SIEMENS

Data sheet 3RW5248-2AC05



SIRIUS soft starter 200-600 V 570 A, 24 V AC/DC spring-type terminals Analog output

product brand name product category product designation product type designation manufacturer's article number

- of standard HMI module usable
- of high feature HMI module usable
- of communication module PROFINET standard usable
- of communication module PROFIBUS usable
- of communication module Modbus TCP usable
- of communication module Modbus RTU usable
- of communication module Ethernet/IP
- of circuit breaker usable at 400 V
- of circuit breaker usable at 500 V
- of circuit breaker usable at 400 V at inside-delta circuit
- of circuit breaker usable at 500 V at inside-delta circuit
- of the gG fuse usable up to 690 V
- of the gG fuse usable at inside-delta circuit up to 500 V
- \bullet of full range R fuse link for semiconductor protection usable up to 690 V
- of back-up R fuse link for semiconductor protection usable up to 690 V

SIRIUS

Hybrid switching devices

Soft starter

3RW52

3RW5980-0HS00

3RW5980-0HF00

3RW5980-0CS00

3RW5980-0CP00

3RW5980-0CT00

3RW5980-0CR00

3RW5980-0CE00

3VA2580-6HN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10

3VA2580-6HN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10

3VA2510-6HN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10

3VA2510-6HN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10

2x3NA3365-6; Type of coordination 1, Iq = 65 kA

2x3NA3365-6; Type of coordination 1, Iq = 65 kA

3NE1437-2; Type of coordination 2, Iq = 65 kA

3NE3340-8; Type of coordination 2, Iq = 65 kA

General technical data

starting voltage [%] stopping voltage [%] start-up ramp time of soft starter current limiting value [%] adjustable certificate of suitability

- CE marking
- UL approval
- CSA approval

product component

- HMI-High Feature
- is supported HMI-Standard
- is supported HMI-High Feature

product feature integrated bypass contact system number of controlled phases

trip class

buffering time in the event of power failure

30 ... 100 %

50 %; non-adjustable

0 ... 20 s

130 ... 700 %

Yes

Yes

Yes

No

Yes

Yes

Yes

3

CLASS 10A (default) / 10E / 20E; acc. to IEC 60947-4-2

- for main assument airestit	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 according to IEC 60947-4-2	AC 53a
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	02/15/2018
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
- analog output	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	
operating voltage ● rated value	200 600 V
	200 600 V 200 600 V
• rated value	200 600 V -15 %
 rated value at inside-delta circuit rated value	200 600 V
 rated value at inside-delta circuit rated value relative negative tolerance of the operating voltage relative positive tolerance of the operating voltage relative negative tolerance of the operating voltage at 	200 600 V -15 %
rated value at inside-delta circuit rated value relative negative tolerance of the operating voltage relative positive tolerance of the operating voltage relative negative tolerance of the operating voltage at inside-delta circuit	200 600 V -15 % 10 % -15 %
 rated value at inside-delta circuit rated value relative negative tolerance of the operating voltage relative positive tolerance of the operating voltage relative negative tolerance of the operating voltage at 	200 600 V -15 % 10 %
rated value at inside-delta circuit rated value relative negative tolerance of the operating voltage relative positive tolerance of the operating voltage relative negative tolerance of the operating voltage at inside-delta circuit relative positive tolerance of the operating voltage at inside-delta circuit operating power for 3-phase motors	200 600 V -15 % 10 % -15 %
rated value at inside-delta circuit rated value relative negative tolerance of the operating voltage relative positive tolerance of the operating voltage relative negative tolerance of the operating voltage at inside-delta circuit relative positive tolerance of the operating voltage at inside-delta circuit	200 600 V -15 % 10 % -15 %
 rated value at inside-delta circuit rated value relative negative tolerance of the operating voltage relative positive tolerance of the operating voltage relative negative tolerance of the operating voltage at inside-delta circuit relative positive tolerance of the operating voltage at inside-delta circuit operating power for 3-phase motors 	200 600 V -15 % 10 % -15 %
 rated value at inside-delta circuit rated value relative negative tolerance of the operating voltage relative positive tolerance of the operating voltage relative negative tolerance of the operating voltage at inside-delta circuit relative positive tolerance of the operating voltage at inside-delta circuit operating power for 3-phase motors at 230 V at 40 °C rated value 	200 600 V -15 % 10 % -15 % 10 %
 rated value at inside-delta circuit rated value relative negative tolerance of the operating voltage relative positive tolerance of the operating voltage relative negative tolerance of the operating voltage at inside-delta circuit relative positive tolerance of the operating voltage at inside-delta circuit operating power for 3-phase motors at 230 V at 40 °C rated value at 230 V at inside-delta circuit at 40 °C rated value 	200 600 V -15 % 10 % -15 % 10 %

• at 500 V at inside-delta circuit at 40 °C rated value	630 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 at rotary coding switch on switch position 14	504 A 526 A
at rotary coding switch on switch position 14 a of rotary coding switch on switch position 15	
 at rotary coding switch on switch position 15 at rotary coding switch on switch position 16 	548 A 570 A
minimum	240 A
adjustable motor current	24071
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 for inside delta circuit at rotary coding switch on	721 A 759 A
 for inside-delta circuit at rotary coding switch on switch position 10 for inside-delta circuit at rotary coding switch on 	797 A
switch position 11 • for inside-delta circuit at rotary coding switch on	835 A
switch position 12 • for inside-delta circuit at rotary coding switch on	873 A
switch position 13 • for inside-delta circuit at rotary coding switch on	911 A
switch position 14 • for inside-delta circuit at rotary coding switch on	949 A
switch position 15for inside-delta circuit at rotary coding switch on	987 A
switch position 16	440.4
at inside-delta circuit minimum	416 A
minimum load [%] power loss [W] for rated value of the current at AC	15 %; Relative to smallest settable le
• at 40 °C after startup	183 W
• at 50 °C after startup	163 W
at 60 °C after startup at 60 °C after startup	153 W
power loss [W] at AC at current limitation 350 %	
at 40 °C during startup	10 241 W
at 50 °C during startup	8 500 W
at 60 °C during startup	7 663 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	-20 %
voltage at AC at 50 Hz	
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	20 %
voltage at AC at 60 Hz	
control supply voltage frequency	50 60 Hz
relative negative tolerance of the control supply	-10 %
voltage frequency	
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
inrush current peak at application of control supply voltage	3.3 A
maximum	
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	The second secon
number of digital inputs	1
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
	17
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	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	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)
processing ● at AWG cables for control circuit solid	2x (24 16)
at AWG cables for control circuit finely stranded with	2x (24 16)
core end processing	ZX (Z 1 10)
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	0.8 1.2 N·m
terminals	
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	7 10.0 101 111
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 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
Garing Storage according to IEO 00721	not get inside the devices), 1M4
 during transport according 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 according to UL 	Type: Class J / L, max. 1600 A; Iq = 30 kA
usable for High Faults up to 575/600 V according to UL	Type: Class J / L, max. 1200 A; Iq = 100 kA
usable for Standard Faults at inside-delta circuit up to 575/600 V according to UL	Type: Class J / L, max. 1600 A; Iq = 30 kA
usable for High Faults at inside-delta circuit up to 575/600 V according to UL	Type: Class J / L, max. 1200 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 	200 hp
 at 460/480 V at 50 °C rated value 	400 hp
 at 575/600 V at 50 °C rated value 	500 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
 at 575/600 V at inside-delta circuit at 50 °C rated value 	950 hp
contact rating of auxiliary contacts according to UL	R300-B300
Safety related data	
protection class IP on the front according to IEC 60529	IP00; IP20 with cover
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front with cover

Certificates/ approvals

General Product Approval

EMC













Declaration of Conformity

Test Certificates

Marine / Shipping





Type Test Certificates/Test Report







Marine / Shipping

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=3RW5248-2AC05

Cax online generator

 $\underline{\text{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RW5248-2AC05}$

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

https://support.industry.siemens.com/cs/ww/en/ps/3RW5248-2AC05

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5248-2AC05&lang=en

Characteristic: Tripping characteristics, I2t, Let-through current

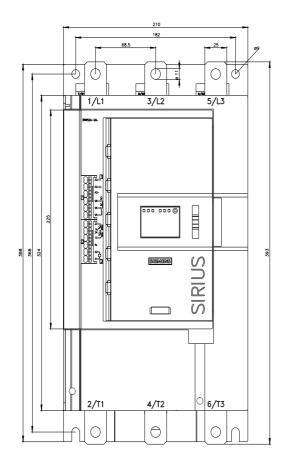
https://support.industry.siemens.com/cs/ww/en/ps/3RW5248-2AC05/char

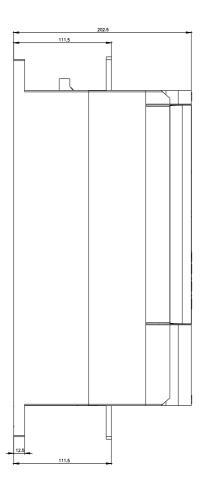
Characteristic: Installation altitude

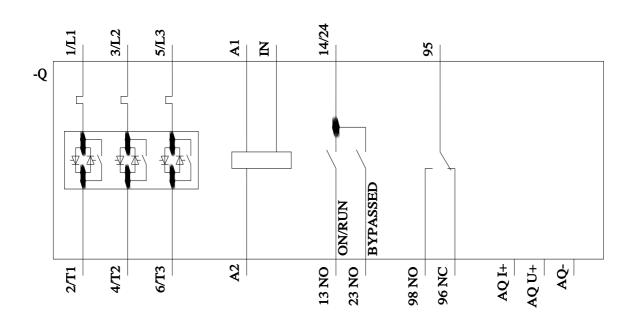
 $\underline{http://www.automation.siemens.com/bilddb/index.aspx?view=Search\&mlfb=3RW5248-2AC05\&objecttype=14\&gridview=view1.pdf.$

Simulation Tool for Soft Starters (STS)

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







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