SIEMENS

product brand name

Data sheet 3RW5217-1AC14

SIRIUS



SIRIUS soft starter 200-480 V 38 A, 110-250 V AC Screw terminals Analog output





product brand name	
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 	3RV2032-4WA10; Type of coordination 1, Iq = 65 kA, CLASS 10
 of circuit breaker usable at 500 V 	3RV2032-4WA10; Type of coordination 1, Iq = 10 kA, CLASS 10
 of circuit breaker usable at 400 V at inside-delta circuit 	3RV2032-4RA10; Type of coordination 1, Iq = 65 kA, CLASS 10
 of circuit breaker usable at 500 V at inside-delta circuit 	3RV2032-4RA10; Type of coordination 1, Iq = 10 kA, CLASS 10
 of the gG fuse usable up to 690 V 	3NA3824-6; Type of coordination 1, Iq = 65 kA
 of the gG fuse usable at inside-delta circuit up to 500 V 	3NA3824-6; Type of coordination 1, Iq = 65 kA
 of full range R fuse link for semiconductor protection usable up to 690 V 	3NE1820-0; Type of coordination 2, Iq = 65 kA
 of back-up R fuse link for semiconductor protection usable up to 690 V 	3NE8024-1; 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	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

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 protective separation	
between main and auxiliary circuit	600 V
shock resistance	15 g / 11 ms, from 12 g / 11 ms with potential contact lifting
utilization category according to IEC 60947-4-2	AC 53a
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	02/15/2018
SVHC substance name	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one - 71868-10-5 Dibutylbis(pentane-2,4-dionato-O,O')tin - 22673-19-4 Diboron trioxide - 1303-86-2
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	38 A
at 50 °C rated value	33.5 A
at 60 °C rated value	30.5 A
operational current at inside-delta circuit	
• at 40 °C rated value	65.8 A
at 50 °C rated value	58 A
at 60 °C rated value	52.8 A
operating voltage	000 400 //
rated value at incide delta circuit rated value	200 480 V
at inside-delta circuit rated value Talativa regetive telegrapes of the expecting voltage.	200 480 V
relative negative tolerance 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 relative positive tolerance of the operating voltage at	-15 %
inside-delta circuit	10 /0
operating power for 3-phase motorsat 230 V at 40 °C rated value	11 kW

a at 220 V at incide delta circuit at 40 °C rated value	10 5 NN
at 230 V at inside-delta circuit at 40 °C rated value at 400 V at 40 °C rated value.	18.5 kW
at 400 V at 40 °C rated value at 400 V at incide delta circuit at 40 °C rated value	18.5 kW
at 400 V at inside-delta circuit at 40 °C rated value	30 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	15.5 A
at rotary coding switch on switch position 2	17 A
at rotary coding switch on switch position 3	18.5 A
at rotary coding switch on switch position 4	20 A
at rotary coding switch on switch position 5	21.5 A
at rotary coding switch on switch position 6	23 A
at rotary coding switch on switch position 7	24.5 A
at rotary coding switch on switch position 8	26 A
at rotary coding switch on switch position 9	27.5 A
at rotary coding switch on switch position 10	29 A
at rotary coding switch on switch position 11	30.5 A
at rotary coding switch on switch position 12	32 A
at rotary coding switch on switch position 13	33.5 A
 at rotary coding switch on switch position 14 	35 A
at rotary coding switch on switch position 15	36.5 A
at rotary coding switch on switch position 16	38 A
• minimum	15.5 A
adjustable motor current	
 for inside-delta circuit at rotary coding switch on switch position 1 	26.8 A
 for inside-delta circuit at rotary coding switch on switch position 2 	29.4 A
 for inside-delta circuit at rotary coding switch on switch position 3 	32 A
 for inside-delta circuit at rotary coding switch on switch position 4 	34.6 A
 for inside-delta circuit at rotary coding switch on switch position 5 	37.2 A
 for inside-delta circuit at rotary coding switch on switch position 6 	39.8 A
 for inside-delta circuit at rotary coding switch on switch position 7 	42.4 A
 for inside-delta circuit at rotary coding switch on switch position 8 	45 A
 for inside-delta circuit at rotary coding switch on switch position 9 	47.6 A
 for inside-delta circuit at rotary coding switch on switch position 10 	50.2 A
 for inside-delta circuit at rotary coding switch on switch position 11 	52.8 A
 for inside-delta circuit at rotary coding switch on switch position 12 	55.4 A
 for inside-delta circuit at rotary coding switch on switch position 13 	58 A
 for inside-delta circuit at rotary coding switch on switch position 14 	60.6 A
 for inside-delta circuit at rotary coding switch on switch position 15 	63.2 A
 for inside-delta circuit at rotary coding switch on switch position 16 	65.8 A
at inside-delta circuit minimum	26.8 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	23 W
• at 50 °C after startup	22 W
at 60 °C after startup	21 W
power loss [W] at AC at current limitation 350 %	
at 40 °C during startup	628 W

 at 50 °C during startup 	526 W
• at 60 °C during startup	464 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	75 mA
inrush current by closing the bypass contacts maximum	0.17 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
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	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 surface +/- 22.5° tiltable to the front and back
fastening method	screw fixing
height	275 mm
width	170 mm
depth	152 mm
required spacing with side-by-side mounting	40
• forwards	10 mm
backwards	0 mm
• upwards	100 mm
downwardsat the side	75 mm
at the side weight without packaging	5 mm
Connections/ Terminals	2.3 kg
type of electrical connection • for main current circuit	screw-type terminals
for control circuit	screw-type terminals screw-type terminals
	color type terminals
type of connectable conductor cross-sections	
type of connectable conductor cross-sections • for main contacts	
• for main contacts	2x (1.0 2.5 mm²) 2x (2.5 10 mm²)
• for main contacts — solid	2x (1.0 2.5 mm²), 2x (2.5 10 mm²) 2x (1.0 2.5 mm²), 2x (2.5 6.0 mm²)
for main contacts — solid — finely stranded with core end processing	2x (1.0 2.5 mm²), 2x (2.5 6.0 mm²)
• for main contacts — solid	

 for control circuit solid 	1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²)
 for control circuit finely stranded with core end processing 	1x (0.5 2.5 mm²), 2x (0.5 1.5 mm²)
for 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
tightening torque	
for main contacts with screw-type terminals	2 2.5 N·m
	0.8 1.2 N·m
 for auxiliary and control contacts with screw-type terminals 	0.0 1.2 IVIII
tightening torque [lbf·in]	
for main contacts with screw-type terminals	18 22 lbf-in
for auxiliary and control contacts with screw-type	7 10.3 lbf-in
terminals	7 10.0 (0) (1)
Ambient conditions	
installation altitude at height above sea level maximum	5 000 m; Derating as of 1000 m, see catalog
	o ooo iii, beraang ac or rooc iii, ooc calalog
ambient temperature	-25 +60 °C; Please observe derating at temperatures of 40 °C or above
during operation	· ·
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
a during transport apparding to IEC 60721	
during transport according to IEC 60721	2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)
Environmental footprint	
Siemens Eco Profile (SEP)	Siemens EcoTech
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
	165
UL/CSA ratings	
manufacturer's article number	
 of circuit breaker usable for Standard Faults 	
— at 460/480 V according to UL	Siemens type: 3RV2742, max. 70 A or 3VA51, max. 125 A; lq = 5 kA
— 60/480 V according to UL	Siemens type: 3RV2742, max.40 A or 3VA51, max. 60 A; Iq max = 65 kA
- at 460/480 V at inside-delta circuit according to UL	Siemens type: 3RV2742, max. 70 A or 3VA51, max. 125 A; Iq = 5 kA
- 60/480 V at inside-delta circuit according to UL	Siemens type: 3VA51, max. 60 A; Iq max = 65 kA
— at 575/600 V according to UL	Siemens type: 3RV2742, max. 70 A or 3VA51, max. 125 A; Iq = 5 kA
 at 575/600 V at inside-delta circuit according to UL 	Siemens type: 3RV2742, max. 70 A or 3VA51, max. 125 A; Iq = 5 kA
• of the fuse	, , , , , , , , , , , , , , , , , , ,
— usable for Standard Faults up to 575/600 V according to UL	Type: Class RK5 / K5, max. 150 A; Iq = 5 kA
— usable for High Faults up to 575/600 V according to UL	Type: Class J / L, max. 150 A; Iq = 100 kA
 usable for Standard Faults at inside-delta circuit up to 575/600 V according to UL 	Type: Class RK5 / K5, max. 150 A; Iq = 5 kA
 usable for High Faults at inside-delta circuit up to 575/600 V according to UL 	Type: Class J / L, max. 150 A; Iq = 100 kA
operating power [hp] for 3-phase motors	
at 200/208 V at 50 °C rated value	10 hp
• at 220/230 V at 50 °C rated value	10 hp
• at 460/480 V at 50 °C rated value	20 hp
	·
at 200/208 V at inside-delta circuit at 50 °C rated value at 200/200 V at inside delta circuit at 50 °C rated value	15 hp
• at 220/230 V at inside-delta circuit at 50 °C rated value	20 hp
at 460/480 V at inside-delta circuit at 50 °C rated value	40 hp
contact rating of auxiliary contacts according to UL	R300-B300
Electrical Safety	
protection class IP on the front according to IEC 60529	IP20
protection class in the front according to 120 cours	

Approvals Certificates

General Product Approval





Confirmation







EMV

Test Certificates

Marine / Shipping



<u>KC</u>

Type Test Certificates/Test Report







Marine / Shipping

othor

Environment



Confirmation

Siemens EcoTech



Environmental Confirmations

Further information

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=3RW5217-1AC14

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5217-1AC14

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

https://support.industry.siemens.com/cs/ww/en/ps/3RW5217-1AC14

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5217-1AC14&lang=en

Characteristic: Tripping characteristics, I2t, Let-through current

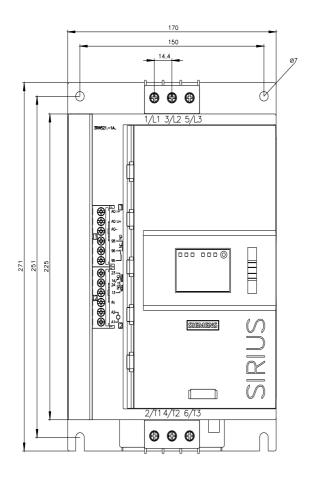
https://support.industry.siemens.com/cs/ww/en/ps/3RW5217-1AC14/char

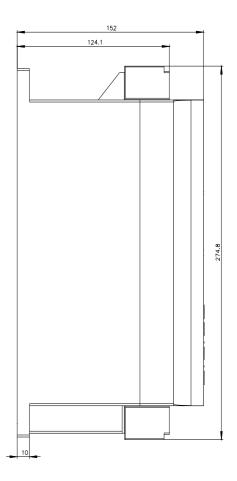
Characteristic: Installation altitude

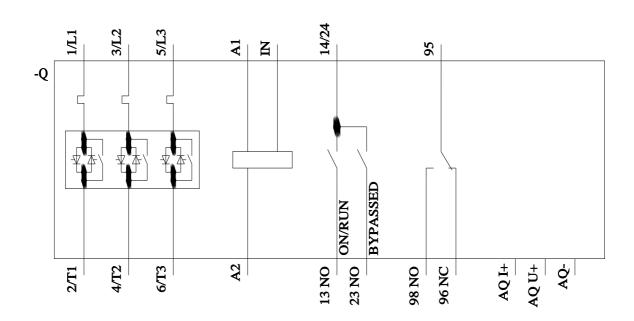
 $\underline{\text{http://www.automation.siemens.com/bilddb/index.aspx?view=Search\&mlfb=3RW5217-1AC14\&objecttype=14\&gridview=view1}$

Simulation Tool for Soft Starters (STS)

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







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