type of connectable conductor cross-sections for 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	5 000 m
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	60 °C
● during storage	-25 ... +80 °C
derating temperature	40 °C
protection class IP on the front according to IEC 60529	IP00
UL/CSA ratings	
yielded mechanical performance [hp] for 3-phase AC motor	
● at 460/480 V	
— at standard circuit at 50 °C rated value	600 hp
— at inside-delta circuit at 50 °C rated value	1 050 hp
● at 575/600 V	
— at standard circuit at 50 °C rated value	750 hp
— at inside-delta circuit at 50 °C rated value	1 350 hp
contact rating of auxiliary contacts according to UL	B300 / R300

Approvals Certificates

Environment	General Product Approval
Environmental Confirmations	CCC, cULus, EAC, CE EG-Konf., UKCA

EMV	Test Certificates	Maritime application
KC, RCM	Special Test Certificate	ABS, Bureau Veritas, Lloyd's Register LRS

other

Confirmation

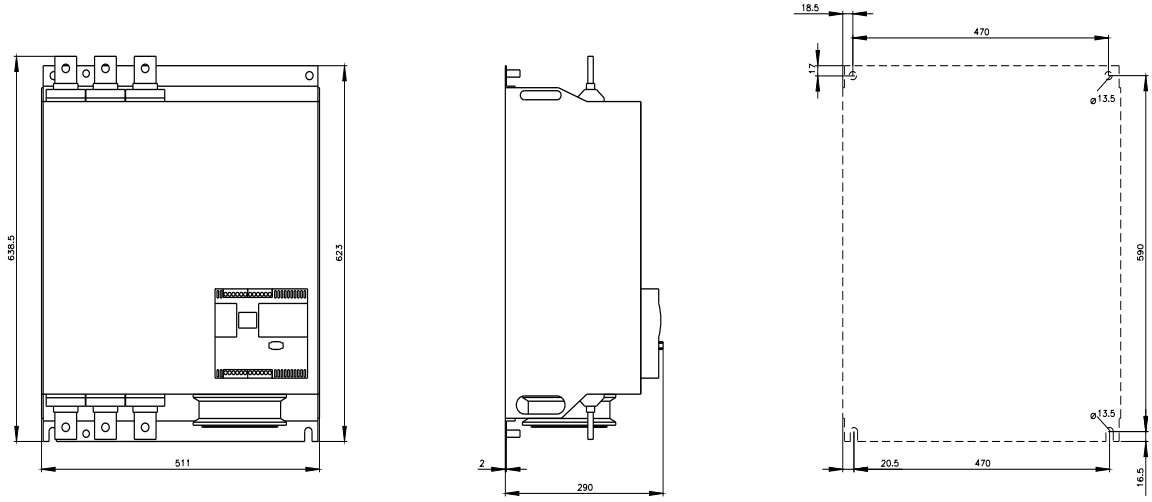
产品合格 QC PASS

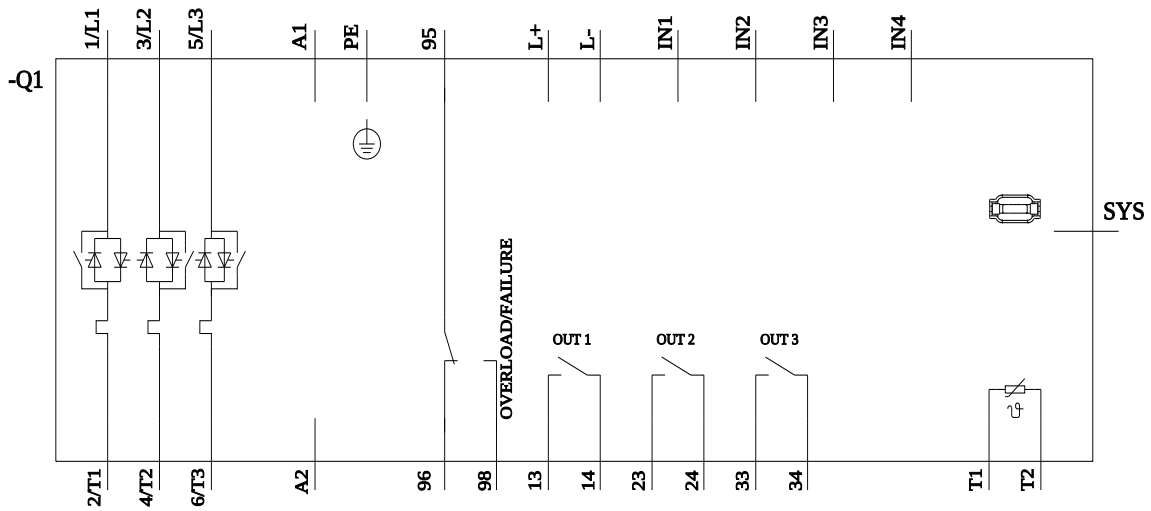
Further information

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 for data generation and storage
https://support.industry.siemens.com/cs/ww/en/view/109995012
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=3RW4456-6BC45
Cax online generator
https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW4456-6BC45

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Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3RW4456-6BC45
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW4456-6BC45&lang=en





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