SIEMENS

product brand name

Data sheet 3RW5215-3TC14

SIRIUS



SIRIUS soft starter 200-480 V 25 A, 110-250 V AC spring-type terminals Thermistor input

product brand name	SIRIUS
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 	3RV2032-4EA10; Type of coordination 1, Iq = 65 kA, CLASS 10
 of circuit breaker usable at 500 V 	3RV2032-4EA10; Type of coordination 1, Iq = 15 kA, CLASS 10
 of circuit breaker usable at 400 V at inside-delta circuit 	3RV2032-4VA10; Type of coordination 1, Iq = 65 kA, CLASS 10
 of circuit breaker usable at 500 V at inside-delta circuit 	3RV2032-4VA10; Type of coordination 1, Iq = 15 kA, CLASS 10
 of the gG fuse usable up to 690 V 	3NA3822-6; Type of coordination 1, Iq = 65 kA
 of the gG fuse usable at inside-delta circuit up to 500 V 	3NA3822-6; Type of coordination 1, Iq = 65 kA
 of full range R fuse link for semiconductor protection usable up to 690 V 	3NE1817-0; Type of coordination 2, Iq = 65 kA
 of back-up R fuse link for semiconductor protection usable up to 690 V 	3NE8021-1; 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	
HMI-Standard	Yes
HMI-High Feature	Yes
product feature integrated bypass contact system	Yes

number of soutualled wheels	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	
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 	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 	25 A
 at 50 °C rated value 	22 A
at 60 °C rated value	20 A
operational current at inside-delta circuit	
 at 40 °C rated value 	43.3 A
 at 50 °C rated value 	39 A
at 60 °C rated value	33.9 A
operating voltage	
• rated value	200 480 V
at inside-delta circuit rated value	200 480 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	-15 %
inside-delta circuit	

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 	5.5 kW
 at 230 V at inside-delta circuit at 40 °C rated value 	11 kW
 at 400 V at 40 °C rated value 	11 kW
• at 400 V at inside-delta circuit at 40 °C rated value	18.5 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 	11.5 A
 at rotary coding switch on switch position 2 	12.4 A
 at rotary coding switch on switch position 3 	13.3 A
 at rotary coding switch on switch position 4 	14.2 A
 at rotary coding switch on switch position 5 	15.1 A
 at rotary coding switch on switch position 6 	16 A
 at rotary coding switch on switch position 7 	16.9 A
at rotary coding switch on switch position 8	17.8 A
at rotary coding switch on switch position 9	18.7 A
at rotary coding switch on switch position 10	19.6 A
 at rotary coding switch on switch position 11 	20.5 A
 at rotary coding switch on switch position 12 	21.4 A
 at rotary coding switch on switch position 13 	22.3 A
 at rotary coding switch on switch position 14 	23.2 A
 at rotary coding switch on switch position 15 	24.1 A
 at rotary coding switch on switch position 16 	25 A
• minimum	11.5 A
adjustable motor current	
 for inside-delta circuit at rotary coding switch on switch position 1 	19.9 A
 for inside-delta circuit at rotary coding switch on switch position 2 	21.5 A
 for inside-delta circuit at rotary coding switch on switch position 3 	23 A
 for inside-delta circuit at rotary coding switch on switch position 4 	24.6 A
 for inside-delta circuit at rotary coding switch on switch position 5 	26.2 A
 for inside-delta circuit at rotary coding switch on switch position 6 	27.7 A
 for inside-delta circuit at rotary coding switch on switch position 7 	29.3 A
 for inside-delta circuit at rotary coding switch on switch position 8 	30.8 A
 for inside-delta circuit at rotary coding switch on switch position 9 	32.4 A
 for inside-delta circuit at rotary coding switch on switch position 10 	33.9 A
 for inside-delta circuit at rotary coding switch on switch position 11 	35.5 A
for inside-delta circuit at rotary coding switch on switch position 12	37.1 A
 for inside-delta circuit at rotary coding switch on switch position 13 	38.6 A
for inside-delta circuit at rotary coding switch on switch position 14	40.2 A
for inside-delta circuit at rotary coding switch on switch position 15	41.7 A
 for inside-delta circuit at rotary coding switch on switch position 16 	43.3 A

	40.0.1
at inside-delta circuit minimum	19.9 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 	20 W
 at 50 °C after startup 	19 W
at 60 °C after startup	18 W
power loss [W] at AC at current limitation 350 %	
 at 40 °C during startup 	376 W
 at 50 °C during startup 	318 W
at 60 °C during startup	278 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
locked-rotor current at close of bypass contact 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 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	+/- 10° rotation possible and can be tilted forward or backward on vertical mounting surface
fastening method	screw fixing
height	275 mm
width	170 mm
depth	152 mm
required spacing with side-by-side mounting	TVE TITE
• forwards	10 mm
backwards	0 mm
upwards	100 mm
• upwarus	TVV HIIII

downwards	75 mm
at the side	5 mm
weight without packaging	2.1 kg
Connections/ Terminals	
type of electrical connection	
for main current circuit	screw-type terminals
for control circuit	spring-loaded terminals
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	
 for main contacts 	
— solid	2x (1.0 2.5 mm²), 2x (2.5 10 mm²)
 finely stranded with core end processing 	2x (1.0 2.5 mm²), 2x (2.5 6.0 mm²)
at AWG cables for main current circuit solid	2x (16 12), 2x (14 8)
type of connectable conductor cross-sections	
for control circuit solid	2x (0.25 1.5 mm²)
 for control circuit finely stranded with core end 	2x (0.25 1.5 mm²)
processing	2v (24 16)
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	2 2.5 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 	18 22 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
- during atomaco and transport	above
during storage and transport	-40 +80 °C
environmental category	3K6 (no ice formation, only occasional condensation), 3C3 (no salt
during operation acc. to IEC 60721 during storage acc. to IEC 60721	mist), 3S2 (sand must not get into the devices), 3M6
during storage acc. to IEC 60721 during transport 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 EMC emitted interference	2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m) acc. to IEC 60947-4-2: Class A
Communication/ Protocol	aud. to ILO 00347-4-2. Gla55 A
communication module is supported • PROFINET standard	Yes
EtherNet/IP	Yes
Modbus RTU	Yes
Modbus RTO 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: 3RV2742, max. 70 A or 3VA51, max. 80 A; Iq = 5 kA
according to UL — usable for High Faults at 460/480 V according	Siemens type: 3RV2742, max.40 A or 3VA51, max. 60 A; lq max = 65

to UL - usable for Standard Faults at 460/480 V at inside-delta circuit according to UL - usable for High Faults at 460/480 V at insidedelta circuit according to UL - usable for Standard Faults at 575/600 V according to UL - usable for Standard Faults at 575/600 V at inside-delta circuit according to UL - usable for Standard Faults up to 575/600 V according to UL - usable for High Faults up to 575/600 V according to UL - usable for Standard Faults at inside-delta circuit up to 575/600 V according to UL - usable for High Faults at inside-delta circuit up to 575/600 V according to UL operating power [hp] for 3-phase motors at 200/208 V at 50 °C rated value

Siemens type: 3RV2742, max. 70 A or 3VA51, max. 80 A; Iq = 5 kA

Siemens type: 3VA51, max. 60 A; Iq max = 65 kA

Siemens type: 3RV2742, max. 70 A or 3VA51, max. 80 A; Iq = 5 kA

Siemens type: 3RV2742, max. 70 A or 3VA51, max. 80 A; Iq = 5 kA

Type: Class RK5 / K5, max. 100 A; Iq = 5 kA

Type: Class J / L, max. 100 A; Iq = 100 kA

Type: Class RK5 / K5, max. 100 A; Iq = 5 kA

Type: Class J / L, max. 100 A; Iq = 100 kA

- at 220/230 V at 50 °C rated value • at 460/480 V at 50 °C rated value • at 200/208 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 contact rating of auxiliary contacts according to UL

5 hp

kΑ

7.5 hp

15 hp 10 hp

10 hp

25 hp

R300-B300

Safety related data

protection class if on the nont acc. to iEc 00323
touch protection on the front acc. to IEC 60529
electromagnetic compatibility

IP20

finger-safe, for vertical contact from the front in accordance with IEC 60947-4-2

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=3RW5215-3TC14

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5215-3TC14

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3RW5215-3TC14

Characteristic: Tripping characteristics, l²t, Let-through current

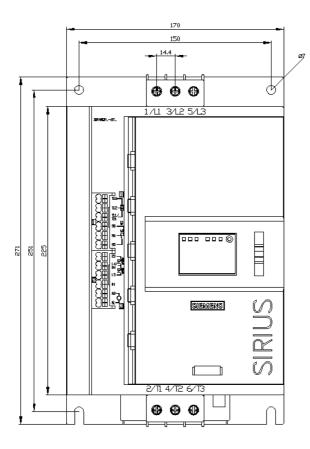
https://support.industry.siemens.com/cs/ww/en/ps/3RW5215-3TC14/char

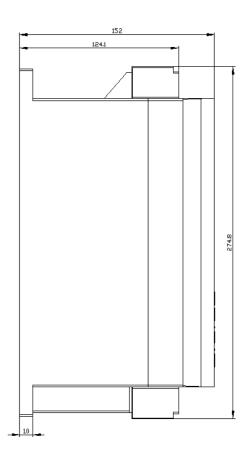
Characteristic: Installation altitude

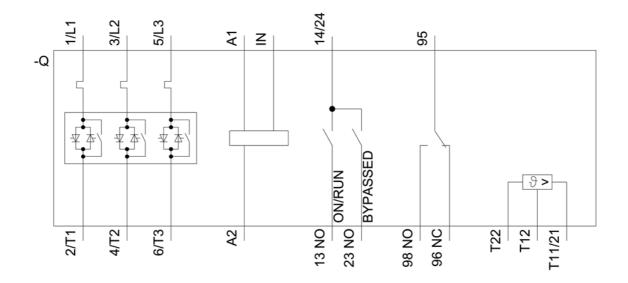
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5215-3TC14&objecttype=14&gridview=view1

Simulation Tool for Soft Starters (STS)

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







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