SIEMENS

product brand name

Data sheet 3RW5246-6TC15

SIRIUS



SIRIUS soft starter 200-600 V 370 A, 110-250 V AC Screw terminals Thermistor input

product brand name	Silvios
product category	Hybrid switching devices
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 	3VA2440-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10
 of circuit breaker usable at 500 V 	3VA2440-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10
• of circuit breaker usable at 400 V at inside-delta circuit	3VA2580-6HN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10
• of circuit breaker usable at 500 V at inside-delta circuit	3VA2580-6HN32-0AA0; 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 	3NE1334-2; Type of coordination 2, Iq = 65 kA
 of back-up R fuse link for semiconductor protection usable up to 690 V 	3NE3336; Type of coordination 2, Iq = 65 kA
eneral 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	Yes
CSA approval	Yes
product component	
HMI-High Feature	No
• is supported HMI-Standard	Yes
• is supported HMI-High Feature	Yes
product feature integrated bypass contact system	Yes
product feature integrated bypass contact system number of controlled phases	Yes 3
· · · · · · · · · · · · · · · · · · ·	
number of controlled phases	3
number of controlled phases trip class	3

insulation voltage rated value	600 V
degree of pollution	3, acc. to IEC 60947-4-2
impulse voltage rated value	5, acc. to IEC 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	ONV
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	02/10/2010
• 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; Full motor protection (thermistor motor protection and electronic motor
	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	370 A
at 50 °C rated value	328 A
at 60 °C rated value	300 A
operational current at inside-delta circuit	
• at 40 °C rated value	641 A
at 50 °C rated value	568 A
at 60 °C rated value	519 A
operating voltage	200 000 //
• rated value	200 600 V
at inside-delta circuit rated value	200 600 V
relative negative telerance of the operating voltage	-15 % -10 %
relative positive telerance 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	110 kW
 at 230 V at inside-delta circuit at 40 °C rated value 	200 kW
at 400 V at 40 °C rated value	200 kW
at 400 V at inside-delta circuit at 40 °C rated value	355 kW
at 500 V at 40 °C rated value	250 kW
 at 500 V at inside-delta circuit at 40 °C rated value 	450 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 	160 A
 at rotary coding switch on switch position 2 	174 A
 at rotary coding switch on switch position 3 	188 A
 at rotary coding switch on switch position 4 	202 A
 at rotary coding switch on switch position 5 	216 A
 at rotary coding switch on switch position 6 	230 A
 at rotary coding switch on switch position 7 	244 A
 at rotary coding switch on switch position 8 	258 A
 at rotary coding switch on switch position 9 	272 A
 at rotary coding switch on switch position 10 	286 A
 at rotary coding switch on switch position 11 	300 A
at rotary coding switch on switch position 12	314 A
at rotary coding switch on switch position 13	328 A
at rotary coding switch on switch position 14	342 A
at rotary coding switch on switch position 15	356 A
at rotary coding switch on switch position 16	370 A
• minimum	160 A
adjustable motor current	
for inside-delta circuit at rotary coding switch on switch position 1	277 A
• for inside-delta circuit at rotary coding switch on switch position 2	301 A
 for inside-delta circuit at rotary coding switch on switch position 3 	326 A
 for inside-delta circuit at rotary coding switch on switch position 4 	350 A
 for inside-delta circuit at rotary coding switch on switch position 5 	374 A
 for inside-delta circuit at rotary coding switch on switch position 6 	398 A
 for inside-delta circuit at rotary coding switch on switch position 7 	423 A
for inside-delta circuit at rotary coding switch on switch position 8	447 A
for inside-delta circuit at rotary coding switch on switch position 9 for inside delta size with at rotary coding switch on switch and switch an	471 A
 for inside-delta circuit at rotary coding switch on switch position 10 for inside-delta circuit at rotary coding switch on switch 	495 A
position 11	520 A 544 A
 for inside-delta circuit at rotary coding switch on switch position 12 for inside-delta circuit at rotary coding switch on switch 	568 A
position 13 • for inside-delta circuit at rotary coding switch on switch	592 A
position 14 • for inside-delta circuit at rotary coding switch on switch	617 A
position 15 • for inside-delta circuit at rotary coding switch on switch	641 A
position 16 • at inside-delta circuit minimum	277 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	123 W
at 50 °C after startup	110 W
at 60 °C after startup	102 W
power loss [W] at AC at current limitation 350 %	
• at 40 °C during startup	5 575 W
at 50 °C during startup	4 706 W
• at 60 °C during startup	4 157 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	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	200 11111
• forwards	10 mm
backwards	0 mm
upwards	100 mm
upwards downwards	75 mm
at the side weight without packaging	5 mm
weight without packaging Connections/ Terminals	9.9 kg
type of electrical connection	husbar connection
for main current circuit for control 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 = 1.5 mm² maximum with conductor cross-section = 2.5 mm² maximum 	
with conductor cross-section = 1.5 mm² maximum with conductor cross-section = 2.5 mm² maximum type of connectable conductor cross-sections	150 m 250 m
 with conductor cross-section = 1.5 mm² maximum with conductor cross-section = 2.5 mm² maximum 	150 m

General Product Approval	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	600 hp
• at 460/480 V at inside-delta circuit at 50 °C rated value	450 hp
• at 220/230 V at inside-delta circuit at 50 °C rated value	200 hp
• at 200/208 V at inside-delta circuit at 50 °C rated value	200 hp
• at 575/600 V at 50 °C rated value	300 hp
• at 460/480 V at 50 °C rated value	250 hp
• at 220/230 V at 50 °C rated value	125 hp
• at 200/208 V at 50 °C rated value	100 hp
operating power [hp] for 3-phase motors	
 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
usable for Standard Faults at inside-delta circuit up to 575/600 V according to UL	Type: Class J / L, max. 1200 A; Iq = 18 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 up to 575/600 V according to UL	Type: Class J / L, max. 1200 A; Iq = 18 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	
during storage and transport	-40 +80 °C
during operation	-25 +60 °C; Please observe derating at temperatures of 40 °C or above
ambient temperature	
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]	
for auxiliary and control contacts with screw-type terminals	0.8 1.2 N·m
• for main contacts with screw-type terminals	14 24 N·m
tightening torque	100 111
at the digital inputs at AC maximum	100 m
between soft starter and motor maximum	800 m
wire length	1A (20 12), 2A (20 17)
 for control circuit finely stranded with core end processing for AWG cables for control circuit solid 	1x (0.5 2.5 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14)
• for control circuit finally atranded with page and processing	1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²)
	4 (0 = 4.0 %) 0 (0 = 0 = %)



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=3RW5246-6TC15

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5246-6TC15

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

https://support.industry.siemens.com/cs/ww/en/ps/3RW5246-6TC15

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5246-6TC15&lang=en

Characteristic: Tripping characteristics, I²t, Let-through current

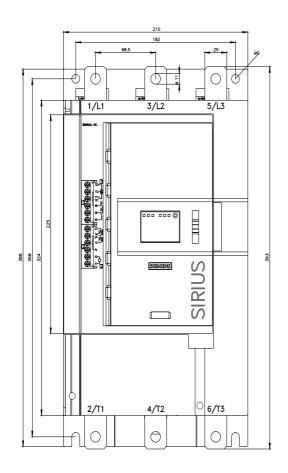
https://support.industry.siemens.com/cs/ww/en/ps/3RW5246-6TC15/char

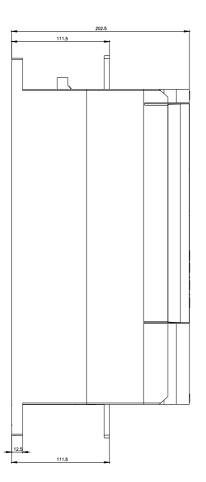
Characteristic: Installation altitude

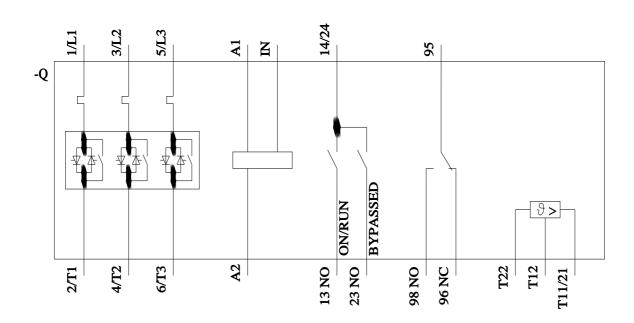
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5246-6TC15&objecttype=14&gridview=view1

Simulation Tool for Soft Starters (STS)

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







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