SIEMENS

product brand name product category

Data sheet 3RW5248-6TC15

SIRIUS

Hybrid switching devices



SIRIUS soft starter 200-600 V 570 A, 110-250 V AC Screw terminals Thermistor input

	,
product designation	Soft starter
product type designation	3RW52
manufacturer's article number	
 of standard HMI module usable 	3RW5980-0HS00
 of high feature HMI module usable 	3RW5980-0HF00
 of communication module PROFINET standard usable 	3RW5980-0CS00
 of communication module PROFIBUS usable 	3RW5980-0CP00
 of communication module Modbus TCP usable 	3RW5980-0CT00
 of communication module Modbus RTU usable 	3RW5980-0CR00
 of communication module Ethernet/IP 	3RW5980-0CE00
 of circuit breaker usable at 400 V 	3VA2580-6HN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10
 of circuit breaker usable at 500 V 	3VA2580-6HN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10
• of circuit breaker usable at 400 V at inside-delta circuit	3VA2510-6HN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10
• of circuit breaker usable at 500 V at inside-delta circuit	3VA2510-6HN32-0AA0; 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 	3NE1437-2; Type of coordination 2, Iq = 65 kA
 of back-up R fuse link for semiconductor protection usable up to 690 V 	3NE3340-8; Type of coordination 2, Iq = 65 kA
General 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	V.
CSA approval	Yes
• OOA approvar	Yes Yes
product component	
• •	
product component	Yes
product component • HMI-High Feature	Yes
product componentHMI-High Featureis supported HMI-Standard	Yes No Yes
 product component HMI-High Feature is supported HMI-Standard is supported HMI-High Feature 	Yes No Yes Yes
product component HMI-High Feature is supported HMI-Standard is supported HMI-High Feature product feature integrated bypass contact system	Yes No Yes Yes Yes
product component HMI-High Feature is supported HMI-Standard is supported HMI-High Feature product feature integrated bypass contact system number of controlled phases	Yes No Yes Yes Yes Yes 3
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	Yes No Yes Yes Yes Yes 3

insulation voltage rated value	600 V
degree of pollution	3, acc. to IEC 60947-4-2
impulse voltage rated value	5, acc. to fee 60947-4-2
blocking voltage of the thyristor maximum	1 600 V
service factor	1
	6 kV
surge voltage resistance rated value maximum permissible voltage for protective separation	UNV
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 Q
-	02/15/2018
Substance Prohibitance (Date) product function	02/13/2010
• ramp-up (soft starting)	Yes
• ramp-down (soft stop)	Yes
Soft Torque	Yes
adjustable current limitation	Yes
adjustable current limitation pump ramp down	Yes
intrinsic device protection	Yes
motor overload protection	Yes; Full motor protection (thermistor motor protection and electronic motor
- motor overload protection	overload protection)
 evaluation of thermistor motor protection 	Yes; Type A PTC or Klixon / Thermoclick
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	No
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	
rated value	200 600 V
at inside-delta circuit rated value	200 600 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 	160 kW
• at 230 V at inside-delta circuit at 40 °C rated value	315 kW
 at 400 V at 40 °C rated value 	315 kW
 at 400 V at inside-delta circuit at 40 °C rated value 	560 kW
 at 500 V at 40 °C rated value 	355 kW
 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 	504 A
at rotary coding switch on switch position 14	526 A
at rotary coding switch on switch position 15	548 A
at rotary coding switch on switch position 16	570 A
minimum	240 A
adjustable motor current	
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	721 A
for inside-delta circuit at rotary coding switch on switch position 10	759 A
for inside-delta circuit at rotary coding switch on switch position 11 for inside delta circuit at rotary coding switch on switch	797 A
 for inside-delta circuit at rotary coding switch on switch position 12 for inside-delta circuit at rotary coding switch on switch 	835 A 873 A
position 13 • for inside-delta circuit at rotary coding switch on switch	911 A
position 14 • for inside-delta circuit at rotary coding switch on switch	949 A
position 15 • for inside-delta circuit at rotary coding switch on switch	987 A
position 16 • at inside-delta circuit minimum	416 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	183 W
• at 50 °C after startup	163 W
• 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
control supply voltage at AC	
	110 250 V
• at 50 Hz	110 250 V 110 250 V
• at 60 Hz	- 110 111 200 1
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	100 mA
inrush current by closing the bypass contacts maximum	2.2 A
inrush current peak at application of control supply voltage	12.2 A
maximum duration of inrush current peak at application of control supply	2.2 ms
voltage	
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 digital outputs	3
not parameterizable	2
digital output version	2 normally-open contacts (NO) / 1 changeover contact (CO)
number of analog outputs	0
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	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	screw-type terminals
width of connection bar maximum	45 mm
wire length for thermistor connection	
• with conductor cross-section = 0.5 mm² maximum	50 m
• with conductor cross-section = 1.5 mm² maximum	150 m
• with conductor cross-section = 2.5 mm² maximum	250 m
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)

	EMC
Certificates/ approvals	
electromagnetic compatibility	in accordance with IEC 60947-4-2
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front with cover
protection class IP on the front according to IEC 60529	IP00; IP20 with cover
Safety related data	
contact rating of auxiliary contacts according to UL	R300-B300
at 575/600 V at inside-delta circuit at 50 °C rated value	950 hp
 at 460/480 V at inside-delta circuit at 50 °C rated value 	750 hp
• at 220/230 V at inside-delta circuit at 50 °C rated value	350 hp
• at 200/208 V at inside-delta circuit at 50 °C rated value	300 hp
at 575/600 V at 50 °C rated value	500 hp
• at 460/480 V at 50 °C rated value	400 hp
at 220/230 V at 50 °C rated value	200 hp
• at 200/208 V at 50 °C rated value	150 hp
operating power [hp] for 3-phase motors	
575/600 V according to UL	, 190. Slado o / E, Ilian. 1200 A, Iq - 100 IM
to 575/600 V according to UL — usable for High Faults at inside-delta circuit up to	Type: Class J / L, max. 1200 A; Iq = 100 kA
usable for High Faults up to 575/600 V according to UL usable for Standard Faults at inside-delta circuit up	Type: Class J / L, max. 1200 A; Iq = 100 kA Type: Class J / L, max. 1600 A; Iq = 30 kA
— usable for Standard Faults up to 575/600 V according to UL	Type: Class J / L, max. 1600 A; lq = 30 kA
of the fuse	
manufacturer's article number	
UL/CSA ratings	
PROFIBUS	Yes
Modbus TCP	Yes
Modbus RTU	Yes
EtherNet/IP	Yes
PROFINET standard	Yes
communication module is supported	
Communication/ Protocol	
EMC emitted interference	acc. to IEC 60947-4-2: Class A
during transport according to IEC 60721	2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)
during storage according to IEC 60721	1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4
 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
environmental category	0/0/
during storage and transport	-40 +80 °C
during operation	-25 +60 °C; Please observe derating at temperatures of 40 °C or above
ambient temperature	05 ×00 00 Pl
installation altitude at height above sea level maximum	5 000 m; Derating as of 1000 m, see catalog
Ambient conditions	
 for main contacts with screw-type terminals for auxiliary and control contacts with screw-type terminals 	124 210 lbf·in 7 10.3 lbf·in
tightening torque [lbf·in]	124 210 lbf in
for auxiliary and control contacts with screw-type terminals tightoning torque [lift-in]	0.8 1.2 N·m
 for main contacts with screw-type terminals 	14 24 N·m
tightening torque	
at the digital inputs at AC maximum	100 m
 between soft starter and motor maximum 	800 m
wire length	
 for AWG cables for control circuit solid 	1x (20 12), 2x (20 14)
• for control circuit finely stranded with core end processing	1x (0.5 2.5 mm²), 2x (0.5 1.5 mm²)
 for control circuit solid 	1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²)





Confirmation







Declaration of Conformity

Test Certificates

Marine / Shipping





Type Test Certificates/Test Report







Marine / Shipping

other



Confirmation

Further information

Siemens has decided to exit the Russian market (see here).

https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

Information on the packaging

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=3RW5248-6TC15

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5248-6TC15

 ${\bf Service \& Support\ (Manuals,\ Certificates,\ Characteristics,\ FAQs,...)}$

https://support.industry.siemens.com/cs/ww/en/ps/3RW5248-6TC15

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

 $\underline{\text{http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5248-6TC15\&lang=en}$

Characteristic: Tripping characteristics, I²t, Let-through current

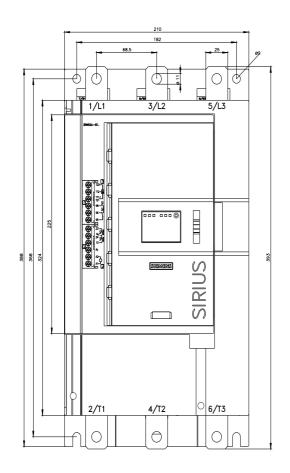
https://support.industry.siemens.com/cs/ww/en/ps/3RW5248-6TC15/char

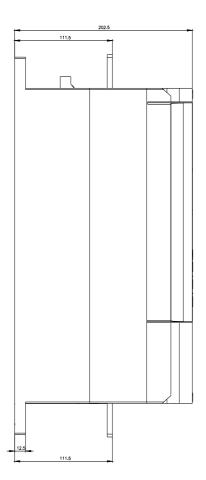
Characteristic: Installation altitude

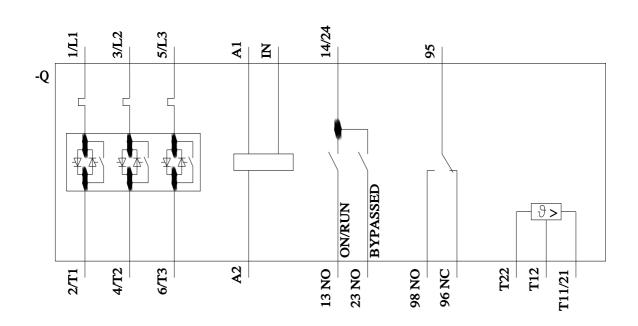
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5248-6TC15&objecttype=14&gridview=view1

Simulation Tool for Soft Starters (STS)

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







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