SIEMENS

Data sheet 3RW4427-1BC44



SIRIUS soft starter Values at 400 V, 40 °C standard: 93 A, 45 kW Inside-delta: 161 A, 90 kW 200-460 V AC, 230 V AC Screw terminals !!! Phased-out product !!! Successor is SIRIUS 3RW5, Preferred successor type is >>3RW5527-1HA14<<

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	93
 at 50 °C rated value 	Α	82
at 60 °C rated value	Α	72
operational current for 3-phase motors at inside-delta circuit		
 at 40 °C rated value 	Α	161
 at 50 °C rated value 	Α	142
at 60 °C rated value	Α	125
yielded mechanical performance for 3-phase motors		
● at 230 V		
 at standard circuit at 40 °C rated value 	W	22 000
 at inside-delta circuit at 40 °C rated value 	W	45 000
● at 400 V		
 at standard circuit at 40 °C rated value 	W	45 000
— at inside-delta circuit at 40 °C rated value	W	90 000
yielded mechanical performance [hp] for 3-phase AC motor at 200/208 V at standard circuit at 50 °C rated value	hp	25

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	А	18
continuous operating current [% of le] at 40 °C	%	115
power loss [W] at operational current at 40 °C during operation typical	W	55
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	170
height	mm	192
depth	mm	270
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		
for main current circuit		box terminal
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 main contacts for box terminal using the front		

solidfinely stranded with core end processing		2.5 16 mm ² 2.5 35 mm ²	
finely stranded with core end processing finely stranded without core end processing		4 50 mm ²	
stranded stranded		4 70 mm ²	
type of connectable conductor cross-sections for main contacts for box terminal using the back clamping point		4 / O Hilli	
• solid		2,5 16 mm²	
 finely stranded with core end processing 		2.5 50 mm²	
 finely stranded without core end processing 		10 50 mm²	
stranded		10 70 mm²	
type of connectable conductor cross-sections for main contacts for box terminal using both clamping points			
• solid		2x (2.5 16 mm²)	
finely stranded with core end processing		2x (2.5 35 mm²)	
finely stranded without core end processing		2x (4 35 mm²)	
• stranded		2x (4 50 mm²)	
type of connectable conductor cross-sections at AWG cables for main contacts for box terminal			
 using the back clamping point 		10 2/0	
 using the front clamping point 		10 2/0	
using both clamping points		2x (10 1/0)	
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 auxiliary contacts		2x (20 14)	
 for auxiliary contacts finely stranded with core end processing 		2x (20 16)	
mbient 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	,
during storage acc. to IEC 60721		1K6 (only occasional condensation), 1S2 (sand must not get inside the de	vices), 1M4
during operation acc. to IEC 60721		3K6 (no formation of ice, no condens mist), 3S2 (sand must not get into the	
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		IP20	
touch protection on the front acc. to IEC 60529		finger-safe, for vertical contact from t	he front
ertificates/ approvals			
General Product Approval		EMC	Declaration of Conformity













Test Certificates

Marine / Shipping









Marine / Shipping

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	40
• at 220/230 V		
 at standard circuit at 50 °C rated value 	hp	25
 at inside-delta circuit at 50 °C rated value 	hp	50
• at 460/480 V		
 at standard circuit at 50 °C rated value 	hp	60
 at inside-delta circuit at 50 °C rated value 	hp	100
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=3RW4427-1BC44

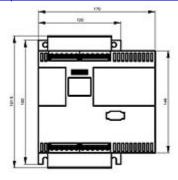
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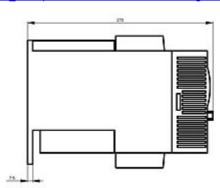
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW4427-1BC44

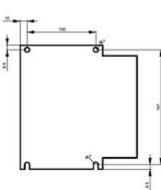
 ${\bf Service \& Support~(Manuals,~Certificates,~Characteristics,~FAQs,...)}$

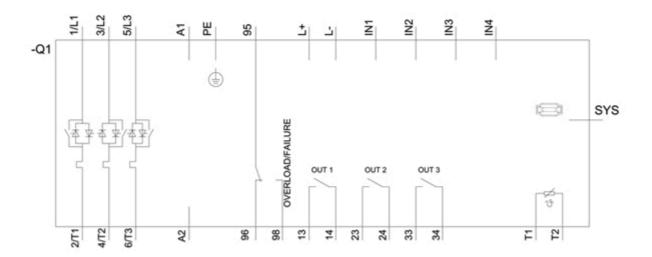
https://support.industry.siemens.com/cs/ww/en/ps/3RW4427-1BC44

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW4427-1BC44&lang=en









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