# **SIEMENS**

product brand name

Data sheet 3RW5213-1TC14

SIRIUS



SIRIUS soft starter 200-480 V 13 A, 110-250 V AC Screw terminals Thermistor input

product category	Hybrid switching devices
product designation	Soft starter
product type designation	3RW52
manufacturer's article number	
<ul> <li>of standard HMI module usable</li> </ul>	3RW5980-0HS00
<ul> <li>of high feature HMI module usable</li> </ul>	3RW5980-0HF00
<ul> <li>of communication module PROFINET standard usable</li> </ul>	3RW5980-0CS00
<ul> <li>of communication module PROFIBUS usable</li> </ul>	3RW5980-0CP00
<ul> <li>of communication module Modbus TCP usable</li> </ul>	3RW5980-0CT00
<ul> <li>of communication module Modbus RTU usable</li> </ul>	3RW5980-0CR00
<ul> <li>of communication module Ethernet/IP</li> </ul>	3RW5980-0CE00
<ul> <li>of circuit breaker usable at 400 V</li> </ul>	3RV2032-4TA10; Type of coordination 1, Iq = 65 kA, CLASS 10
<ul> <li>of circuit breaker usable at 500 V</li> </ul>	3RV2032-4TA10; Type of coordination 1, Iq = 18 kA, CLASS 10
<ul> <li>of circuit breaker usable at 400 V at inside-delta circuit</li> </ul>	3RV2032-4DA10; Type of coordination 1, Iq = 65 kA, CLASS 10
<ul> <li>of circuit breaker usable at 500 V at inside-delta circuit</li> </ul>	3RV2032-4DA10; Type of coordination 1, Iq = 18 kA, CLASS 10
<ul> <li>of the gG fuse usable up to 690 V</li> </ul>	3NA3820-6; Type of coordination 1, Iq = 65 kA
<ul> <li>of the gG fuse usable at inside-delta circuit up to 500 V</li> </ul>	3NA3820-6; Type of coordination 1, Iq = 65 kA
<ul> <li>of full range R fuse link for semiconductor protection usable up to 690 V</li> </ul>	3NE1815-0; Type of coordination 2, Iq = 65 kA
<ul> <li>of back-up R fuse link for semiconductor protection usable up to 690 V</li> </ul>	3NE8017-1; 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 controlled wheels	
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 ma
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	u.
• ramp-up (soft starting)	Yes
<ul><li>ramp-down (soft stop)</li></ul>	Yes
Soft Torque	Yes
<ul> <li>adjustable current limitation</li> </ul>	Yes
<ul><li>pump ramp down</li></ul>	Yes
<ul> <li>intrinsic device protection</li> </ul>	Yes
motor overload protection	Yes; Full motor protection (thermistor motor protection and electronic motor overload protection)
<ul> <li>evaluation of thermistor motor protection</li> </ul>	Yes; Type A PTC or Klixon / Thermoclick
inside-delta circuit	Yes
• auto-RESET	Yes
manual RESET	Yes
<ul><li>remote reset</li></ul>	Yes; By turning off the control supply voltage
<ul> <li>communication function</li> </ul>	Yes
<ul> <li>operating measured value display</li> </ul>	Yes; Only in conjunction with special accessories
<ul><li>error logbook</li></ul>	Yes; Only in conjunction with special accessories
<ul> <li>via software parameterizable</li> </ul>	No
<ul> <li>via software configurable</li> </ul>	Yes
PROFlenergy	Yes; in connection with the PROFINET Standard communication module
• firmware update	Yes
<ul> <li>removable terminal for control circuit</li> </ul>	Yes
• torque control	No
analog output	No
Power Electronics	
operational current	
<ul> <li>at 40 °C rated value</li> </ul>	13 A
<ul> <li>at 50 °C rated value</li> </ul>	12 A
at 60 °C rated value	11 A
operational current at inside-delta circuit	
<ul> <li>at 40 °C rated value</li> </ul>	22.5 A
<ul> <li>at 50 °C rated value</li> </ul>	19.9 A
at 60 °C rated value	18.2 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	
<ul> <li>at 230 V at 40 °C rated value</li> </ul>	3 kW
<ul> <li>at 230 V at inside-delta circuit at 40 °C rated value</li> </ul>	5.5 kW
<ul> <li>at 400 V at 40 °C rated value</li> </ul>	5.5 kW
<ul> <li>at 400 V at inside-delta circuit at 40 °C rated value</li> </ul>	11 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	
<ul> <li>at rotary coding switch on switch position 1</li> </ul>	5.5 A
<ul> <li>at rotary coding switch on switch position 2</li> </ul>	6 A
<ul> <li>at rotary coding switch on switch position 3</li> </ul>	6.5 A
<ul> <li>at rotary coding switch on switch position 4</li> </ul>	7 A
<ul> <li>at rotary coding switch on switch position 5</li> </ul>	7.5 A
<ul> <li>at rotary coding switch on switch position 6</li> </ul>	8 A
<ul> <li>at rotary coding switch on switch position 7</li> </ul>	8.5 A
<ul> <li>at rotary coding switch on switch position 8</li> </ul>	9 A
<ul> <li>at rotary coding switch on switch position 9</li> </ul>	9.5 A
at rotary coding switch on switch position 10	10 A
at rotary coding switch on switch position 11	10.5 A
at rotary coding switch on switch position 12	11 A
<ul> <li>at rotary coding switch on switch position 13</li> </ul>	11.5 A
<ul> <li>at rotary coding switch on switch position 14</li> </ul>	12 A
<ul> <li>at rotary coding switch on switch position 15</li> </ul>	12.5 A
at rotary coding switch on switch position 16	13 A
• minimum	5.5 A
adjustable motor current	
for inside-delta circuit at rotary coding switch on switch position 1	9.5 A
<ul> <li>for inside-delta circuit at rotary coding switch on switch position 2</li> </ul>	10.4 A
<ul> <li>for inside-delta circuit at rotary coding switch on switch position 3</li> </ul>	11.3 A
<ul> <li>for inside-delta circuit at rotary coding switch on switch position 4</li> </ul>	12.1 A
<ul> <li>for inside-delta circuit at rotary coding switch on switch position 5</li> </ul>	13 A
<ul> <li>for inside-delta circuit at rotary coding switch on switch position 6</li> </ul>	13.9 A
<ul> <li>for inside-delta circuit at rotary coding switch on switch position 7</li> </ul>	14.7 A
<ul> <li>for inside-delta circuit at rotary coding switch on switch position 8</li> </ul>	15.6 A
for inside-delta circuit at rotary coding switch on switch position 9	16.5 A
for inside-delta circuit at rotary coding switch on switch position 10	17.3 A
for inside-delta circuit at rotary coding switch on switch position 11      for inside delta circuit at rotary coding switch on switch on the size of the size of the size of the switch on the switch of the switch on the switch of the switch on the switch on the switch on the switch of the switch of the switch on the switch of the switch on the switch of the switch on the s	18.2 A
for inside-delta circuit at rotary coding switch on switch position 12      for inside delta circuit at rotary coding switch on	19.1 A
for inside-delta circuit at rotary coding switch on switch position 13     for inside delta circuit at rotary coding switch on	19.9 A
for inside-delta circuit at rotary coding switch on switch position 14      for inside delta circuit at rotary coding switch on	20.8 A
<ul> <li>for inside-delta circuit at rotary coding switch on switch position 15</li> <li>for inside-delta circuit at rotary coding switch on</li> </ul>	21.7 A 22.5 A
Tor inside-delta circuit at rotary coding switch on switch position 16	22.0 A

minimum toad (%) power loss [W] for rated value of the current at AC     # 48 °C after startup     # 85 °C after startup	at inside-delta circuit minimum	9.5 A
power loss [W] for rated value of the current at AC  • at 40 °C after startup  • at 50 °C after startup  • at 50 °C after startup  • at 50 °C after startup  • at 60 °C during startup  • browards  • backwards   10 W  • at 60 °C during startup  • browards  • backwards  • at 60 °C after startup  • at 60 °C after startup  • browards  • backwards  16 W  • backwards  16 W  • backwards  16 W  • backwards  • backwards  16 W  • backwa		
e at 40 °C after startup e 16 W e 16 S0 °C after startup e 15 W e 16 0° C after startup e 15 W e 16 0° C after startup e 15 W e 16 0° C after startup e 15 W e 16 0° C after startup e 15 W e 16 0° C after startup e 16 W e 16 0° C after startup e 17 W e 16 0° C after startup e 17 W e 16 0° C after startup e 17 W e 16 0° C after startup e 17 W e 16 0° C after startup e 17 W e 16 0° C after startup e 17 W e 16 0° C after startup e 16 W e 16 0° C after startup e 17 W e 16 0° C after startup e 17 W e 16 0° C after startup e 17 W e 16 0° C after startup e 16 0° C after startup e 17 W e 16 0° C after startup e 16 0° C after startup e 17 W e 18 0° C after startup e 17 W e 18 0° C after startup e 18 0° C after st		, reduite to diffalloct octable to
e at 80 °C after startup el 68 0 °C after startup power loss WJ at AC at current limitation 350 % e at 40 °C during startup e at 60 °C during startup  161 W  20		16 W
e at 60 °C after startup power loss [W] at AC at current limitation 350 %	·	
power loss [W] at AC at current limitation 350 %  at 40 °C during startup  at 60 °C during startup  type of voltage of the control supply voltage  control supply voltage at AC  at 60 °L2  a	•	
a 48 0°C during startup at 60°C during startup background at 60°C during startup at 60°C during startup background backg		
at 60 °C during startup at 60 °C during startup  type of voltage of the control supply voltage control supply voltage at AC  at 50 °RZ at 50 °RZ to 100 °RZ to 100 °RZ at 50 °RZ relative negative tolerance of the control supply voltage at AC at 50 °RZ relative positive tolerance of the control supply voltage at AC at 50 °RZ voltage at AC at 50 °RZ at 50		210 W
• et 60 °C during startup  Control circult/ Control  type of voltage of the control supply voltage		
Control current Control  type of Voltage of the control supply voltage  of 450 Hz  el at 50 Hz  relative negative tolerance of the control supply voltage at AC at 50 Hz  relative negative tolerance of the control supply voltage at AC at 50 Hz  relative negative tolerance of the control supply voltage at AC at 50 Hz  relative negative tolerance of the control supply voltage at AC at 50 Hz  relative negative tolerance of the control supply voltage at AC at 50 Hz  relative negative tolerance of the control supply voltage at AC at 50 Hz  relative negative tolerance of the control supply voltage at AC at 50 Hz  relative negative tolerance of the control supply voltage frequency  relative positive tolerance of the control supply voltage frequency  relative positive tolerance of the control supply voltage frequency  relative positive tolerance of the control supply voltage frequency  relative positive tolerance of the control supply voltage frequency  relative positive tolerance of the control supply voltage frequency  relative positive tolerance of the control supply voltage frequency  relative positive tolerance of the control supply voltage frequency  relative positive tolerance of the control supply voltage frequency  relative positive tolerance of the control supply voltage frequency  relative positive tolerance of the control supply voltage frequency  relative positive tolerance of the control supply voltage frequency  relative positive tolerance of the control supply voltage frequency  relative positive tolerance of the control supply voltage frequency  relative positive tolerance of the control supply voltage frequency  relative positive tolerance of the control supply voltage frequency  relative positive tolerance of the control supply voltage frequency  relative positive tolerance of the control supply voltage frequency  relative positive tolerance of the control supply voltage frequency  relative positive tolerance of the control supply voltage frequency  relative positive tolerance of the control supply vo	0 1	
type of voltage of the control supply voltage at AC  at 50 Hz  at 50 Hz  to the control supply voltage at AC  at 50 Hz  at 50 Hz  to the control supply voltage at AC at 50 Hz  relative negative tolerance of the control supply voltage at AC at 50 Hz  relative positive tolerance of the control supply voltage at AC at 50 Hz  relative positive tolerance of the control supply voltage at AC at 50 Hz  relative positive tolerance of the control supply voltage at AC at 50 Hz  relative positive tolerance of the control supply voltage at AC at 60 Hz  relative paginity tolerance of the control supply voltage frequency  relative paginity tolerance of the control supply voltage frequency  relative paginity tolerance of the control supply voltage frequency  relative positive tolerance of the control supply voltage frequency  relative positive tolerance of the control supply voltage frequency  relative positive tolerance of the control supply voltage frequency  relative positive tolerance of the control supply voltage frequency  relative positive tolerance of the control supply voltage frequency  relative positive tolerance of the control supply voltage frequency  10 %  10	<u> </u>	
control supply voltage at AC  at 50 Hz  relative negative tolerance of the control supply voltage at AC at 50 Hz  relative positive tolerance of the control supply voltage at AC at 50 Hz  relative positive tolerance of the control supply voltage at AC at 50 Hz  relative negative tolerance of the control supply voltage at AC at 60 Hz  relative negative tolerance of the control supply voltage at AC at 60 Hz  relative negative tolerance of the control supply voltage at AC at 60 Hz  relative negative tolerance of the control supply voltage at AC at 60 Hz  relative negative tolerance of the control supply voltage frequency  relative positive tolerance of the control supply voltage frequency  relative positive tolerance of the control supply voltage frequency  relative positive tolerance of the control supply voltage frequency  relative positive tolerance of the control supply voltage frequency  relative positive tolerance of the control supply voltage frequency  relative positive tolerance of the control supply voltage frequency  relative positive tolerance of the control supply voltage frequency  relative negative tolerance of the control supply voltage frequency  relative negative tolerance of the control supply voltage frequency  10 %  doubted positive tolerance of the control supply voltage frequency  relative negative tolerance of the control supply voltage frequency  10 %  doubted positive tolerance of the control supply voltage frequency  22 ms  doubted for for for tolerative frequency  12.2 A  maximum  voltage frequency  22 ms  design of short-circuit protection for control circuit  design of short-circuit protection for control circuit  required folial poutputs  number of inputs for thermistor connection  1. Type A PTC or Klixon / Thermoclick  number of inputs for thermistor connection  1. Type A PTC or Klixon / Thermoclick  1. Type A PTC or Klixon / The		AC.
* at 50 Hz		
relative negative tolerance of the control supply voltage at AC at 50 Hz relative positive tolerance of the control supply voltage at AC at 50 Hz relative negative tolerance of the control supply voltage at AC at 50 Hz relative negative tolerance of the control supply voltage at AC at 60 Hz relative negative tolerance of the control supply voltage at AC at 60 Hz control supply voltage frequency relative negative tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance frequency relative positive tolerance frequency relative		110 250 V
relative negative tolerance of the control supply voltage at AC at 50 Hz relative positive tolerance of the control supply voltage at AC at 50 Hz relative positive tolerance of the control supply voltage at AC at 50 Hz relative positive tolerance of the control supply voltage at AC at 60 Hz relative positive tolerance of the control supply voltage at AC at 60 Hz relative positive tolerance of the control supply voltage at AC at 60 Hz relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency voltage frequency 10 % voltage 10 %		
voltage at AC at 50 Hz relative negative tolerance of the control supply voltage at AC at 50 Hz relative positive tolerance of the control supply voltage at AC at 50 Hz control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance frequency relative positive tolerance frequency relative positive tolerance frequency relative positive tolerance frequency relative positive positive frequency relative positive frequency relative positive frequency relative positive frequ	relative negative tolerance of the control supply	
voltage at AC at 60 Hz relative positive tolerance of the control supply voltage at AC at 60 Hz control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency control supply current in standby mode rated value holding current in bypass operation rated value locked-rotor current at close of bypass contact maximum inush current peak at application of control supply voltage maximum duration of inrush current peak at application of control supply voltage maximum duration of inrush current peak at application of control supply voltage design of the overvoltage protection design of short-circuit protection for control circuit  singular of scope of supply  Inputs/ Outputs  number of digital inputs 1 number of digital inputs 2 inputs for thermistor connection 1; Type A PTC or Klixon / Thermoclick number of digital outputs 3 inputs of the relative voltage voltage digital output version 2 normally-open contacts (NO) / 1 changeover contact (CO) number of analog outputs 3 A 4 A GC 1st 250 V rated value 4 A CC-15 at 250 V rated value 4 A CC-15 at 250 V rated value 5 A A CC-15 at 250 V rated value 7 A A CC 7 minimiture circuit forward or backward on vertical mounting surface fastening method 1		10 %
voltage at AC at 60 Hz  control supply voltage frequency  relative negative tolerance of the control supply voltage frequency  relative positive tolerance of the control supply voltage frequency  control supply current in standby mode rated value holding current in bypass operation rated value  locked-rotor current at close of bypass contact maximum  locked-rotor current at close of bypass contact maximum  locked-rotor current peak at application of control supply voltage maximum  duration of inrush current peak at application of control supply voltage maximum  design of the overvoltage protection  design of short-circuit protection for control circuit  design of short-circuit protection for control circuit  number of digital inputs  number of digital inputs  number of digital inputs  number of digital outputs  • not parameterizable  digital output version  number of analog outputs  • at AC-15 at 250 V rated value  • at DC-13 at 24 V rated value  • at DC-13 on the relay outputs  fastening method  height  width  170 mm  depth  required spacing with side-by-side mounting  • forwards  • backwards  10 mm  0 mm		-15 %
relative negative tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency control supply current in standby mode rated value holding current in bypass operation rated value locked-rotor current at close of bypass contact maximum inrush current peak at application of control supply voltage maximum duration of inrush current peak at application of control supply voltage maximum design of the overvoltage protection  design of short-circuit protection for control circuit design of short-circuit protection for control circuit number of digital inputs number of digital inputs number of digital outputs  • not parameterizable digital output version number of analog outputs  • at AC-15 at 250 V rated value • 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 screw fixing  screw fixing  fastening method • forwards	voltage at AC at 60 Hz	
relative positive tolerance of the control supply voltage frequency control supply current in standby mode rated value holding current in bypass operation rated value locked-roter current at close of bypass contact maximum inrush current peak at application of control supply voltage maximum duration of inrush current peak at application of control supply voltage design of the overvoltage protection design of short-circuit protection for control circuit  Inputs/ Outputs number of digital inputs number of digital outputs  • not parameterizable digital output version number of analog outputs  • at AC-15 at 250 V rated value  • at DC-13 at 24 V rated value  fastening method height width 170 mm depth required spacing with side-by-side mounting • forwards • backwards  10 %  30 mA 30 mA 30 mA 30 mA 30 mA 40 mA 30 mA 40 mA 30 mA 40 mA 4		50 60 Hz
control supply current in standby mode rated value holding current in bypass operation rated value locked-rotor current at close of bypass contact maximum inrush current peak at application of control supply voltage maximum duration of inrush current peak at application of control supply voltage design of the overvoltage protection design of short-circuit protection for control circuit mumber of digital inputs number of digital inputs number of digital outputs  • on parameterizable digital output version number of analog outputs  • at AC-15 at 250 V rated value • at AC-15 at 250 V rated value  • at AC-15 at 250 V rated value  • at AC-15 at 250 V rated value  fastening method height width 170 mm depth  required spacing with side-by-side mounting • forwards • backwards  • backwards  10 mm	voltage frequency	
holding current in bypass operation rated value   Ocked-rotor current at close of bypass contact maximum   inrush current peak at application of control supply voltage   duration of inrush current peak at application of control supply voltage   duration of inrush current peak at application of control supply voltage   2.2 ms   urange   duration of short-circuit 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= 500 A), C6 miniature circuit breaker (Icu= 300 A); Is not part of scope of supply   number of digital inputs   1	voltage frequency	
locked-rotor current at close of bypass contact maximum   12.2 A		
maximum inrush current peak at application of control supply voltage maximum  duration of inrush current peak at application of control supply voltage design of the overvoltage protection  design of short-circuit protection for control circuit  design of short-circuit protection for control circuit  design of short-circuit protection for control circuit  Inputs/ Outputs  number of digital inputs  number of inputs for thermistor connection  number of inputs for thermistor connection  number of digital outputs  on to parameterizable  digital output version  at AC-15 at 250 V rated value  of at AC-15 at 250 V rated value  at AC-15 at 250 V rated value  fastening method  fastening method  height  width  depth  required spacing with side-by-side mounting  of forwards  of forwards  of some of control circuit  12.2 ms  22.2 ms  4.4 gG fuse (Icu=1 kA), 6 A quick-acting fuse (Icu=1 kA), C1 miniature circuit breaker (Icu=300 A); Is not part of scope of supply  1.5 mounting fuse (Icu=1 kA), 6 A quick-acting fuse (Icu=1 kA), C1 miniature circuit breaker (Icu=300 A); Is not part of scope of supply  1.5 mounting fuse (Icu=1 kA), 6 A quick-acting fuse (Icu=1 kA), C1 miniature circuit breaker (Icu=300 A); Is not part of scope of supply  1.5 mounting of scope of supply  1.5 mounting surface  1.		
inrush current peak at application of control supply voltage maximum  duration of inrush current peak at application of control supply voltage  design of the overvoltage protection  design of short-circuit protection for control circuit  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 number of digital outputs  • not parameterizable digital output version number of analog outputs  • at AC-15 at 250 V rated value • at DC-13 at 24 V rated value  fastening method height width 170 mm  depth required spacing with side-by-side mounting • forwards • backwards  12.2 A  22.2 ms  22.2 ms  24.2 fuse (Icu= 1kA), 6 A quick-acting fuse (Icu= 1kA), C1 miniature circuit breaker (Icu= 600 A), C6 miniature circuit breaker (Icu= 300 A); Is not part of scope of supply  1 A g fuse (Icu= 1kA), 6 A quick-acting fuse (Icu= 1kA), C1 miniature circuit breaker (Icu= 600 A), C6 miniature circuit breaker (Icu= 300 A); Is not part of scope of supply  1 A g fuse (Icu= 1kA), 6 A quick-acting fuse (Icu= 1kA), C1 miniature circuit breaker (Icu= 600 A), C6 miniature circuit breaker (Icu= 300 A); Is not part of scope of supply  1 A g fuse (Icu= 1kA), 6 A quick-acting fuse (Icu= 1kA), 6 A quicker (Icu= 600 A), C6 miniature circuit breaker (Icu= 600 A), C6 m	• • • • • • • • • • • • • • • • • • • •	0.17 A
duration of inrush current peak at application of control supply voltage  design of the overvoltage protection  design of short-circuit protection for control circuit  linputs/ Outputs  number of digital inputs number of digital outputs  number of digital outputs  number of digital outputs  number of analog outputs  number of analog outputs  o at AC-15 at 250 V rated value  at AC-15 at 24 V rated value  fastening method  height  height  forwards  o fastening method  o forwards  o f	inrush current peak at application of control supply voltage	12.2 A
design of short-circuit protection for control circuit  design of short-circuit protection for control circuit breaker (Icu= 300 A); Is not part of scope of supply  Inputs/ Outputs  number of digital inputs		2.2 ms
Inputs/ Outputs  number of digital inputs 1 number of digital outputs 3 • not part of scope of supply 1 1; Type A PTC or Klixon / Thermoclick 1; T	design of the overvoltage protection	Varistor
Inputs/ Outputs  number of digital inputs 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 • forwards • backwards  0 mm	design of short-circuit protection for control circuit	circuit breaker (Icu= 600 A), C6 miniature circuit breaker (Icu= 300 A); Is
number of digital inputs  number of inputs for thermistor connection  1; Type A PTC or Klixon / Thermoclick  number of digital outputs  • not parameterizable  digital output version  number of analog outputs  • at AC-15 at 250 V rated value  • at DC-13 at 24 V rated value  Installation/ mounting/ dimensions  mounting position  **-/- 10° rotation possible and can be tilted forward or backward on vertical mounting surface  fastening method  height  vidth  170 mm  depth  required spacing with side-by-side mounting  • forwards  • backwards  1 mumber of inputs for thermistor connection  1; Type A PTC or Klixon / Thermoclick  3 A  2 normally-open contacts (NO) / 1 changeover contact (CO)  1	Inputs/ Outputs	
number of inputs for thermistor connection  number of digital outputs  onot parameterizable  digital output version  number of analog outputs  oat AC-15 at 250 V rated value  oat DC-13 at 24 V rated value  fastening method  height  width  depth  required spacing with side-by-side mounting  o not parameterizable  2 normally-open contacts (NO) / 1 changeover contact (CO)	number of digital inputs	1
number of digital outputs		1; Type A PTC or Klixon / Thermoclick
ont parameterizable      digital output version     number of analog outputs      switching capacity current of the relay outputs     o at AC-15 at 250 V rated value     o at DC-13 at 24 V rated value     Installation/ mounting/ dimensions      mounting position	number of digital outputs	
number of analog outputs  switching capacity current of the relay outputs  at AC-15 at 250 V rated value  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  required spacing with side-by-side mounting  forwards  backwards  10 mm  0 mm		2
number of analog outputs  switching capacity current of the relay outputs  at AC-15 at 250 V rated value  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  required spacing with side-by-side mounting  forwards  backwards  10 mm  o mm	digital output version	2 normally-open contacts (NO) / 1 changeover contact (CO)
<ul> <li>at AC-15 at 250 V rated value</li> <li>at DC-13 at 24 V rated value</li> <li>1 A</li> </ul> Installation/ mounting/ dimensions mounting position <ul> <li>+/- 10° rotation possible and can be tilted forward or backward on vertical mounting surface</li> <li>fastening method</li> <li>screw fixing</li> <li>height</li> <li>275 mm</li> <li>width</li> <li>170 mm</li> <li>depth</li> <li>required spacing with side-by-side mounting</li> <li>forwards</li> <li>backwards</li> <li>0 mm</li> </ul>	number of analog outputs	
<ul> <li>at DC-13 at 24 V rated value</li> <li>Installation/ mounting/ dimensions</li> <li>mounting position</li> <li>+/- 10° rotation possible and can be tilted forward or backward on vertical mounting surface</li> <li>fastening method</li> <li>screw fixing</li> <li>height</li> <li>width</li> <li>170 mm</li> <li>depth</li> <li>required spacing with side-by-side mounting</li> <li>forwards</li> <li>backwards</li> <li>0 mm</li> </ul>	switching capacity current of the relay outputs	
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 • forwards • backwards  0 mm	• at AC-15 at 250 V rated value	3 A
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 • forwards • backwards  10 mm  0 mm	• at DC-13 at 24 V rated value	1 A
vertical mounting surface  fastening method screw fixing  height 275 mm width 170 mm depth 152 mm required spacing with side-by-side mounting • forwards • backwards 10 mm 0 mm	Installation/ mounting/ dimensions	
height     275 mm       width     170 mm       depth     152 mm       required spacing with side-by-side mounting     0 mm       ● forwards     10 mm       ● backwards     0 mm	mounting position	
width 170 mm   depth 152 mm   required spacing with side-by-side mounting 0 mm   • forwards 0 mm	fastening method	screw fixing
depth     152 mm       required spacing with side-by-side mounting     10 mm       • forwards     0 mm	height	275 mm
required spacing with side-by-side mounting  oforwards backwards  10 mm 0 mm	width	170 mm
<ul><li>◆ forwards</li><li>◆ backwards</li><li>10 mm</li><li>0 mm</li></ul>	depth	152 mm
• backwards 0 mm	required spacing with side-by-side mounting	
	<ul><li>forwards</li></ul>	10 mm
• upwards 100 mm	<ul><li>backwards</li></ul>	0 mm
	• upwards	100 mm

• 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	screw-type 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	0 (4.0
— solid	2x (1.0 2.5 mm²), 2x (2.5 10 mm²)
— finely stranded with core end processing     • at AWG cables for main current circuit solid	2x (1.0 2.5 mm²), 2x (2.5 6.0 mm²)
	2x (16 12), 2x (14 8)
type of connectable conductor cross-sections  • for control circuit solid	1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²)
for control circuit solid     for control circuit finely stranded with core end	1x (0.5 4.0 mm²), 2x (0.5 1.5 mm²)
processing	1 (0.5 2.5 11111 ), 2 (0.5 1.5 11111 )
at AWG cables for control circuit solid	1x (20 12), 2x (20 14)
wire length	
<ul> <li>between soft starter and motor maximum</li> </ul>	800 m
at the digital inputs at AC maximum	100 m
tightening torque	
<ul> <li>for main contacts with screw-type terminals</li> </ul>	2 2.5 N·m
<ul> <li>for auxiliary and control contacts with screw-type</li> </ul>	0.8 1.2 N·m
terminals	
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	o ooo iii, bolaaliig ao oo looo iii, ooo oalalog
during operation	-25 +60 °C; Please observe derating at temperatures of 40 °C or
adding operation	above
during storage and transport	-40 +80 °C
environmental category	
<ul> <li>during operation acc. to IEC 60721</li> </ul>	3K6 (no ice formation, only occasional condensation), 3C3 (no salt
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	mist), 3S2 (sand must not get into the devices), 3M6
<ul> <li>during storage acc. to IEC 60721</li> </ul>	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 according to UL	Siemens type: 3RV2742, max. 40 A or 3VA51, max. 40 A; Iq = 5 kA
	Siemens type: 3RV2742, max. 30 A or 3VA51, max. 35 A; Iq max = 65
— usable for High Faults at 460/480 V according to UL	kA

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

Siemens type: 3RV2742, max. 30 A or 3VA51, max. 35 A; Iq max = 65

Siemens type: 3RV2742, max. 40 A or 3VA51, max. 40 A; Iq = 5 kA

Siemens type: 3RV2742, max. 40 A or 3VA51, max. 40 A; Iq = 5 kA

Type: Class RK5 / K5, max. 50 A; Iq = 5 kA

Type: Class J / L, max. 50 A; Iq = 100 kA

Type: Class RK5 / K5, max. 50 A; Iq = 5 kA

Type: Class J / L, max. 50 A; Iq = 100 kA

#### operating power [hp] for 3-phase motors

- at 200/208 V at 50 °C rated value
- 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

2 hp

3 hp

7.5 hp

5 hp

5 hp

10 hp

R300-B300

#### Safety related data

protection class IP on the front acc. to IEC 60529

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=3RW5213-1TC14

#### Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5213-1TC14

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

https://support.industry.siemens.com/cs/ww/en/ps/3RW5213-1TC14

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RW5213-1TC14&lang=en

Characteristic: Tripping characteristics, I2t, Let-through current

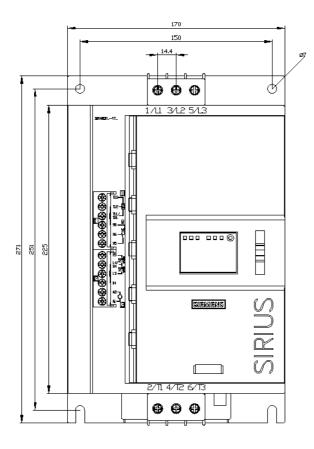
https://support.industry.siemens.com/cs/ww/en/ps/3RW5213-1TC14/char

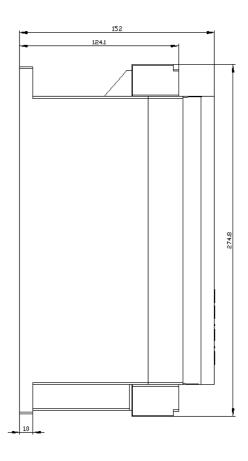
Characteristic: Installation altitude

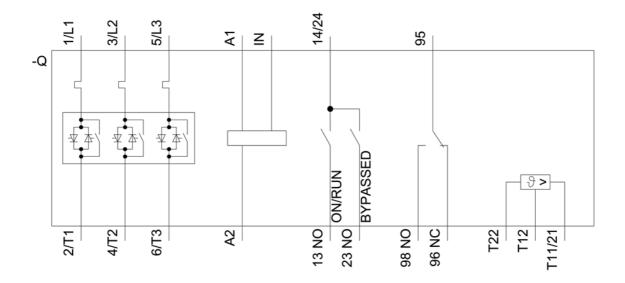
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5213-1TC14&objecttype=14&gridview=view1

Simulation Tool for Soft Starters (STS)

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







last modified: 8/10/2021 🖸