SIEMENS

product brand name

Data sheet 3RW5243-2AC15

SIRIUS



SIRIUS soft starter 200-600 V 210 A, 110-250 V AC spring-type terminals Analog output



Programme and the second secon	
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 	3VA2325-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10
 of circuit breaker usable at 500 V 	3VA2325-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10
 of circuit breaker usable at 400 V at inside-delta circuit 	3VA2440-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10
 of circuit breaker usable at 500 V at inside-delta circuit 	3VA2440-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10
 of the gG fuse usable up to 690 V 	2x3NA3354-6; Type of coordination 1, Iq = 65 kA
 of the gG fuse usable at inside-delta circuit up to 500 V 	2x3NA3354-6; Type of coordination 1, Iq = 65 kA
 of full range R fuse link for semiconductor protection usable up to 690 V 	3NE1230-2; Type of coordination 2, Iq = 65 kA
 of back-up R fuse link for semiconductor protection usable up to 690 V 	3NE3333; 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
buffering time in the event of power failure	

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
OVITO SUBSTRATOR HARM	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
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	210 A
• at 50 °C rated value	186 A
at 60 °C rated value	170 A
operational current at inside-delta circuit	
• at 40 °C rated value	364 A
at 50 °C rated value	322 A
at 60 °C rated value	294 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	EE IAM
at 230 V at 40 °C rated value at 230 V at incide data circuit at 40 °C rated value	55 kW
 at 230 V at inside-delta circuit at 40 °C rated value 	110 kW

14001/14000	4401111
• at 400 V at 40 °C rated value	110 kW
 at 400 V at inside-delta circuit at 40 °C rated value 	200 kW
 at 500 V at 40 °C rated value 	132 kW
at 500 V at inside-delta circuit at 40 °C rated value	250 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 	90 A
 at rotary coding switch on switch position 2 	98 A
 at rotary coding switch on switch position 3 	106 A
 at rotary coding switch on switch position 4 	114 A
at rotary coding switch on switch position 5	122 A
 at rotary coding switch on switch position 6 	130 A
 at rotary coding switch on switch position 7 	138 A
 at rotary coding switch on switch position 8 	146 A
 at rotary coding switch on switch position 9 	154 A
 at rotary coding switch on switch position 10 	162 A
 at rotary coding switch on switch position 11 	170 A
 at rotary coding switch on switch position 12 	178 A
 at rotary coding switch on switch position 13 	186 A
 at rotary coding switch on switch position 14 	194 A
 at rotary coding switch on switch position 15 	202 A
 at rotary coding switch on switch position 16 	210 A
• minimum	90 A
adjustable motor current	
 for inside-delta circuit at rotary coding switch on switch position 1 	156 A
 for inside-delta circuit at rotary coding switch on switch position 2 	170 A
 for inside-delta circuit at rotary coding switch on switch position 3 	184 A
 for inside-delta circuit at rotary coding switch on switch position 4 	197 A
 for inside-delta circuit at rotary coding switch on switch position 5 	211 A
 for inside-delta circuit at rotary coding switch on switch position 6 	225 A
 for inside-delta circuit at rotary coding switch on switch position 7 	239 A
 for inside-delta circuit at rotary coding switch on switch position 8 	253 A
 for inside-delta circuit at rotary coding switch on switch position 9 	267 A
 for inside-delta circuit at rotary coding switch on switch position 10 	281 A
 for inside-delta circuit at rotary coding switch on switch position 11 	294 A
 for inside-delta circuit at rotary coding switch on switch position 12 	308 A
 for inside-delta circuit at rotary coding switch on switch position 13 	322 A
for inside-delta circuit at rotary coding switch on switch position 14	336 A
for inside-delta circuit at rotary coding switch on switch position 15	350 A
 for inside-delta circuit at rotary coding switch on switch position 16 	364 A
at inside-delta circuit minimum	156 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 	75 W
• at 50 °C after startup	68 W
at 60 °C after startup	63 W
power loss [W] at AC at current limitation 350 %	

• at 40 °C during startup	3 562 W
at 50 °C during startup	2 979 W
at 60 °C during startup	2 617 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	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	1A
Installation/ mounting/ dimensions	171
	with vertical mounting ourface 1/00° retatable with western security
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	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)
 for AWG cables for control circuit solid 	2x (24 16)
 for AWG cables for control circuit finely stranded with core end processing 	2x (24 16)
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 	14 24 N·m
 for auxiliary and control contacts with screw-type 	0.8 1.2 N·m
terminals	
tightening torque [lbf-in]	404 040 lbs:-
for main contacts with screw-type terminals	124 210 lbf-in
 for auxiliary and control contacts with screw-type terminals 	7 10.3 lbf-in
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 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
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
UL/CSA ratings	
manufacturer's article number	
 of circuit breaker usable for Standard Faults 	
— at 460/480 V according to UL	Siemens type: 3VA53, max. 400 A or 3VA54, max. 600 A; Iq = 10 kA
— 60/480 V according to UL	Siemens type: 3VA53, max. 400 A or 3VA54, max. 600 A; Iq max = 65 kA
— at 460/480 V at inside-delta circuit according to UL	Siemens type: 3VA53, max. 400 A or 3VA54, max. 600 A; Iq = 10 kA
— 60/480 V at inside-delta circuit according to UL	Siemens type: 3VA53, max. 400 A or 3VA54, max. 600 A; Iq max = 65 kA
— at 575/600 V according to UL	Siemens type: 3VA53, max. 400 A or 3VA54, max. 600 A; Iq = 10 kA
— at 575/600 V at inside-delta circuit according to UL	Siemens type: 3VA53, max. 400 A or 3VA54, max. 600 A; Iq = 10 kA
• of the fuse	
 usable for Standard Faults up to 575/600 V according to UL 	Type: Class J / L, max. 700 A; Iq = 10 kA
usable for High Faults up to 575/600 V according to UL	Type: Class J / L, max. 700 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. 700 A; Iq = 10 kA
— usable for High Faults at inside-delta circuit up to	Type: Class J / L, max. 700 A; Iq = 100 kA
575/600 V according to UL	
operating power [hp] for 3-phase motors • at 200/208 V at 50 °C rated value	60 hp
	60 hp
• at 220/230 V at 50 °C rated value	60 hp
• at 460/480 V at 50 °C rated value	150 hp
 at 575/600 V at 50 °C rated value at 200/208 V at inside-delta circuit at 50 °C rated value 	150 hp
a ar virin vira v ar includ delta circuit at PH 1, Lated Valle	100 hp
	·
at 250/250 V at inside-delta circuit at 50 °C rated value at 220/230 V at inside-delta circuit at 50 °C rated value at 460/480 V at inside-delta circuit at 50 °C rated value	125 hp 250 hp

300 hp • at 575/600 V at inside-delta circuit at 50 °C rated value R300-B300 contact rating of auxiliary contacts according to UL **Electrical Safety** 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 **Approvals Certificates**

General Product Approval

Confirmation











EMV

Test Certificates

Marine / Shipping



<u>KC</u>

Type Test Certificates/Test Report







Marine / Shipping

other

Environment



Confirmation





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=3RW5243-2AC15

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5243-2AC15

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

https://support.industry.siemens.com/cs/ww/en/ps/3RW5243-2AC15

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5

Characteristic: Tripping characteristics, I2t, Let-through current

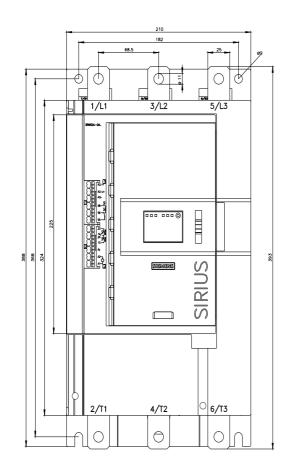
https://support.industry.siemens.com/cs/ww/en/ps/3RW5243-2AC15/char

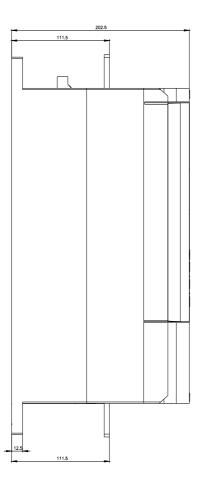
Characteristic: Installation altitude

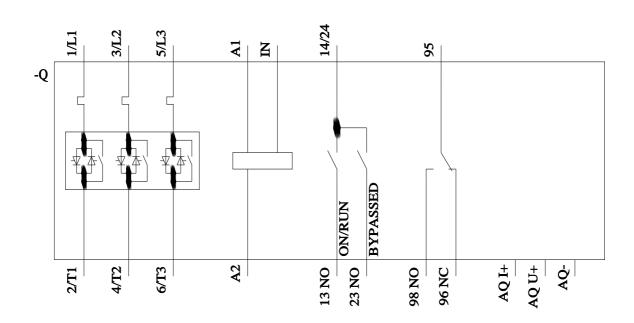
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5243-2AC15&objecttype=14&gridview=view1

Simulation Tool for Soft Starters (STS)

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







last modified: 4/19/2024 🖸

