SIEMENS

Data sheet

3RW5217-1AC04



SIRIUS soft starter 200-480 V 38 A, 24 V AC/DC Screw terminals Analog output

product brand name	SIRIUS		
product brand name	Hybrid switching devices Soft starter 3RW52		
product designation			
product type designation			
manufacturer's article number	0111102		
of standard HMI module usable	3RW5980-0HS00		
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 	3RV2032-4WA10; Type of coordination 1, Iq = 65 kA, CLASS 10		
 of circuit breaker usable at 500 V 	3RV2032-4WA10; Type of coordination 1, Iq = 10 kA, CLASS 10		
 of circuit breaker usable at 400 V at inside-delta circuit 	3RV2032-4RA10; Type of coordination 1, Iq = 65 kA, CLASS 10		
 of circuit breaker usable at 500 V at inside-delta circuit 	3RV2032-4RA10; Type of coordination 1, Iq = 10 kA, CLASS 10		
 of the gG fuse usable up to 690 V 	3NA3824-6: Type of coordination 1, Iq = 65 kA		
 of the gG fuse usable at inside-delta circuit up to 500 V 	<u>3NA3824-6; Type of coordination 1, Iq = 65 kA</u>		
 of full range R fuse link for semiconductor protection usable up to 690 V 	<u>3NE1820-0: Type of coordination 2, Iq = 65 kA</u>		
 of back-up R fuse link for semiconductor protection usable up to 690 V 	<u>3NE8024-1; Type of coordination 2, Iq = 65 kA</u>		
General technical data			
starting voltage [%]	30 100 %		
stopping voltage [%]	50 50 %		
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 is supported			
HMI-Standard	Yes		
HMI-High Feature	Yes		
product feature integrated bypass contact system	Yes		
number of controlled phases	3		
trip class	CLASS 10A (default) / 10E / 20E; acc. to IEC 60947-4-2		

buffering time in the event of newer failure		
 buffering time in the event of power failure 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	200.1/	
between main and auxiliary circuit		
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 AC 53a	
utilization category acc. to IEC 60947-4-2		
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	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	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	38 A	
● at 50 °C rated value	34 A	
• at 60 °C rated value	31 A	
operational current at inside-delta circuit		
• at 40 °C rated value	65.8 A	
• at 50 °C rated value	58 A	
• at 60 °C rated value	52.8 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	-15 %	
inside-delta circuit relative positive tolerance of the operating voltage at inside delta circuit	10 %	
inside-delta circuit		
operating power for 3-phase motors	11 M/	
• at 230 V at 40 °C rated value	11 kW	

• at 230 V at inside-delta circuit at 40 °C rated value	18.5 kW
• at 400 V at 40 °C rated value	18.5 kW
at 400 V at inside-delta circuit at 40 °C rated value	30 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 	15.5 A
 at rotary coding switch on switch position 2 	17 A
at rotary coding switch on switch position 3	18.5 A
 at rotary coding switch on switch position 4 at rotary coding switch on switch position 5 	20 A
at rotary coding switch on switch position 5	21.5 A 23 A
 at rotary coding switch on switch position 6 at rotary coding switch on switch position 7 	
 at rotary coding switch on switch position 7 at rotary coding switch on switch position 2 	24.5 A
at rotary coding switch on switch position 8 at rotary coding switch on switch position 0	26 A
 at rotary coding switch on switch position 9 at rotary coding switch on switch position 10 	27.5 A 29 A
 at rotary coding switch on switch position 10 at rotary coding switch on switch position 11 	29 A 30.5 A
 at rotary coding switch on switch position 11 at rotary coding switch on switch position 12 	32 A
at rotary coding switch on switch position 12 at rotary coding switch on switch position 13	33.5 A
at rotary coding switch on switch position 13 at rotary coding switch on switch position 14	35.5 A 35 A
 at rotary coding switch on switch position 14 at rotary coding switch on switch position 15 	36.5 A
 at rotary coding switch on switch position 16 	38 A
minimum	15.5 A
adjustable motor current	
 for inside-delta circuit at rotary coding switch on switch position 1 	26.8 A
 for inside-delta circuit at rotary coding switch on switch position 2 	29.4 A
 for inside-delta circuit at rotary coding switch on switch position 3 	32 A
 for inside-delta circuit at rotary coding switch on switch position 4 	34.6 A
• for inside-delta circuit at rotary coding switch on switch position 5	37.2 A
for inside-delta circuit at rotary coding switch on switch position 6	39.8 A
• for inside-delta circuit at rotary coding switch on switch position 7	42.4 A
 for inside-delta circuit at rotary coding switch on switch position 8 for inside-delta circuit at rotary coding switch on 	45 A 47.6 A
switch position 9	50.2 A
 for inside-delta circuit at rotary coding switch on switch position 10 for inside-delta circuit at rotary coding switch on 	52.8 A
 for inside-delta circuit at rotary coding switch on for inside-delta circuit at rotary coding switch on 	55.4 A
 switch position 12 for inside-delta circuit at rotary coding switch on 	58 A
switch position 13 • for inside-delta circuit at rotary coding switch on	60.6 A
switch position 14 • for inside-delta circuit at rotary coding switch on	63.2 A
 switch position 15 for inside-delta circuit at rotary coding switch on 	65.8 A
switch position 16 at inside-delta circuit minimum 	26.8 A
• at inside-delta circuit minimum minimum load [%]	15 %; Relative to smallest settable le
power loss [W] for rated value of the current at AC	
• at 40 °C after startup	23 W
• at 50 °C after startup	22 W
• at 60 °C after startup	21 W

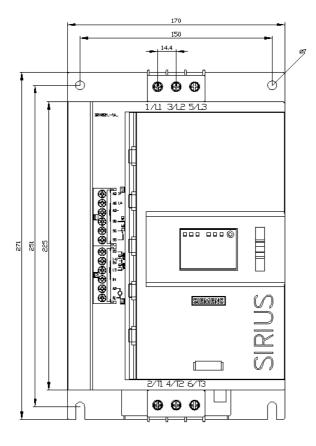
power loss [W] at AC at current limitation 350 %		
 at 40 °C during startup 	628 W	
 at 50 °C during startup 	526 W	
• at 60 °C during startup	464 W	
Control circuit/ Control		
type of voltage of the control supply voltage	AC/DC	
control supply voltage at AC		
• at 50 Hz rated value	24 V	
• at 60 Hz rated value	24 V	
relative negative tolerance of the control supply voltage at AC at 50 Hz	-20 %	
relative positive tolerance of the control supply voltage at AC at 50 Hz	20 %	
relative negative tolerance of the control supply voltage at AC at 60 Hz	-20 %	
relative positive tolerance of the control supply voltage at AC at 60 Hz	20 %	
control supply voltage frequency	50 60 Hz	
relative negative tolerance of the control supply voltage frequency	-10 %	
relative positive tolerance of the control supply	10 %	
voltage frequency		
control supply voltage		
at DC rated value	24 V	
relative negative tolerance of the control supply voltage at DC	-20 %	
relative positive tolerance of the control supply voltage at DC	20 %	
control supply current in standby mode rated value	160 mA	
holding current in bypass operation rated value	360 mA	
locked-rotor current at close of bypass contact maximum	0.75 A	
inrush current peak at application of control supply voltage maximum	3.3 A	
duration of inrush current peak at application of control supply voltage	12.1 ms	
design of the overvoltage protection	Varistor	
design of short-circuit protection for control circuit	4 A gG fuse (Icu=1 kA), 6 A quick-acting fuse (Icu=1 kA), C1 miniature circuit breaker (Icu= 600 A), C6 miniature circuit breaker (Icu= 300 A); Is not part of scope of supply	
Inputs/ Outputs		
number of digital inputs	1	
number of inputs for thermistor connection	0	
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		
at AC-15 at 250 V rated value	3 A	
• at DC-13 at 24 V rated value	1A	
Installation/ mounting/ dimensions		
mounting position	with vertical mounting surface +/-90° rotatable, with vertical mounting	
fastening method	surface +/- 22.5° tiltable to the front and back screw fixing	
	275 mm	
height width		
width	170 mm	
depth	152 mm	
required spacing with side-by-side mounting	10	
• forwards	10 mm	
backwards	0 mm	
• upwards	100 mm	
• downwards	75 mm	
• at the side	5 mm	

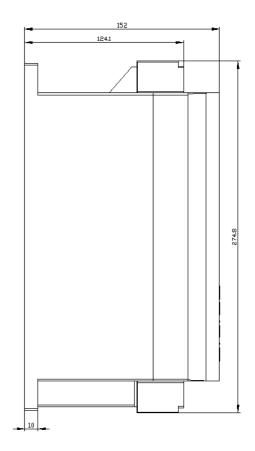
weight without packaging	2.3 kg
Connections/ Terminals	
type of electrical connection	
 for main current circuit 	screw-type terminals
for control circuit	screw-type terminals
type of connectable conductor cross-sections	
for main contacts	
— solid	2x (1.0 2.5 mm²), 2x (2.5 10 mm²)
 finely stranded with core end processing 	2x (1.0 2.5 mm²), 2x (2.5 6.0 mm²)
at AWG cables for main current circuit solid	2x (16 12), 2x (14 8)
type of connectable conductor cross-sections	
 for control circuit solid 	1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²)
 for control circuit finely stranded with core end 	1x (0.5 2.5 mm²), 2x (0.5 1.5 mm²)
processing	
at AWG cables for control circuit solid	1x (20 12), 2x (20 14)
wire length	
between soft starter and motor maximum	800 m
at the digital inputs at AC maximum	100 m
at the digital inputs at DC maximum	1 000 m
tightening torque	0.051
 for main contacts with screw-type terminals 	2 2.5 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	18 22 lbf·in
	7 10.3 lbf in
 for auxiliary and control contacts with screw-type terminals 	7 10.5 IDI'III
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 °C; Please observe derating at temperatures of 40 °C or
	above
 during storage and transport 	-40 +80 °C
environmental category	
 during operation acc. 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 acc. to IEC 60721 	1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must
	not get inside the devices), 1M4
during transport acc. to IEC 60721	2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)
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: 3RV2742, max. 70 A or 3VA51, max. 125 A; lq = 5 kA
— usable for High Faults at 460/480 V according to UL	Siemens type: 3RV2742, max.40 A or 3VA51, max. 60 A; lq max = 65 kA
 usable for Standard Faults at 460/480 V at inside-delta circuit according to UL 	Siemens type: 3RV2742, max. 70 A or 3VA51, max. 125 A; lq = 5 kA
— usable for High Faults at 460/480 V at inside- delta circuit according to UL	Siemens type: 3VA51, max. 60 A; lq max = 65 kA
 — usable for Standard Faults at 575/600 V according to UL 	Siemens type: 3RV2742, max. 70 A or 3VA51, max. 125 A; Iq = 5 kA
 — usable for Standard Faults at 575/600 V at inside-delta circuit according to UL 	Siemens type: 3RV2742, max. 70 A or 3VA51, max. 125 A; lq = 5 kA

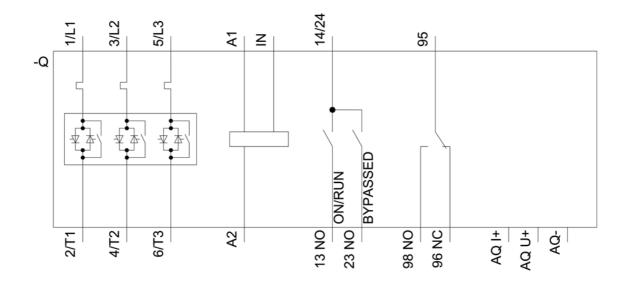
 of the fuse 			
 — usable for Standard Faults up to 575/600 V according to UL 	Type: Class RK5 / K5, max		
 — usable for High Faults up to 575/600 V according to UL 	Type: Class J / L, max. 150 A; Iq = 100 kA		
 — usable for Standard Faults at inside-delta circuit up to 575/600 V according to UL 	Type: Class RK5 / K5, max. 150 A; lq = 5 kA		
 — usable for High Faults at inside-delta circuit up to 575/600 V according to UL 	Type: Class J / L, max. 150 A; Iq = 100 kA		
operating power [hp] for 3-phase motors			
 at 200/208 V at 50 °C rated value 	10 hp		
 at 220/230 V at 50 °C rated value 	10 hp		
• at 460/480 V at 50 °C rated value	20 hp		
 at 200/208 V at inside-delta circuit at 50 °C rated 	20 np 15 hp		
value • at 220/230 V at inside-delta circuit at 50 °C rated	20 hp		
value ● at 460/480 V at inside-delta circuit at 50 °C rated	40 hp		
value	_		
contact rating of auxiliary contacts according to UL	R300-B300		
Safety related data			
protection class IP on the front acc. to IEC 60529	IP20		
touch protection on the front acc. to IEC 60529	finger-safe, for vertical con	tact from the front	
electromagnetic compatibility	in accordance with IEC 60	947-4-2	
Certificates/ approvals			
		EMC	Declaration of
General Product Approval		LINO	Conformity
	EHC	RCM	CE EG-Konf.
	EAC	RCM	CE EG-Konf.
Test Certificates Marine / Shipping	EHC	RCM	CE EG-Konf.
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Characteristic: Installation altitude http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5217-1AC04&objecttype=14&gridview=view1

Simulation Tool for Soft Starters (STS) https://support.industry.siemens.com/cs/ww/en/view/101494917







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