SIEMENS

product brand name product category

Data sheet 3RW5246-6AC15

SIRIUS

Hybrid switching devices



SIRIUS soft starter 200-600 V 370 A, 110-250 V AC Screw terminals Analog output

product category	Tybrid 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
number of controlled phases	3
trin class	CLASS 10A (default) / 10E / 20E; acc. to IEC 60947-4-2
trip class	CLASS TOA (deladit) / TOE / 20E, acc. to IEC 00947-4-2
buffering time in the event of power failure	CEASS TOA (default) / TOE / 20E, acc. to IEC 00347-4-2
•	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 protective separation	
 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 HMI)
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	
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	110 kW
	200 kW
 at 230 V at inside-delta circuit at 40 °C rated value 	
 at 230 V at inside-delta circuit at 40 °C rated value at 400 V at 40 °C rated value 	200 kW
	200 kW 355 kW
• at 400 V at 40 °C rated value	

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	Λ0
	440 250 //
• 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 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
nputs/ 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	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
nstallation/ 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	9.9 kg
Connections/ Terminals	
type of electrical connection	
for main current circuit	busbar connection
for control circuit	screw-type terminals
	45 mm
width of connection bar maximum	
width of connection bar maximum type of connectable conductor cross-sections	
	2x (50 240 mm²)
type of connectable conductor cross-sections	2x (50 240 mm²) 2x (70 240 mm²)
type of connectable conductor cross-sections • for DIN cable lug for main contacts stranded	
 type of connectable conductor cross-sections for DIN cable lug for main contacts stranded for DIN cable lug for main contacts finely stranded 	
type of connectable conductor cross-sections • for DIN cable lug for main contacts stranded • for DIN cable lug for main contacts finely stranded type of connectable conductor cross-sections	2x (70 240 mm²)

wire length		
between soft starter and motor maximum	800 m	
at the digital inputs at AC maximum	100 m	
tightening torque	44 04 14	
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	7 10.3 lbf·in	
terminals		
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 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 	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 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 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	100 hp	
• at 220/230 V at 50 °C rated value	125 hp	
• at 460/480 V at 50 °C rated value	250 hp	
• at 575/600 V at 50 °C rated value	300 hp	
• at 200/208 V at inside-delta circuit at 50 °C rated value	200 hp	
• at 220/230 V at inside-delta circuit at 50 °C rated value	200 hp	
• at 460/480 V at inside-delta circuit at 50 °C rated value	450 hp	
• at 575/600 V at inside-delta circuit at 50 °C rated value	600 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	
electromagnetic compatibility	in accordance with IEC 60947-4-2	
Certificates/ approvals		
General Product Approval	EMC	





Confirmation







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=3RW5246-6AC15

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5246-6AC15

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

https://support.industry.siemens.com/cs/ww/en/ps/3RW5246-6AC15

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5246-6AC15&lang=en

Characteristic: Tripping characteristics, I2t, Let-through current

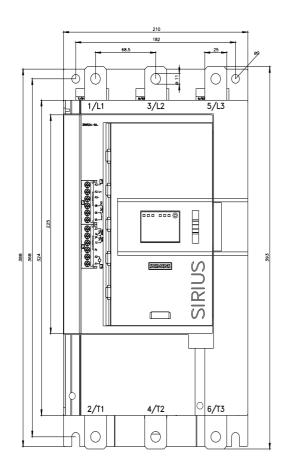
https://support.industry.siemens.com/cs/ww/en/ps/3RW5246-6AC15/char

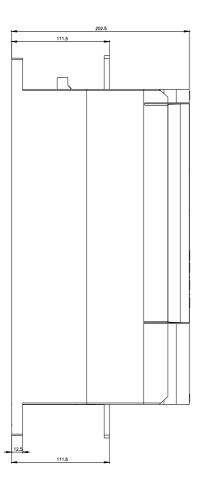
Characteristic: Installation altitude

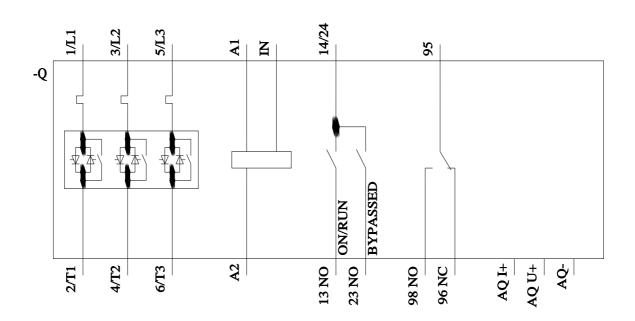
 $\underline{http://www.automation.siemens.com/bilddb/index.aspx?view=Search\&mlfb=3RW5246-6AC15\&objecttype=14\&gridview=view1action.siemens.com/bilddb/index.aspx?view=Search\&mlfb=3RW5246-6AC15\&objecttype=14\&gridview=view1action.siemens.com/bilddb/index.aspx?view=Search\&mlfb=3RW5246-6AC15\&objecttype=14\&gridview=view1action.siemens.com/bilddb/index.aspx?view=Search\&mlfb=3RW5246-6AC15\&objecttype=14\&gridview=view1action.siemens.com/bilddb/index.aspx?view=Search\&mlfb=3RW5246-6AC15\&objecttype=14\&gridview=view1action.siemens.com/bilddb/index.aspx?view=Search\&mlfb=3RW5246-6AC15\&objecttype=14\&gridview=view1action.siemens.com/bilddb/index.aspx?view=Search\&mlfb=3RW5246-6AC15\&objecttype=14\&gridview=view1action.siemens.com/bilddb/index.aspx?view=Search\&mlfb=3RW5246-6AC15\&objecttype=14\&gridview=view1action.siemens.com/bilddb/index.aspx?view=Search\&mlfb=3RW5246-6AC15\&objecttype=14\&gridview=view1action.siemens.com/bilddb/index.aspx.com/$

Simulation Tool for Soft Starters (STS)

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







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