SIEMENS

Data sheet

product brand name



SIRIUS soft starter 200-480 V 315 A, 110-250 V AC spring-type terminals Analog output

3RW5245-2AC14



product category	Hybrid switching devices				
product designation	Soft starter				
product type designation	3RW52				
manufacturer's article number					
 of standard HMI module usable 	<u>3RW5980-0HS00</u>				
 of high feature HMI module usable 	<u>3RW5980-0HF00</u>				
 of communication module PROFINET standard usable 	<u>3RW5980-0CS00</u>				
 of communication module PROFIBUS usable 	<u>3RW5980-0CP00</u>				
 of communication module Modbus TCP usable 	<u>3RW5980-0CT00</u>				
 of communication module Modbus RTU usable 	<u>3RW5980-0CR00</u>				
 of communication module Ethernet/IP 	<u>3RW5980-0CE00</u>				
 of circuit breaker usable at 400 V 	<u>3VA2440-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10</u>				
 of circuit breaker usable at 500 V 	3VA2440-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10				
 of circuit breaker usable at 400 V at inside-delta circuit 	3VA2580-6HN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10				
 of circuit breaker usable at 500 V at inside-delta circuit 	3VA2580-6HN32-0AA0; 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 	<u>3NE1334-2: Type of coordination 2, Iq = 65 kA</u>				
 of back-up R fuse link for semiconductor protection usable up to 690 V 	<u>3NE3336; Type of coordination 2, Iq = 65 kA</u>				
eneral technical data					
starting voltage [%]	30 100 %				
stopping voltage [%]	50 %; non-adjustable				
start-up ramp time of soft starter	0 20 s				
current limiting value [%] adjustable	130 700 %				
certificate of suitability					
CE marking	Yes				
UL approval	Yes				
CSA approval	Yes				
product component					
HMI-High Feature	No				
 is supported HMI-Standard 	Yes				
 is supported HMI-High Feature 	Yes				
product feature integrated bypass contact system	Yes				
number of controlled phases	3				
buffering time in the event of power failure					

SIRIUS

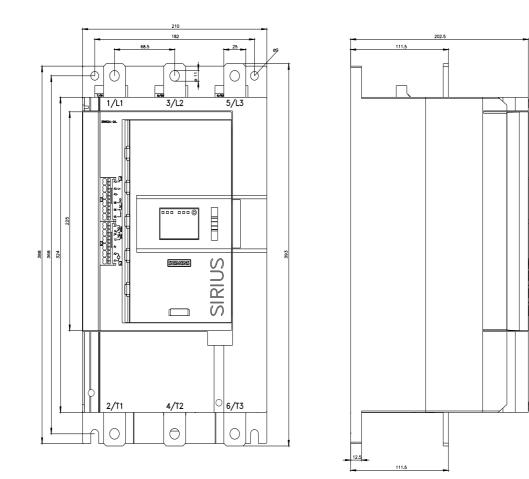
 for main current circuit 	100 ms			
for control circuit	100 ms			
insulation voltage rated value	600 V			
degree of pollution	3, acc. to IEC 60947-4-2			
impulse voltage rated value	6 kV			
blocking voltage of the thyristor maximum	1 600 V			
service factor	1			
surge voltage resistance rated value	6 kV			
maximum permissible voltage for protective separation				
 between main and auxiliary circuit 	600 V			
shock resistance	15 g / 11 ms, from 12 g / 11 ms with potential contact lifting			
utilization category according to IEC 60947-4-2	AC 53a			
reference code according to IEC 81346-2	Q			
Substance Prohibitance (Date)	02/15/2018			
SVHC substance name	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one - 71868-10-5 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol - 79-94-7 1,6,7,8,9,14,15,16,17,17,18,18- Dodecachloropentacyclo[12.2.1.16,9.02,13.05,10]octadeca-7,15-diene ("Dechlorane Plus"™) covering any of its individual anti- and syn-isomers or any combination thereof Dibutylbis(pentane-2,4-dionato-O,O')tin - 22673-19-4 Dicyclohexyl phthalate (DCHP) - 84-61-7 Dodecamethylcyclohexasiloxane (D6) - 540-97-6			
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 	Yes; Electronic motor overload protection			
 evaluation of thermistor motor 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 via software configurable 	No Yes			
Via software configurable 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	315 A			
• at 50 °C rated value	279 A			
• at 60 °C rated value	255 A			
operational current at inside-delta circuit				
• at 40 °C rated value	546 A			
• at 50 °C rated value	483 A			
• at 60 °C rated value	442 A			
operating voltage				
rated value	200 480 V			
at inside-delta circuit rated value	200 480 V			
relative negative tolerance of the operating voltage	-15 %			
relative positive tolerance of the operating voltage	10 %			
relative negative tolerance of the operating voltage at inside-delta circuit	-15 %			

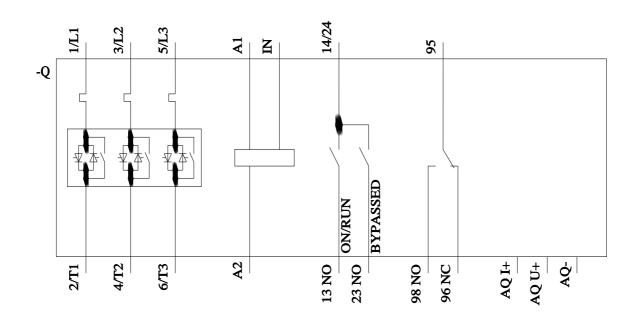
relative positive tolerance of the operating voltage at inside-delta circuit	10 %
operating power for 3-phase motors	
 at 230 V at 40 °C rated value 	90 kW
 at 230 V at inside-delta circuit at 40 °C rated value 	160 kW
 at 400 V at 40 °C rated value 	160 kW
 at 400 V at inside-delta circuit at 40 °C rated value 	315 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 	135 A
 at rotary coding switch on switch position 2 	147 A
 at rotary coding switch on switch position 3 	159 A
 at rotary coding switch on switch position 4 	171 A
 at rotary coding switch on switch position 5 	183 A
 at rotary coding switch on switch position 6 	195 A
 at rotary coding switch on switch position 7 	207 A
 at rotary coding switch on switch position 8 	219 A
 at rotary coding switch on switch position 9 	231 A
 at rotary coding switch on switch position 10 	243 A
 at rotary coding switch on switch position 11 	255 A
 at rotary coding switch on switch position 12 	267 A
 at rotary coding switch on switch position 13 	279 A
 at rotary coding switch on switch position 14 	291 A
• at rotary coding switch on switch position 15	303 A
 at rotary coding switch on switch position 16 	315 A
• minimum	135 A
djustable motor current	
 for inside-delta circuit at rotary coding switch on switch position 1 	234 A
 for inside-delta circuit at rotary coding switch on switch position 2 	255 A
 for inside-delta circuit at rotary coding switch on switch position 3 	275 A
 for inside-delta circuit at rotary coding switch on switch position 4 	296 A
 for inside-delta circuit at rotary coding switch on switch position 5 	317 A
 for inside-delta circuit at rotary coding switch on switch position 6 	338 A
• for inside-delta circuit at rotary coding switch on switch position 7	359 A
• for inside-delta circuit at rotary coding switch on switch position 8	379 A
 for inside-delta circuit at rotary coding switch on switch position 9 	400 A
 for inside-delta circuit at rotary coding switch on switch position 10 	421 A
 for inside-delta circuit at rotary coding switch on switch position 11 for inside delta circuit at rotary coding switch on switch 	442 A
 for inside-delta circuit at rotary coding switch on switch position 12 for inside delta circuit at rotary coding switch on switch 	462 A
 for inside-delta circuit at rotary coding switch on switch position 13 for inside delta circuit at rotary coding switch on switch 	483 A 504 A
 for inside-delta circuit at rotary coding switch on switch position 14 for inside delta circuit at rotary coding switch on switch 	504 A 525 A
 for inside-delta circuit at rotary coding switch on switch position 15 for inside delta circuit at rotary coding switch on switch 	
 for inside-delta circuit at rotary coding switch on switch position 16 at inside delta circuit minimum 	546 A
at inside-delta circuit minimum	234 A 15 %; Relative to smallest settable le
minimum load [%] power loss [W] for rated value of the current at AC	יט יט, ווכומנועב נט סווומוובסו סכונמטוב וב
• at 40 °C after startup	107 W

power loss (W) at AC at correct limitation 390 % 5 500 W ••••••••••••••••••••••••••••••••••••	• at 50 °C after startup	96 W			
• at 0 °C during stantup \$ 390 W • at 0 °C during stantup 3 934 W Control account Control 9394 W Stantal Account Control 9394 W Control account Control 100 - 250 V • at 0 0 Ft 110 - 250 V • at 0 0 Ft 110 - 250 V • at 0 0 Ft 110 - 250 V • at 0 0 Ft 110 - 250 V • at 0 0 Ft 110 - 250 V • at 0 0 Ft 10 % A C at 0 Ft 10 % Control supply voltage ft 10 % Control supply corrent in stat voltage <		89 W			
• 15 0° C during statup 4 471 W Sentral circuit/Control 3934 W Control supply voltage at AC 10 • at 50 1/2 110 • at 60 1/2 10					
• at 0 °C outring stanup 9.84 W Control supply voltage of the control supply voltage AC Control supply voltage at AC 10 250 V • at 0.0 1/2 110 250 V • at 0.0 1/2 10 % • AC at 0.0 1/2 10 % • Control supply voltage of the control supply vol					
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Control supply voltage at AC is at 50 Hz is at 50 Hz is at 50 Hz is at 50 Hz is 10 250 V is 10					
• at 30 h2 110 250 V relative optice 110 250 V relative optice 100 250 V relative optice 100 250 V relative positive tolerance of the control supply voltage at 24.55 % 10% A cat 50 h2 10% Control supply voltage frequency 50 60 h2 relative positive tolerance of the control supply voltage 10% A cat 50 h2 10% relative positive tolerance of the control supply voltage 10% relative positive tolerance of the control supply voltage 10% relative positive tolerance of the control supply voltage 10.2.0 relative positive tolerance of the control supply voltage 10.2.0 relative positive tolerance of the control supply voltage 10% device 100 mA Innuk current in standby mode rated value 100 mA Innuk current pask at application of control supply voltage 12.2.A design of the overvoltage protection Vacitor design of the ov		AC			
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number of digital outputs 3 • not parameterizable 2 digital output version 2 normally-open contacts (NO) / 1 changeover contact (CO) number of analog outputs 1 switching capacity current of the relay outputs 1 • at AC-15 at 250 V rated value 3 A • at DC-13 at 24 V rated value 1 A Installation/ mounting/ dimensions with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/-22.5° tittable to the front and back fastening method screw fixing height 393 mm width 210 mm depth 203 mm required spacing with side-by-side mounting 10 mm • backwards 0 mm • outpwards 75 mm • at the side 5 mm weight without packaging 9.9 kg Connections/ Torminals busbar connection • for control circuit busbar connection • for control circuit spring-loaded terminals	Inputs/ Outputs				
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digital output version 2 normally-open contacts (NO) / 1 changeover contact (CO) number of analog outputs 1 switching capacity current of the relay outputs 3 A • at AC-15 at 250 V rated value 3 A • at DC-13 at 24 V rated value 1 A Installation mounting/ dimensions with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/-20° rotatable, with vertical mounting surface +/-22.5° tiltable to the front and back fastening method screw fixing height 393 mm width 210 mm depth 203 mm required spacing with side-by-side mounting 10 mm • backwards 0 mm • upwards 100 mm • downwards 75 mm • at the side 5 mm weight without packaging 9.9 kg Connections/ Terminals busbar connection • for control circuit busbar connection • for control circuit spring-loaded terminals	•				
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• downwards 75 mm • at the side 5 mm • weight without packaging 9.9 kg Connections/ Terminals Connections/ Terminals type of electrical connection busbar connection • for main current circuit busbar connection • for control circuit spring-loaded terminals width of connection bar maximum 45 mm	backwards	0 mm			
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• for main current circuit busbar connection • for control circuit spring-loaded terminals width of connection bar maximum 45 mm	Connections/ Terminals				
• for control circuit spring-loaded terminals width of connection bar maximum 45 mm	type of electrical connection				
width of connection bar maximum 45 mm	 for main current circuit 	busbar connection			
	for control circuit	spring-loaded terminals			
type of connectable conductor cross-sections	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)			
 for AWG cables for control circuit solid 	2x (24 16)			
 for AWG cables for control circuit finely stranded with 	2x (24 16)			
core end processing				
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 	7 10.3 lbf·in			
terminals				
Ambient conditions				
installation altitude at height above sea level maximum	5 000 m; Derating as of 1000 m, see catalog			
ambient temperature				
during operation	-25 +60 $^\circ\text{C};$ Please observe derating at temperatures of 40 $^\circ\text{C}$ or above			
during storage and transport	-40 +80 °C			
environmental category				
 during operation according to IEC 60721 	3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6			
during storage according to IEC 60721	1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4			
 during transport according to IEC 60721 	2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)			
Environmental footprint				
Siemens Eco Profile (SEP)	Siemens EcoTech			
EMC emitted interference	acc. to IEC 60947-4-2: Class A			
Communication/ Protocol				
communication module is supported				
 PROFINET standard 	Yes			
• EtherNet/IP	Yes			
Modbus RTU	Yes			
Modbus TCP	Yes			
PROFIBUS	Yes			
UL/CSA ratings				
manufacturer's article number				
 of circuit breaker usable for Standard Faults 				
— at 460/480 V according to UL	Siemens type: 3VA53, max. 400 A or 3VA54, max. 600 A; lq = 18 kA			
— 60/480 V according to UL	Siemens type: 3VA53, max. 400 A or 3VA54, max. 600 A; lq max = 65 kA			
— at 460/480 V at inside-delta circuit according to UL	Siemens type: 3VA54, max. 600 A; Ig = 18 kA			
— 60/480 V at inside-delta circuit according to UL	Siemens type: 3VA54, max. 600 A; lq max = 65 kA			
- at 575/600 V according to UL	Siemens type: 3VA53, max. 400 A or 3VA54, max. 600 A; Ig = 18 kA			
— at 575/600 V at inside-delta circuit according to UL	Siemens type: 3VA54, max. 400 A ti 5VA64, max. 600 A, iq = 10 kA			
• of the fuse				
- usable for Standard Faults up to 575/600 V	Type: Class J / L, max. 1000 A; Iq = 18 kA			
according to UL — usable for High Faults up to 575/600 V according to	Type: Class J / L, max. 1000 A; lq = 100 kA			
UL — usable for Standard Faults at inside-delta circuit up to 575/600 V according to U	Type: Class J / L, max. 1000 A; Iq = 18 kA			
to 575/600 V according to UL — usable for High Faults at inside-delta circuit up to 575/600 V according to UI	Type: Class J / L, max. 1000 A; Iq = 100 kA			
575/600 V according to UL operating power [hp] for 3-phase motors				
• at 200/208 V at 50 °C rated value	75 hp			
 at 220/230 V at 50 °C rated value 	100 hp			
 at 460/480 V at 50 °C rated value 	200 hp			
• at 400/480 V at 50 °C fated value	200 hp			
 at 200/208 V at inside-delta circuit at 50 °C rated value 	200 hp 150 hp			

• at 220/230 V at inside-delta circuit at 50 °C rated value		200 h	р			
• at 460/480 V at inside-delta circuit at 50 °C rated value		C rated value	400 h	p		
contact rating of auxiliary contacts according to UL		to UL	R300-	B300		
Electrical Safety						
protection class IP on	the front according to	IEC 60529	IP00;	IP20 with cover		
touch protection on th	e front according to IE	C 60529	finger	-safe, for vertical contac	t from the front with cover	
Approvals Certificates						
General Product Appr	oval					
SP.	<u>Confirmation</u>			C C EG-Konf.	UK CA	(U) U
General Product Ap- proval	EMV			Test Certificates	Marine / Shipping	
EHC	RCM	KC		Type Test Certific- ates/Test Report	ABS	BUREAU VERITAS
Marine / Shipping		other		Environment		
Lloyd's Register urs	PRS	<u>Confirmation</u>	1	Siemens EcoTech	EPD	Environmental Con- firmations
Further information Information on the pac						
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=3RW5245-2AC14 Cax online generator http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5245-2AC14						
Service&Support (Manuals, Certificates, Characteristics, FAQs,) https://support.industry.siemens.com/cs/ww/en/ps/3RW5245-2AC14						
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros,) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5245-2AC14⟨=en						
Characteristic: Tripping characteristics, I ² t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RW5245-2AC14/char						
Characteristic: Installa http://www.automation.s Simulation Tool for So	tion altitude iemens.com/bilddb/inde:	k.aspx?view=Searcl		<u>-3RW5245-2AC14&obj</u> €	ecttype=14&gridview=view1	





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