SIEMENS

Data sheet 3RW5248-2AC14



SIRIUS soft starter 200-480 V 570 A, 110-250 V AC spring-type terminals Analog output

product brand name	SIRIUS		
product category	Hybrid switching devices		
product designation	Soft starter		
product type designation	3RW52		
manufacturer's article number			
 of standard HMI module usable 	3RW5980-0HS00		
 of high feature HMI module usable 	3RW5980-0HF00		
 of communication module PROFINET standard usable 	3RW5980-0CS00		
 of communication module PROFIBUS usable 	3RW5980-0CP00		
 of communication module Modbus TCP usable 	3RW5980-0CT00		
 of communication module Modbus RTU usable 	3RW5980-0CR00		
 of communication module Ethernet/IP 	3RW5980-0CE00		
 of circuit breaker usable at 400 V 	3VA2580-6HN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10		
 of circuit breaker usable at 500 V 	3VA2580-6HN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10		
 of circuit breaker usable at 400 V at inside-delta circuit 	3VA2510-6HN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10		
 of circuit breaker usable at 500 V at inside-delta circuit 	3VA2510-6HN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10		
 of the gG fuse usable up to 690 V 	2x3NA3365-6; Type of coordination 1, Iq = 65 kA		
 of the gG fuse usable at inside-delta circuit up to 500 V 	2x3NA3365-6; Type of coordination 1, Iq = 65 kA		
 of full range R fuse link for semiconductor protection usable up to 690 V 	3NE1437-2; Type of coordination 2, Iq = 65 kA		
 of back-up R fuse link for semiconductor protection usable up to 690 V 	3NE3340-8; Type of coordination 2, Iq = 65 kA		
General technical data			
starting voltage [%]	30 100 %		
stopping voltage [%]	50 50 %		

start-up ramp time of soft starter

product component is supported

product feature integrated bypass contact system

certificate of suitability
• CE marking

UL approval

CSA approval

HMI-StandardHMI-High Feature

current limiting value [%] adjustable

0 ... 20 s

Yes Yes

Yes

Yes

Yes

Yes

130 ... 700 %

number of controlled phases	3			
trip class				
	CLASS 10A (default) / 10E / 20E; acc. to IEC 60947-4-2			
buffering time in the event of power failure	400			
for main current circuit	100 ms			
for control circuit	100 ms			
insulation voltage rated value	600 V			
degree of pollution	3, acc. to IEC 60947-4-2			
impulse voltage rated value	6 kV			
blocking voltage of the thyristor maximum	1 600 V			
service factor	1			
surge voltage resistance rated value	6 kV			
maximum permissible voltage for safe isolation				
between main and auxiliary circuit	600 V			
shock resistance	15 g / 11 ms, from 12 g / 11 ms with potential contact lifting			
vibration resistance	15 mm to 6 Hz; 2g to 500 Hz			
utilization category acc. to IEC 60947-4-2	AC 53a			
reference code acc. to IEC 81346-2	Q			
Substance Prohibitance (Date)	15.02.2018 00:00:00			
product function				
• ramp-up (soft starting)	Yes			
• ramp-down (soft stop)	Yes			
• Soft Torque	Yes			
adjustable current limitation	Yes			
pump ramp down	Yes			
intrinsic device protection	Yes			
motor overload protection				
evaluation of thermistor motor protection	Yes; Electronic motor overload protection			
	No			
• inside-delta circuit	Yes			
auto-RESET	Yes			
manual RESET	Yes			
• remote reset	Yes; By turning off the control supply voltage			
communication function	Yes			
 operating measured value display 	Yes; Only in conjunction with special accessories			
error logbook	Yes; Only in conjunction with special accessories			
 via software parameterizable 	No			
 via software configurable 	Yes			
PROFlenergy	Yes; in connection with the PROFINET Standard communication module			
• firmware update	Yes			
 removable terminal for control circuit 	Yes			
• torque control	No			
analog output	Yes; 4 20 mA (default) / 0 10 V (parameterizable with High Feature HMI)			
Power Electronics				
operational current				
at 40 °C rated value	570 A			
• at 50 °C rated value	504 A			
at 60 °C rated value	460 A			
operational current at inside-delta circuit				
• at 40 °C rated value	987 A			
at 50 °C rated value	873 A			
at 60 °C rated value	796 A			
operating voltage				
• rated value	200 480 V			
at inside-delta circuit rated value	200 480 V 200 480 V			
	200 480 V -15 %			
relative negative tolerance of the operating voltage				
relative positive tolerance of the operating voltage	10 %			
relative negative tolerance of the operating voltage at inside-delta circuit	-15 %			

relative positive tolerance of the operating voltage at inside-delta circuit	10 %
operating power for 3-phase motors	
 at 230 V at 40 °C rated value 	160 kW
 at 230 V at inside-delta circuit at 40 °C rated value 	315 kW
 at 400 V at 40 °C rated value 	315 kW
 at 400 V at inside-delta circuit at 40 °C rated value 	560 kW
Operating frequency 1 rated value	50 Hz
Operating frequency 2 rated value	60 Hz
relative negative tolerance of the operating frequency	-10 %
relative positive tolerance of the operating frequency	10 %
adjustable motor current	
 at rotary coding switch on switch position 1 	240 A
 at rotary coding switch on switch position 2 	262 A
 at rotary coding switch on switch position 3 	284 A
 at rotary coding switch on switch position 4 	306 A
 at rotary coding switch on switch position 5 	328 A
at rotary coding switch on switch position 6	350 A
 at rotary coding switch on switch position 7 	372 A
at rotary coding switch on switch position 8	394 A
 at rotary coding switch on switch position 9 	416 A
at rotary coding switch on switch position 10	438 A
at rotary coding switch on switch position 11	460 A
at rotary coding switch on switch position 12	482 A
 at rotary coding switch on switch position 13 	504 A
at rotary coding switch on switch position 14	526 A
at rotary coding switch on switch position 15	548 A
at rotary coding switch on switch position 16	570 A
• minimum	240 A
adjustable motor current	
for inside-delta circuit at rotary coding switch on switch position 1	416 A
 for inside-delta circuit at rotary coding switch on switch position 2 	454 A
 for inside-delta circuit at rotary coding switch on switch position 3 	492 A
 for inside-delta circuit at rotary coding switch on switch position 4 	530 A
 for inside-delta circuit at rotary coding switch on switch position 5 	568 A
 for inside-delta circuit at rotary coding switch on switch position 6 	606 A
 for inside-delta circuit at rotary coding switch on switch position 7 	644 A
 for inside-delta circuit at rotary coding switch on switch position 8 	682 A
 for inside-delta circuit at rotary coding switch on switch position 9 	721 A
 for inside-delta circuit at rotary coding switch on switch position 10 	759 A
 for inside-delta circuit at rotary coding switch on switch position 11 	797 A
for inside-delta circuit at rotary coding switch on switch position 12	835 A
 for inside-delta circuit at rotary coding switch on switch position 13 	873 A
 for inside-delta circuit at rotary coding switch on switch position 14 	911 A
for inside-delta circuit at rotary coding switch on switch position 15	949 A
 for inside-delta circuit at rotary coding switch on switch position 16 	987 A

minimum load (%) power loss [W] for rated value of the current at AC #4 do C after startup ** if 50 °C after startup	at inside-delta circuit minimum	416 A			
power loss [W] for rated value of the current at AC at 80 °C after startup by end 50 °C after startup carbon for the control startup carbon for the control startup carbon for the control supply control supply voltage at AC cartrol supply voltage frequency control supply voltage frequency control supply voltage frequency control supply voltage frequency control supply current in standby mode rated value bloding current in bypass operation rated value locked-rotor current at close of bypass contact mush current peak at application of control supply voltage design of the overvoltage protection duration of inrush current peak at application of control supply voltage design of the overvoltage protection for part supply voltage of the control supply cartrol supply voltage frequency cartrol supply voltag					
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required spacing with side-by-side mounting • forwards • backwards 10 mm 0 mm	width	210 mm			
◆ forwards◆ backwards10 mm0 mm	depth	203 mm			
• backwards 0 mm	required spacing with side-by-side mounting				
	forwards	10 mm			
• upwards 100 mm	backwards	0 mm			
	• upwards	100 mm			

• downwards	75 mm		
• at the side	5 mm		
weight without packaging	10.6 kg		
Connections/ Terminals			
type of electrical connection			
 for main current circuit 	busbar connection		
for control circuit	spring-loaded terminals		
width of connection bar maximum	45 mm		
type of connectable conductor cross-sections			
 for DIN cable lug for main contacts stranded 	2x (50 240 mm²)		
for DIN cable lug for main contacts finely stranded	2x (70 240 mm²)		
type of connectable conductor cross-sections			
 for control circuit solid 	2x (0.25 1.5 mm²)		
 for control circuit finely stranded with core end processing 	2x (0.25 1.5 mm²)		
 at AWG cables for control circuit solid 	2x (24 16)		
at AWG cables for control circuit finely stranded with core end processing	2x (24 16)		
wire length			
 between soft starter and motor maximum 	800 m		
at the digital inputs at AC maximum	100 m		
tightening torque			
for main contacts with screw-type terminals	14 24 N·m		
for auxiliary and control contacts with screw-type terminals	0.8 1.2 N·m		
tightening torque [lbf·in]			
 for main contacts with screw-type terminals 	124 210 lbf·in		
for auxiliary and control contacts with screw-type terminals	7 10.3 lbf·in		
Ambient conditions			
	E 000 Dti		
installation altitude at height above sea level maximum	5 000 m; Derating as of 1000 m, see catalog		
ambient temperature	5 UUU m; Derating as of 1000 m, see catalog		
ambient temperature • during operation	-25 +60 °C; Please observe derating at temperatures of 40 °C or above		
ambient temperature	-25 +60 °C; Please observe derating at temperatures of 40 °C or		
 ambient temperature during operation during storage and transport environmental category 	-25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C		
 ambient temperature during operation during storage and transport environmental category during operation acc. to IEC 60721 	-25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6		
 ambient temperature during operation during storage and transport environmental category during operation acc. to IEC 60721 during storage acc. to IEC 60721 	-25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4		
 ambient temperature during operation during storage and transport environmental category during operation acc. to IEC 60721 during storage acc. to IEC 60721 during transport acc. to IEC 60721 	-25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4 2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)		
ambient temperature	-25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4		
ambient temperature	-25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4 2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)		
ambient temperature	-25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4 2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m) acc. to IEC 60947-4-2: Class A		
ambient temperature	-25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4 2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m) acc. to IEC 60947-4-2: Class A		
ambient temperature	-25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4 2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m) acc. to IEC 60947-4-2: Class A		
ambient temperature	-25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4 2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m) acc. to IEC 60947-4-2: Class A Yes Yes		
ambient temperature	-25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4 2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m) acc. to IEC 60947-4-2: Class A Yes Yes Yes		
ambient temperature	-25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4 2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m) acc. to IEC 60947-4-2: Class A Yes Yes		
ambient temperature	-25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4 2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m) acc. to IEC 60947-4-2: Class A Yes Yes Yes		
ambient temperature	-25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4 2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m) acc. to IEC 60947-4-2: Class A Yes Yes Yes		
ambient temperature	-25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4 2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m) acc. to IEC 60947-4-2: Class A Yes Yes Yes		
ambient temperature	-25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4 2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m) acc. to IEC 60947-4-2: Class A Yes Yes Yes Yes Yes		
ambient temperature	-25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4 2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m) acc. to IEC 60947-4-2: Class A Yes Yes Yes Yes Yes Yes		
ambient temperature	-25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4 2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m) acc. to IEC 60947-4-2: Class A Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye		

operating power [hp] for 3-phase motors					
 at 200/208 V at 50 °C rated value 	150 hp				
 at 220/230 V at 50 °C rated value 	200 hp				
 at 460/480 V at 50 °C rated value 	400 hp				
 at 200/208 V at inside-delta circuit at 50 °C rated value 	300 hp				
 at 220/230 V at inside-delta circuit at 50 °C rated value 	350 hp				
 at 460/480 V at inside-delta circuit at 50 °C rated value 	750 hp				
contact rating of auxiliary contacts according to UL	R300-B300				
Safety related data					
protection class IP on the front acc. to IEC 60529	IP00; IP20 with cover				
touch protection on the front acc. to IEC 60529	finger-safe, for vertical contact from the front with cover				
electromagnetic compatibility	in accordance with IEC 60947-4-2				
Certificates/ approvals					
General Product Approval		FMC	Declaration of		



General Product Approval









EMC



Conformity

Test Certificates

Marine / Shipping

Type Test Certificates/Test Report











other

Confirmation

Further information

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=3RW5248-2AC14

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5248-2AC14

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

https://support.industry.siemens.com/cs/ww/en/ps/3RW5248-2AC14

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5248-2AC14&lang=en

Characteristic: Tripping characteristics, I2t, Let-through current

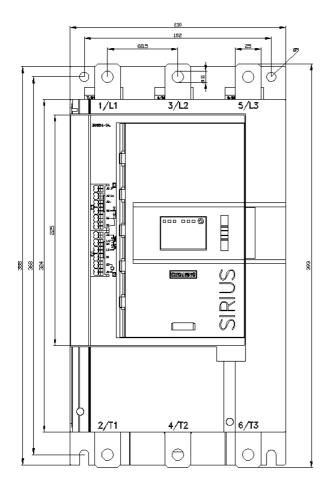
https://support.industry.siemens.com/cs/ww/en/ps/3RW5248-2AC14/char

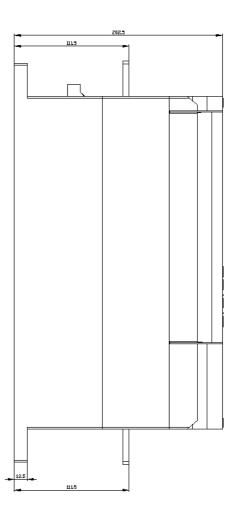
Characteristic: Installation altitude

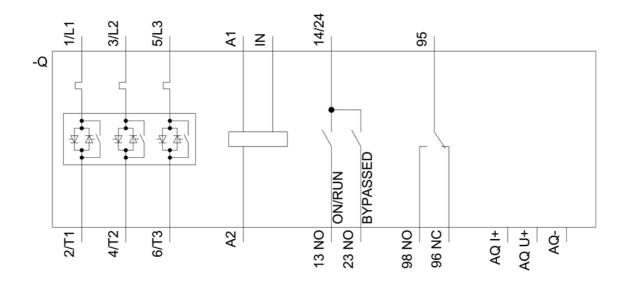
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5248-2AC14&objecttype=14&gridview=view1

Simulation Tool for Soft Starters (STS)

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







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