SIEMENS

Data sheet

3RW5234-2AC14



SIRIUS soft starter 200-480 V 113 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 	<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 	3VA2216-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10
 of circuit breaker usable at 400 V at inside-delta circuit 	3VA2220-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10
 of the gG fuse usable up to 690 V 	3NA3244-6; Type of coordination 1, Iq = 65 kA
 of the gG fuse usable at inside-delta circuit up to 500 V 	<u>3NA3244-6; Type of coordination 1, Iq = 65 kA</u>
 of full range R fuse link for semiconductor protection usable up to 690 V 	<u>3NE1225-0: Type of coordination 2. Iq = 65 kA</u>
 of back-up R fuse link for semiconductor protection usable up to 690 V 	<u>3NE3332-0B; 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 power failure	

a for main ourrant aircuit	100 ma
for main current circuit	100 ms 100 ms
for control circuit	
insulation voltage rated value	600 V 3. acc. to IEC 60947-4-2
degree of pollution	
impulse voltage rated value	6 kV
blocking voltage of the thyristor maximum	1 400 V
service factor	1
surge voltage resistance rated value	6 kV
maximum permissible voltage for safe isolation	C00.)/
between main and auxiliary circuit shock resistance	600 V
	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 reference code acc. to IEC 81346-2	AC 53a Q
Substance Prohibitance (Date) product function	15.02.2018 00:00:00
•	Yes
• ramp-up (soft starting)	
ramp-down (soft stop)	Yes
Soft Torque adjustable surrent limitation	Yes
adjustable current limitation	Yes
pump ramp down intrincip dowing protection	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
Power Electronics	HMI)
 operational current at 40 °C rated value 	112.0
 at 40 °C rated value at 50 °C rated value 	113 A 101 A
at 50 °C rated value at 60 °C rated value	
operational current at inside-delta circuit	89 A
• at 40 °C rated value	196 A
at 40 °C rated value at 50 °C rated value	196 A 175 A
 at 50 °C rated value at 60 °C rated value 	175 A 154 A
operating voltage rated value 	200 480 1/
	200 480 V 200 480 V
at inside-delta circuit rated value	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	30 kW
 at 230 V at inside-delta circuit at 40 °C rated value 	55 kW
 at 400 V at 40 °C rated value 	55 kW
 at 400 V at inside-delta circuit at 40 °C rated value 	110 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 	53 A
 at rotary coding switch on switch position 2 	57 A
 at rotary coding switch on switch position 3 	61 A
 at rotary coding switch on switch position 4 	65 A
 at rotary coding switch on switch position 5 	69 A
 at rotary coding switch on switch position 6 	73 A
 at rotary coding switch on switch position 7 	77 A
 at rotary coding switch on switch position 8 	81 A
 at rotary coding switch on switch position 9 	85 A
• at rotary coding switch on switch position 10	89 A
 at rotary coding switch on switch position 11 	93 A
 at rotary coding switch on switch position 12 	97 A
 at rotary coding switch on switch position 13 	101 A
 at rotary coding switch on switch position 14 	105 A
 at rotary coding switch on switch position 15 	109 A
 at rotary coding switch on switch position 16 	113 A
• minimum	53 A
adjustable motor current	
 for inside-delta circuit at rotary coding switch on switch position 1 	91.8 A
 for inside-delta circuit at rotary coding switch on switch position 2 	98.7 A
 for inside-delta circuit at rotary coding switch on switch position 3 	106 A
 for inside-delta circuit at rotary coding switch on switch position 4 	113 A
 for inside-delta circuit at rotary coding switch on switch position 5 	120 A
 for inside-delta circuit at rotary coding switch on switch position 6 	126 A
 for inside-delta circuit at rotary coding switch on switch position 7 	133 A
 for inside-delta circuit at rotary coding switch on switch position 8 	140 A
 for inside-delta circuit at rotary coding switch on switch position 9 	147 A
 for inside-delta circuit at rotary coding switch on switch position 10 	154 A
• for inside-delta circuit at rotary coding switch on switch position 11	161 A
 for inside-delta circuit at rotary coding switch on switch position 12 	168 A
 for inside-delta circuit at rotary coding switch on switch position 13 	175 A
 for inside-delta circuit at rotary coding switch on switch position 14 	182 A
 for inside-delta circuit at rotary coding switch on switch position 15 	189 A
 for inside-delta circuit at rotary coding switch on switch position 16 	196 A
at inside-delta circuit minimum	91.8 A
minimum load [%]	15 %; Relative to smallest settable le

• at 40 °C after startup	46 W
 at 50 °C after startup 	42 W
• at 60 °C after startup	39 W
power loss [W] at AC at current limitation 350 %	
 at 40 °C during startup 	1 512 W
 at 50 °C during startup 	1 291 W
 at 60 °C during startup 	1 086 W
Control circuit/ Control	
type of voltage of the control supply voltage	AC
control supply voltage at AC	
• at 50 Hz	110 250 V
• at 60 Hz	110 250 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 %
control supply voltage frequency	50 60 Hz
relative negative tolerance of the control supply voltage frequency	-10 %
relative positive tolerance of the control supply voltage frequency	10 %
control supply current in standby mode rated value	30 mA
holding current in bypass operation rated value	75 mA
locked-rotor current at close of bypass contact maximum	2.5 A
inrush current peak at application of control supply voltage maximum	12.2 A
duration of inrush current peak at application of control supply voltage	2.2 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	1 A
Installation/ mounting/ dimensions	
mounting position	with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back
fastening method	screw fixing
height	306 mm
width	185 mm
depth	203 mm
required spacing with side-by-side mounting	10
• forwards	10 mm
backwards	0 mm
• upwards	100 mm
• downwards	75 mm
the side weight without packaging	5 mm 6.6 kg

Connections/ Terminals	
type of electrical connection	
for main current circuit	busbar connection
 for control circuit 	spring-loaded terminals
width of connection bar maximum	25 mm
type of connectable conductor cross-sections	
 for DIN cable lug for main contacts stranded 	2x (16 95 mm²)
 for DIN cable lug for main contacts finely stranded 	2x (25 120 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	10 14 N·m
for auxiliary and control contacts with screw-type terminals	0.8 1.2 N·m
tightening torque [lbf·in]	20 124 lbf in
for main contacts with screw-type terminals	89 124 lbf·in
 for auxiliary and control contacts with screw-type terminals 	7 10.3 lbf·in
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	2KC (no ice formation, only approximal condensation), 2C2 (no colt
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	Voo
PROFINET standard EtherNet/IP	Yes
EtherNet/IP Modbus BTU	Yes
Modbus RTU 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: 3VA52, max. 250 A; Iq = 10 kA
— usable for High Faults at 460/480 V according to UL	Siemens type: 3VA52, max. 250 A; lq max = 65 kA
— usable for Standard Faults at 460/480 V at inside-delta circuit according to UL	Siemens type: 3VA52, max. 250 A; Iq = 10 kA
— usable for High Faults at 460/480 V at inside- delta circuit according to UL	Siemens type: 3VA52, max. 250 A; Iq max = 65 kA
— usable for Standard Faults at 575/600 V according to UL	Siemens type: 3VA52, max. 250 A; Iq = 10 kA
— usable for Standard Faults at 575/600 V at	Siemens type: 3VA52, max. 250 A; Iq = 10 kA

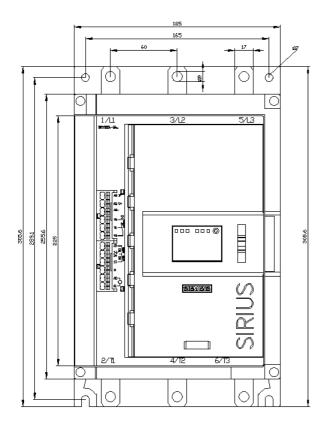
of the fuse					
according to U			Type: Class RK5 / K5, m		
 — usable for H according to U 	ligh Faults up to 575/60	0 V	Type: Class J / L, max. 3	350 A; Iq = 100 kA	
	Standard Faults at inside 5/600 V according to UI		Type: Class RK5 / K5, m	ax. 350 A; lq = 10 kA	
— usable for H to 575/600 V a	ligh Faults at inside-delt according to UL	ta circuit up	Type: Class J / L, max. 3	850 A; Iq = 100 kA	
operating power [hp]	for 3-phase motors				
• at 200/208 V at 5	50 °C rated value		30 hp		
• at 220/230 V at 5	50 °C rated value		30 hp		
• at 460/480 V at 5	50 °C rated value		75 hp		
 at 200/208 V at ir value 	nside-delta circuit at 50	°C rated	50 hp		
 at 220/230 V at ir value 	nside-delta circuit at 50	°C rated	60 hp		
 at 460/480 V at in value 	nside-delta circuit at 50	°C rated	125 hp		
-	iliary contacts accordi	ng to UL	R300-B300		
afety related data		·			
protection class IP or	n the front acc. to IEC	60529	IP00; IP20 with cover		
touch protection on the	he front acc. to IEC 60	529	finger-safe, for vertical co	ontact from the front with	n cover
electromagnetic com	patibility		in accordance with IEC 6	60947-4-2	
ertificates/ approvals					
General Product App	(III)	Ē	ror	Æ	Conformity
Test Certificates Type Test Certific- ates/Test Report	Marine / Shipping		Effic Lioveds Lis	RCM	EG-Konf.
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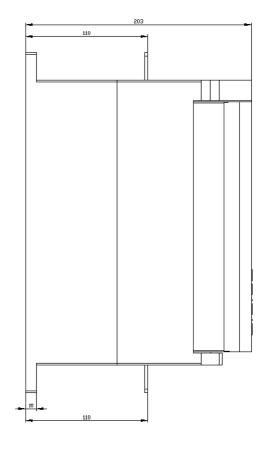
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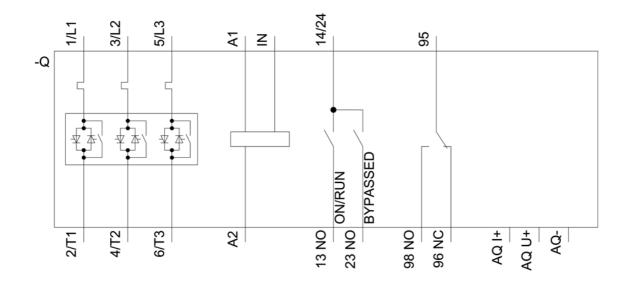
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) <u>http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5234-2AC14&lang=en</u> Characteristic: Tripping characteristics, I²t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RW5234-2AC14/char

Characteristic: Installation altitude

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5234-2AC14&objecttype=14&gridview=view1 Simulation Tool for Soft Starters (STS) https://support.industry.siemens.com/cs/ww/en/view/101494917







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