SIEMENS

product brand name

Data sheet 3RW5243-2TC15

SIRIUS



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

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
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
trip class	CLASS 10A (default) / 10E / 20E; acc. to IEC 60947-4-2
buffering time in the event of power failure	
for main current circuit	100 ms

inculation voltage rated value	600 V
insulation voltage rated value 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
surge voltage resistance rated value	6 kV
maximum permissible voltage for protective separation	O KV
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; 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 via software configurable	No Yes
via software configurablePROFlenergy	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	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	
 at 230 V at 40 °C rated value 	55 kW
 at 230 V at inside-delta circuit at 40 °C rated value 	110 kW
 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 1 rated value 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 for inside delta circuit at rotary coding switch on switch	239 A
for inside-delta circuit at rotary coding switch on switch position 8 for inside delta circuit at rotary coding switch on switch and switch on switch and switch on switch are switched.	253 A 267 A
 for inside-delta circuit at rotary coding switch on switch position 9 for inside-delta circuit at rotary coding switch on switch 	281 A
position 10 • for inside-delta circuit at rotary coding switch on switch	294 A
position 11 • for inside-delta circuit at rotary coding switch on switch	308 A
position 12 • for inside-delta circuit at rotary coding switch on switch	322 A
position 13 • for inside-delta circuit at rotary coding switch on switch	336 A
position 14 • for inside-delta circuit at rotary coding switch on switch	350 A
position 15 for inside-delta circuit at rotary coding switch on switch	364 A
position 16 • 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	, 6
• at 50 Hz	110 250 V
• at 60 Hz	110 250 V 110 250 V
• at 60 ⊓Z relative negative tolerance of the control supply voltage at	-15 %
AC at 50 Hz	
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	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
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	spring-loaded 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	
type of connectable conductor cross-sections • for DIN cable lug for main contacts stranded	2x (50 240 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 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 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 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 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
— usable for High Faults at 460/480 V according to UL	Siemens type: 3VA53, max. 400 A or 3VA54, max. 600 A; lq max = 65 kA
 usable for Standard Faults 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
 usable for High Faults at 460/480 V at inside-delta circuit according to UL 	Siemens type: 3VA53, max. 400 A or 3VA54, max. 600 A; lq max = 65 kA
 usable for Standard Faults at 575/600 V according to UL 	Siemens type: 3VA53, max. 400 A or 3VA54, max. 600 A; lq = 10 kA
 usable for Standard Faults at 575/600 V at inside- delta circuit according to UL 	Siemens type: 3VA53, max. 400 A or 3VA54, max. 600 A; lq = 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 575/600 V according to UL	Type: Class J / L, max. 700 A; Iq = 100 kA
operating power [hp] for 3-phase motors	
• at 200/208 V at 50 °C rated value	60 hp
• at 220/230 V at 50 °C rated value	60 hp
 at 220/230 V at 50 °C rated value at 460/480 V at 50 °C rated value 	60 hp 150 hp
	·

 at 220/230 V at inside-delta circuit at 50 °C rated value 125 hp • at 460/480 V at inside-delta circuit at 50 °C rated value 250 hp • at 575/600 V at inside-delta circuit at 50 °C rated value 300 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







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=3RW5243-2TC15

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5243-2TC15

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

https://support.industry.siemens.com/cs/ww/en/ps/3RW5243-2TC15

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5243-2TC15&lang=en

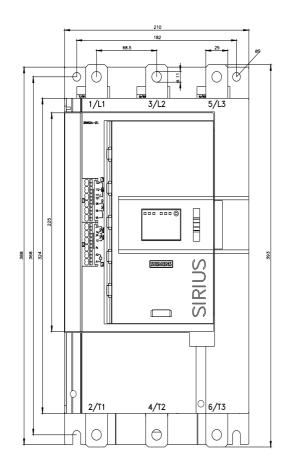
Characteristic: Tripping characteristics, I2t, Let-through current

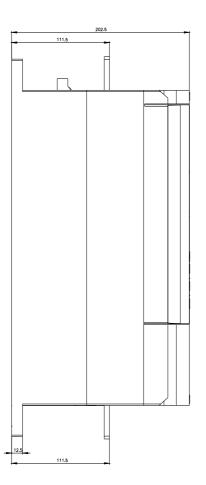
https://support.industry.siemens.com/cs/ww/en/ps/3RW5243-2TC15/char

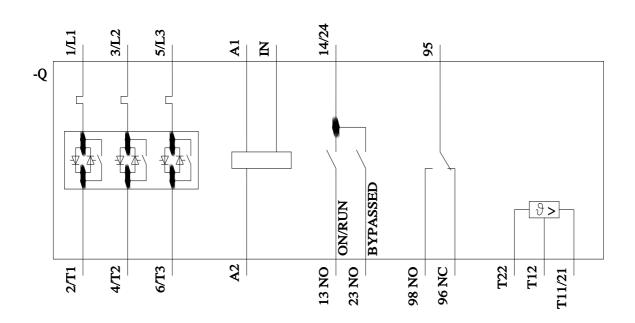
Characteristic: Installation altitude

Simulation Tool for Soft Starters (STS)

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







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