SIEMENS

Data sheet

3RW5247-6AC05



SIRIUS soft starter 200-600 V 470 A, 24 V AC/DC Screw 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 	3VA2450-7MN32-0AA0: Type of coordination 1. lq = 65 kA. CLASS 10
 of circuit breaker usable at 500 V 	3VA2450-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10
 of circuit breaker usable at 400 V at inside-delta circuit 	<u>3VA2510-6HN32-0AA0: Type of coordination 1, Iq = 65 kA, CLASS 10</u>
 of circuit breaker usable at 500 V at inside-delta circuit 	<u>3VA2510-6HN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10</u>
 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>3NE1436-2: Type of coordination 2. Iq = 65 kA</u>
 of back-up R fuse link for semiconductor protection usable up to 690 V 	<u>3NE3340-8; Type of coordination 2, Iq = 65 kA</u>
Seneral 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

rip class CLASS 10A (default) / 10E / 20E; acc. to IEC 60047-4-2 buffering time in the event of power failure 100 ms • for main current dirout 100 ms • for control circuit 100 ms • for main current dirout 100 ms • for control circuit 600 V degree of pollution 3, acc. to IEC 60047-4-2 mustlem voltage rated value 64 V envice factor 1 surge voltage rated value 66 V maximum permissible voltage for safe isolation 64 V • between main and auxiling voruit 600 V ethock resistance 15 g/ 11 ms. from 12 g / 11 ms. with potential contact lifting vibration resistance 15 g/ 11 ms. from 12 g / 11 ms. with potential contact lifting vibration resistance 15 g/ 11 ms. from 12 g / 11 ms. with potential contact lifting vibration resistance 15 g/ 11 ms. from 12 g / 11 ms. with potential contact lifting vibration resistance 15 g/ 11 ms. from 12 g / 11 ms. with potential contact lifting vibration resistance 15 g/ 20 ms/ 42 G contact clift starting) Yes • amp-down (soft stop) Yes • sind-clata circuit Yes	number of controlled phases	3
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relative negative tolerance of the operating voltage at -15 %		
inside-delta circuit		

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 	132 kW
 at 230 V at inside-delta circuit at 40 °C rated value 	250 kW
 at 400 V at 40 °C rated value 	250 kW
 at 400 V at inside-delta circuit at 40 °C rated value 	400 kW
 at 500 V at 40 °C rated value 	315 kW
 at 500 V at inside-delta circuit at 40 °C rated value 	500 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 	200 A
 at rotary coding switch on switch position 2 	218 A
 at rotary coding switch on switch position 3 	236 A
 at rotary coding switch on switch position 4 	254 A
 at rotary coding switch on switch position 5 	272 A
 at rotary coding switch on switch position 6 	290 A
 at rotary coding switch on switch position 7 	308 A
 at rotary coding switch on switch position 8 	326 A
 at rotary coding switch on switch position 9 	344 A
 at rotary coding switch on switch position 10 	362 A
 at rotary coding switch on switch position 11 	380 A
 at rotary coding switch on switch position 12 	398 A
 at rotary coding switch on switch position 13 	416 A
 at rotary coding switch on switch position 14 	434 A
 at rotary coding switch on switch position 15 	452 A
 at rotary coding switch on switch position 16 	470 A
• minimum	200 A
adjustable motor current	
 for inside-delta circuit at rotary coding switch on switch position 1 	346 A
 for inside-delta circuit at rotary coding switch on switch position 2 	378 A
 for inside-delta circuit at rotary coding switch on switch position 3 	409 A
 for inside-delta circuit at rotary coding switch on switch position 4 	440 A
 for inside-delta circuit at rotary coding switch on switch position 5 	471 A
 for inside-delta circuit at rotary coding switch on switch position 6 	502 A
 for inside-delta circuit at rotary coding switch on switch position 7 	533 A
 for inside-delta circuit at rotary coding switch on switch position 8 	565 A
 for inside-delta circuit at rotary coding switch on switch position 9 for inside delta circuit at rotary coding switch on 	596 A
 for inside-delta circuit at rotary coding switch on switch position 10 for inside delta circuit at rotary coding switch on 	627 A
 for inside-delta circuit at rotary coding switch on switch position 11 for inside-delta circuit at rotary coding switch on 	658 A 689 A
 for inside-delta circuit at rotary coding switch on switch position 12 for inside-delta circuit at rotary coding switch on 	721 A
 for inside-defa circuit at rotary coding switch on switch position 13 for inside-delta circuit at rotary coding switch on 	752 A
 for inside-defa circuit at rotary coding switch on switch position 14 for inside-delta circuit at rotary coding switch on 	752 A 783 A
switch position 15	

 for inside-delta circuit at rotary coding switch on 	814 A
switch position 16	
at inside-delta circuit minimum	346 A
minimum load [%]	15 %; Relative to smallest settable le
power loss [W] for rated value of the current at AC	
 at 40 °C after startup 	153 W
 at 50 °C after startup 	137 W
at 60 °C after startup	126 W
power loss [W] at AC at current limitation 350 %	
 at 40 °C during startup 	7 903 W
 at 50 °C during startup 	6 604 W
● at 60 °C during startup	5 794 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	20 %
voltage at AC at 50 Hz	
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 voltage frequency	10 %
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	470 mA
locked-rotor current at close of bypass contact maximum	7.6 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	1 A
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
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height	393 mm
width	210 mm
depth	203 mm
required spacing with side-by-side mounting	
• forwards	10 mm
backwards	0 mm
• upwards	100 mm
downwards	75 mm
at the side	5 mm
weight without packaging	9.9 kg
Connections/ Terminals	
type of electrical connection	
for main current circuit	busbar connection
for control circuit	screw-type 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 mm ²)
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 mm ²), 2x (0.5 1.5 mm ²)
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	
 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	
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 the fuse	
- usable for Standard Faults up to 575/600 V	Type: Class J / L, max. 1600 A; Iq = 30 kA

according to l — usable for according to l				
			00 4.1. 400 1.4	
	High Faults up to 575/600 V JL	Type: Class J / L, max. 12	00 A; Iq = 100 kA	
	Standard Faults at inside-delta 75/600 V according to UL	Type: Class J / L, max. 16	00 A; Iq = 30 kA	
	High Faults at inside-delta circuit up according to UL	Type: Class J / L, max. 12	00 A; Iq = 100 kA	
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	150 hp		
• at 460/480 V at	50 °C rated value	350 hp		
• at 575/600 V at	50 °C rated value	450 hp		
• at 200/208 V at value	inside-delta circuit at 50 °C rated	250 hp		
• at 220/230 V at value	inside-delta circuit at 50 °C rated	250 hp		
● at 460/480 V at value	inside-delta circuit at 50 °C rated	600 hp		
● at 575/600 V at value	inside-delta circuit at 50 °C rated	800 hp		
contact rating of aux	ciliary contacts according to UL	R300-B300		
afety related data				
protection class IP of	on the front acc. to IEC 60529	IP00; IP20 with cover		
touch protection on	the front acc. to IEC 60529	finger-safe, for vertical con	tact from the front with	cover
electromagnetic con	npatibility	in accordance with IEC 60		
ertificates/ approvals	s			
General Product Ap	proval		EMC	Declaration of Conformity
General Product Ap) EHC	EMC ECM	
	((()) EHC	EMC ECM	Conformity
General Product Ap			EMC ECM RCM	Conformity
General Product Ap	Marine / Shipping	A U	EMC ECM	Conformity CC EG-Konf.
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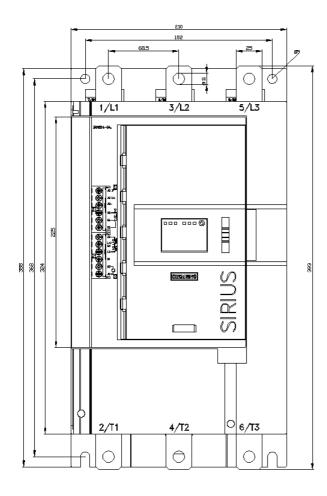
Further information

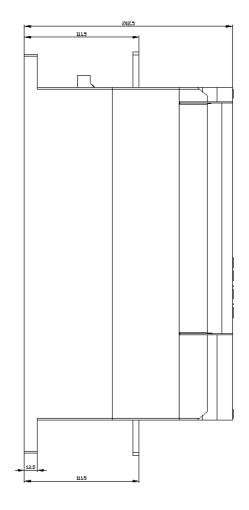
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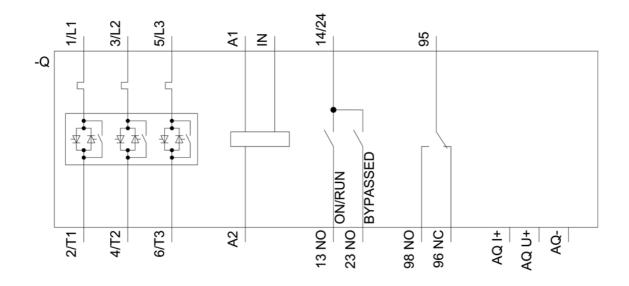
Characteristic: Installation altitude

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5247-6AC05&objecttype=14&gridview=view1 Simulation Tool for Soft Starters (STS)

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







last modified:

12/15/2020 🖸