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, lq = 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 50 %
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 is supported

product feature integrated bypass contact system

• HMI-Standard

• HMI-High Feature

Yes

Yes

Yes

number of controlled phases	2
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	400 mg
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 safe isolation • 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 acc. to IEC 60947-4-2	AC 53a
reference code acc. to IEC 81346-2	Q
Substance Prohibitance (Date)	15.02.2018 00:00:00
product function	13.02.2010 00.00.00
• 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
Thick eveneda protostion	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	210 A
• at 50 °C rated value	186 A
at 60 °C rated value	170 A
operational current at inside-delta circuit	224.4
• at 40 °C rated value	364 A
• at 50 °C rated value	322 A
at 60 °C rated value	294 A
operating voltage	000 0001/
• 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 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 for inside delta circuit at rotary coding switch on	253 A
for inside-delta circuit at rotary coding switch on switch position 9 for inside delta circuit at rotary coding switch on	267 A 281 A
 for inside-delta circuit at rotary coding switch on switch position 10 for inside-delta circuit at rotary coding switch on 	294 A
switch position 11 • for inside-delta circuit at rotary coding switch on	308 A
switch position 12 • for inside-delta circuit at rotary coding switch on	322 A
switch position 13 • for inside-delta circuit at rotary coding switch on	336 A
switch position 14 • for inside-delta circuit at rotary coding switch on	350 A
switch position 15	

 for inside-delta circuit at rotary coding switch on 	364 A
switch 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	2 017 VV
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	10 %
voltage at AC at 50 Hz	
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
locked-rotor current at close of bypass contact	2.2 A
maximum	
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 inputs for thermistor connection	1; Type A PTC or Klixon / Thermoclick
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	
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	0.0 Ng
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	70 111111
with conductor cross-section = 0.5 mm² maximum	50 m
with conductor cross-section = 0.5 mm² maximum 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	250 m
type of connectable conductor cross-sections	250 111
	2v /50 240 mm²\
for DIN cable lug for main contacts stranded for DIN cable lug for main contacts finely stranded	2x (50 240 mm²)
for DIN cable lug for main contacts finely stranded	2x (70 240 mm²)
type of connectable conductor cross-sections	2v /0.2F
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)
 at AWG cables for control circuit solid 	2x (24 16)
at 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 acc. 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 acc. to IEC 60721 	1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4
during transport acc. 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	Siemens type: 3VA53, max. 400 A or 3VA54, max. 600 A; Iq = 10 kA
according to UL	, , , , , , , , , , , , , , , , , , , ,

- usable for High Faults at 460/480 V according Siemens type: 3VA53, max. 400 A or 3VA54, max. 600 A; Iq max = 65 to UL - usable for Standard Faults at 460/480 V at Siemens type: 3VA53, max. 400 A or 3VA54, max. 600 A; Iq = 10 kA inside-delta circuit according to UL - usable for High Faults at 460/480 V at inside-Siemens type: 3VA53, max. 400 A or 3VA54, max. 600 A; Iq max = 65 delta circuit according to UL - usable for Standard Faults at 575/600 V Siemens type: 3VA53, max. 400 A or 3VA54, max. 600 A; Iq = 10 kA according to UL - usable for Standard Faults at 575/600 V at Siemens type: 3VA53, max. 400 A or 3VA54, max. 600 A; Iq = 10 kA inside-delta circuit according to UL • of the fuse — usable for Standard Faults up to 575/600 V Type: Class J / L, max. 700 A; Iq = 10 kA according to UL - usable for High Faults up to 575/600 V Type: Class J / L, max. 700 A; Iq = 100 kA according to UL - usable for Standard Faults at inside-delta Type: Class J / L, max. 700 A; Iq = 10 kA circuit up to 575/600 V according to UL - usable for High Faults at inside-delta circuit up Type: Class J / L, max. 700 A; Iq = 100 kA to 575/600 V according to UL operating power [hp] for 3-phase motors 60 hp • at 200/208 V at 50 °C rated value • 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 150 hp • at 200/208 V at inside-delta circuit at 50 °C rated 100 hp value • at 220/230 V at inside-delta circuit at 50 °C rated 125 hp value • at 460/480 V at inside-delta circuit at 50 °C rated 250 hp • at 575/600 V at inside-delta circuit at 50 °C rated 300 hp value R300-B300 contact rating of auxiliary contacts according to UL Safety related data protection class IP on the front acc. to IEC 60529 IP00; IP20 with cover touch protection on the front acc. to IEC 60529 finger-safe, for vertical contact from the front with cover in accordance with IEC 60947-4-2 electromagnetic compatibility

Certificates/ approvals

General Product Approval

EMC

Declaration of Conformity













Test Certificates

Marine / Shipping

Type Test Certificates/Test Report











other

Confirmation

Further information

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

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

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

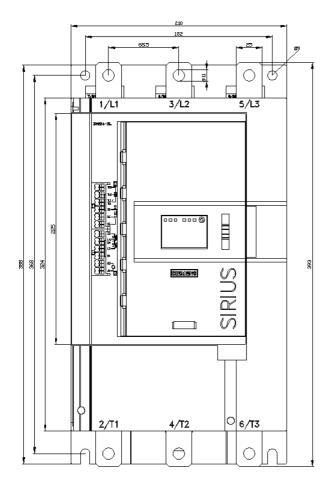
https://support.industry.siemens.com/cs/ww/en/ps/3RW5243-2TC15/char

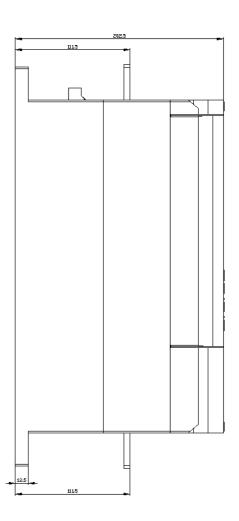
Characteristic: Installation altitude

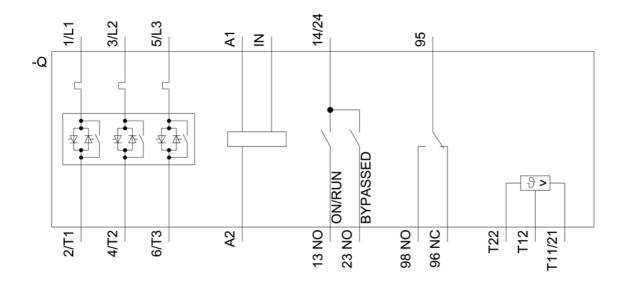
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5243-2TC15&objecttype=14&gridview=view1

Simulation Tool for Soft Starters (STS)

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







last modified: 12/15/2020 🖸