## **SIEMENS**



Data sheet 3RW5524-3HA14



SIRIUS soft starter 200-480 V 47 A, 110-250 V AC spring-type terminals

product brand name	SIRIUS		
product category	Hybrid switching devices		
product designation	Soft starter		
product type designation	3RW55		
manufacturer's article number			
<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 PROFINET high-feature usable</li> </ul>	3RW5950-0CH00		
<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>	3RV2032-4JA10; Type of coordination 1, Iq = 65 kA, CLASS 10		
<ul> <li>of circuit breaker usable at 500 V</li> </ul>	3RV2032-4JA10; Type of coordination 1, Iq = 10 kA, CLASS 10		
<ul> <li>of circuit breaker usable at 400 V at inside-delta circuit</li> </ul>	3RV2032-4RA10: Type of coordination 1, Iq = 65 kA, CLASS 10		
<ul> <li>of circuit breaker usable at 500 V at inside-delta circuit</li> </ul>	3RV2032-4RA10; Type of coordination 1, Iq = 10 kA, CLASS 10		
<ul> <li>of the gG fuse usable up to 690 V</li> </ul>	3NA3824-6; Type of coordination 1, Iq = 65 kA		
<ul> <li>of the gG fuse usable at inside-delta circuit up to 500 V</li> </ul>	3NA3824-6; 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>	3NE1021-2; 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>	3NE8024-1; Type of coordination 2, Iq = 65 kA		

General technical data			
starting voltage [%]	20 100 %		
stopping voltage [%]	50 %; non-adjustable		
start-up ramp time of soft starter	0 360 s		
ramp-down time of soft starter	0 360 s		
start torque [%]	10 100 %		
stopping torque [%]	10 100 %		
torque limitation [%]	20 200 %		
current limiting value [%] adjustable	125 800 %		
breakaway voltage [%] adjustable	40 100 %		
breakaway time adjustable	0 2 s		
number of parameter sets	3		
accuracy class according to IEC 61557-12	5 %		
certificate of suitability			

CE marking	Yes			
<ul> <li>UL approval</li> </ul>	Yes MILDINIANIA			
CSA approval	Yes Yes Yes Yes			
product component				
<ul> <li>HMI-High Feature</li> </ul>	Yes			
is supported HMI-High Feature	Yes			
product feature integrated bypass contact system	Yes			
number of controlled phases	3			
trip class	CLASS 10A / 10E (default) / 20E / 30E; acc. to IEC 60947-4-2			
current unbalance limiting value [%]	10 60 %			
ground-fault monitoring limiting value [%]	10 95 %			
buffering time in the event of power failure				
for main current circuit	100 ms			
for control circuit	100 ms			
idle time adjustable	0 255 s			
insulation voltage rated value	480 V			
degree of pollution	3, acc. to IEC 60947-4-2			
impulse voltage rated value	6 kV			
blocking voltage of the thyristor maximum	1 400 V			
service factor	1.15			
surge voltage resistance rated value	6 kV			
maximum permissible voltage for safe isolation				
between main and auxiliary circuit	480 V; does not apply for thermistor connection			
shock resistance	15 g / 11 ms, from 6 g / 11 ms with potential contact lifting			
vibration resistance	15 mm up to 6 Hz; 2 g up to 500 Hz			
recovery time after overload trip adjustable	60 1 800 s			
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				
<ul><li>ramp-up (soft starting)</li></ul>	Yes			
<ul><li>ramp-down (soft stop)</li></ul>	Yes			
<ul> <li>breakaway pulse</li> </ul>	Yes			
<ul> <li>adjustable current limitation</li> </ul>	Yes			
<ul> <li>creep speed in both directions of rotation</li> </ul>	Yes			
pump ramp down	Yes			
DC braking	Yes			
motor heating	Yes			
slave pointer function	Yes			
trace function	Yes			
intrinsic device protection	Yes			
<ul> <li>motor overload protection</li> </ul>	Yes; Full motor protection (thermistor motor protection and electronic motor overload protection) / When using the motor overload protection according to ATEX, an upstream contactor is required in inside-delta circuit.			
<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			
remote reset	Yes			
<ul> <li>communication function</li> </ul>	Yes			
<ul> <li>operating measured value display</li> </ul>	Yes			
<ul><li>event list</li></ul>	Yes			
<ul><li>error logbook</li></ul>	Yes			
• via software parameterizable	Yes			
• via software configurable	Yes			
screw terminal	No			
spring-loaded terminal	Yes			
PROFlenergy	Yes; in connection with the PROFINET Standard and PROFINET High- Feature communication modules			
firmware update	Yes			

<ul> <li>removable terminal for control circuit</li> </ul>	Yes				
<ul> <li>voltage ramp</li> </ul>	Yes Yes Yes				
torque control					
<ul> <li>combined braking</li> </ul>	Yes				
<ul><li>analog output</li></ul>	Yes; 4 20 mA (default) / 0 10 V				
<ul> <li>programmable control inputs/outputs</li> </ul>	Yes				
<ul><li>condition monitoring</li></ul>	Yes				
<ul> <li>automatic parameterisation</li> </ul>	Yes				
application wizards	Yes				
<ul> <li>alternative run-down</li> </ul>	Yes				
<ul> <li>emergency operation mode</li> </ul>	Yes				
<ul><li>reversing operation</li></ul>	Yes				
soft starting at heavy starting conditions	Yes				
Power Electronics					
operational current					
<ul> <li>at 40 °C rated value</li> </ul>	47 A				
<ul> <li>at 40 °C rated value minimum</li> </ul>	10 A				
at 50 °C rated value	41.6 A				
at 60 °C rated value	36.2 A				
operational current at inside-delta circuit					
• at 40 °C rated value	81.4 A				
<ul> <li>at 50 °C rated value</li> </ul>	72 A				
at 60 °C rated value	62.7 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 % -15 %				
relative negative tolerance of the operating voltage at inside-delta circuit	-15 70				
relative positive tolerance of the operating voltage at	10 %				
inside-delta circuit					
inside-delta circuit	11 kW				
inside-delta circuit operating power for 3-phase motors	11 kW 22 kW				
inside-delta circuit operating power for 3-phase motors • at 230 V at 40 °C rated value					
inside-delta circuit operating power for 3-phase motors • at 230 V at 40 °C rated value • at 230 V at inside-delta circuit at 40 °C rated value • at 400 V at 40 °C rated value • at 400 V at inside-delta circuit at 40 °C rated value	22 kW 22 kW 45 kW				
inside-delta circuit operating power for 3-phase motors  • at 230 V at 40 °C rated value • at 230 V at inside-delta circuit at 40 °C rated value • at 400 V at 40 °C rated value • at 400 V at inside-delta circuit at 40 °C rated value  Operating frequency 1 rated value	22 kW 22 kW 45 kW				
inside-delta circuit operating power for 3-phase motors • at 230 V at 40 °C rated value • at 230 V at inside-delta circuit at 40 °C rated value • at 400 V at 40 °C rated value • at 400 V at inside-delta circuit at 40 °C rated value Operating frequency 1 rated value Operating frequency 2 rated value	22 kW 22 kW 45 kW 50 Hz				
inside-delta circuit operating power for 3-phase motors  • at 230 V at 40 °C rated value • at 230 V at inside-delta circuit at 40 °C rated value • at 400 V at 40 °C rated value • at 400 V at inside-delta circuit at 40 °C rated value  Operating frequency 1 rated value Operating frequency 2 rated value relative negative tolerance of the operating frequency	22 kW 22 kW 45 kW 50 Hz 60 Hz -10 %				
inside-delta circuit  operating power for 3-phase motors  • at 230 V at 40 °C rated value  • at 230 V at inside-delta circuit at 40 °C rated value  • at 400 V at 40 °C rated value  • at 400 V at inside-delta circuit at 40 °C rated value  Operating frequency 1 rated value  Operating frequency 2 rated value  relative negative tolerance of the operating frequency  relative positive tolerance of the operating frequency	22 kW 22 kW 45 kW 50 Hz 60 Hz -10 % 10 %				
inside-delta circuit  operating power for 3-phase motors  • at 230 V at 40 °C rated value  • at 230 V at inside-delta circuit at 40 °C rated value  • at 400 V at 40 °C rated value  • at 400 V at inside-delta circuit at 40 °C rated value  Operating frequency 1 rated value  Operating frequency 2 rated value  relative negative tolerance of the operating frequency  relative positive tolerance of the operating frequency  minimum load [%]	22 kW 22 kW 45 kW 50 Hz 60 Hz -10 %				
inside-delta circuit  operating power for 3-phase motors  • at 230 V at 40 °C rated value  • at 230 V at inside-delta circuit at 40 °C rated value  • at 400 V at 40 °C rated value  • at 400 V at inside-delta circuit at 40 °C rated value  Operating frequency 1 rated value  Operating frequency 2 rated value  relative negative tolerance of the operating frequency relative positive tolerance of the operating frequency minimum load [%]  power loss [W] for rated value of the current at AC	22 kW 22 kW 45 kW 50 Hz 60 Hz -10 % 10 %; Relative to set le				
inside-delta circuit  operating power for 3-phase motors  • at 230 V at 40 °C rated value  • at 230 V at inside-delta circuit at 40 °C rated value  • at 400 V at 40 °C rated value  • at 400 V at inside-delta circuit at 40 °C rated value  Operating frequency 1 rated value  Operating frequency 2 rated value  relative negative tolerance of the operating frequency  relative positive tolerance of the operating frequency  minimum load [%]  power loss [W] for rated value of the current at AC  • at 40 °C after startup	22 kW 22 kW 45 kW 50 Hz 60 Hz -10 % 10 % 10 %; Relative to set le				
inside-delta circuit  operating power for 3-phase motors  • at 230 V at 40 °C rated value  • at 230 V at inside-delta circuit at 40 °C rated value  • at 400 V at 40 °C rated value  • at 400 V at inside-delta circuit at 40 °C rated value  Operating frequency 1 rated value  Operating frequency 2 rated value  relative negative tolerance of the operating frequency relative positive tolerance of the operating frequency minimum load [%]  power loss [W] for rated value of the current at AC  • at 40 °C after startup  • at 50 °C after startup	22 kW 22 kW 45 kW 50 Hz 60 Hz -10 % 10 % 10 %; Relative to set le				
inside-delta circuit operating power for 3-phase motors  • at 230 V at 40 °C rated value • at 230 V at inside-delta circuit at 40 °C rated value • at 400 V at 40 °C rated value • at 400 V at inside-delta circuit at 40 °C rated value Operating frequency 1 rated value Operating frequency 2 rated value relative negative tolerance of the operating frequency relative positive tolerance of the operating frequency minimum load [%]  power loss [W] for rated value of the current at AC • at 40 °C after startup • at 50 °C after startup • at 60 °C after startup	22 kW 22 kW 45 kW 50 Hz 60 Hz -10 % 10 % 10 %; Relative to set le				
inside-delta circuit  operating power for 3-phase motors  • at 230 V at 40 °C rated value  • at 230 V at inside-delta circuit at 40 °C rated value  • at 400 V at 40 °C rated value  • at 400 V at inside-delta circuit at 40 °C rated value  Operating frequency 1 rated value  Operating frequency 2 rated value  relative negative tolerance of the operating frequency relative positive tolerance of the operating frequency minimum load [%]  power loss [W] for rated value of the current at AC  • at 40 °C after startup  • at 50 °C after startup  • at 60 °C after startup  power loss [W] at AC at current limitation 350 %	22 kW 22 kW 45 kW 50 Hz 60 Hz -10 % 10 % 10 %; Relative to set le  14 W 12 W 11 W				
inside-delta circuit  operating power for 3-phase motors  • at 230 V at 40 °C rated value  • at 230 V at inside-delta circuit at 40 °C rated value  • at 400 V at 40 °C rated value  • at 400 V at inside-delta circuit at 40 °C rated value  Operating frequency 1 rated value  Operating frequency 2 rated value  relative negative tolerance of the operating frequency  relative positive tolerance of the operating frequency  minimum load [%]  power loss [W] for rated value of the current at AC  • at 40 °C after startup  • at 50 °C after startup  • at 60 °C after startup  power loss [W] at AC at current limitation 350 %  • at 40 °C during startup	22 kW 22 kW 45 kW 50 Hz 60 Hz -10 % 10 % 10 %; Relative to set le  14 W 12 W 11 W				
inside-delta circuit  operating power for 3-phase motors  • at 230 V at 40 °C rated value  • at 230 V at inside-delta circuit at 40 °C rated value  • at 400 V at 40 °C rated value  • at 400 V at inside-delta circuit at 40 °C rated value  Operating frequency 1 rated value  Operating frequency 2 rated value  relative negative tolerance of the operating frequency  relative positive tolerance of the operating frequency  minimum load [%]  power loss [W] for rated value of the current at AC  • at 40 °C after startup  • at 50 °C after startup  power loss [W] at AC at current limitation 350 %  • at 40 °C during startup  • at 50 °C during startup	22 kW 22 kW 45 kW 50 Hz 60 Hz -10 % 10 % 10 %; Relative to set le  14 W 12 W 11 W  588 W 504 W				
inside-delta circuit  operating power for 3-phase motors  • at 230 V at 40 °C rated value  • at 230 V at inside-delta circuit at 40 °C rated value  • at 400 V at 40 °C rated value  • at 400 V at inside-delta circuit at 40 °C rated value  Operating frequency 1 rated value  Operating frequency 2 rated value  relative negative tolerance of the operating frequency relative positive tolerance of the operating frequency minimum load [%]  power loss [W] for rated value of the current at AC  • at 40 °C after startup  • at 50 °C after startup  power loss [W] at AC at current limitation 350 %  • at 40 °C during startup  • at 50 °C during startup  • at 60 °C during startup	22 kW 22 kW 45 kW 50 Hz 60 Hz -10 % 10 % 10 %; Relative to set le  14 W 12 W 11 W  588 W 504 W 420 W				
inside-delta circuit  operating power for 3-phase motors  • at 230 V at 40 °C rated value  • at 230 V at inside-delta circuit at 40 °C rated value  • at 400 V at 40 °C rated value  • at 400 V at inside-delta circuit at 40 °C rated value  Operating frequency 1 rated value  Operating frequency 2 rated value  relative negative tolerance of the operating frequency relative positive tolerance of the operating frequency minimum load [%]  power loss [W] for rated value of the current at AC  • at 40 °C after startup  • at 50 °C after startup  power loss [W] at AC at current limitation 350 %  • at 40 °C during startup  • at 60 °C during startup  • at 60 °C during startup  type of the motor protection	22 kW 22 kW 45 kW 50 Hz 60 Hz -10 % 10 % 10 %; Relative to set le  14 W 12 W 11 W  588 W 504 W				
inside-delta circuit  operating power for 3-phase motors  • at 230 V at 40 °C rated value  • at 230 V at inside-delta circuit at 40 °C rated value  • at 400 V at 40 °C rated value  • at 400 V at inside-delta circuit at 40 °C rated value  Operating frequency 1 rated value  Operating frequency 2 rated value  relative negative tolerance of the operating frequency  relative positive tolerance of the operating frequency  minimum load [%]  power loss [W] for rated value of the current at AC  • at 40 °C after startup  • at 50 °C after startup  • at 60 °C after startup  power loss [W] at AC at current limitation 350 %  • at 40 °C during startup  • at 50 °C during startup  • at 60 °C during startup  • at 60 °C during startup  type of the motor protection  Control circuit/ Control	22 kW 22 kW 45 kW 50 Hz 60 Hz -10 % 10 % 10 %; Relative to set le  14 W 12 W 11 W  588 W 504 W 420 W Electronic, tripping in the event of thermal overload of the motor				
inside-delta circuit  operating power for 3-phase motors  • at 230 V at 40 °C rated value  • at 230 V at inside-delta circuit at 40 °C rated value  • at 400 V at 40 °C rated value  • at 400 V at inside-delta circuit at 40 °C rated value  Operating frequency 1 rated value  Operating frequency 2 rated value  relative negative tolerance of the operating frequency  relative positive tolerance of the operating frequency  minimum load [%]  power loss [W] for rated value of the current at AC  • at 40 °C after startup  • at 50 °C after startup  power loss [W] at AC at current limitation 350 %  • at 40 °C during startup  • at 50 °C during startup  • at 60 °C during startup  type of the motor protection  Control circuit/ Control  type of voltage of the control supply voltage	22 kW 22 kW 45 kW 50 Hz 60 Hz -10 % 10 % 10 %; Relative to set le  14 W 12 W 11 W  588 W 504 W 420 W				
inside-delta circuit  operating power for 3-phase motors  • at 230 V at 40 °C rated value  • at 230 V at inside-delta circuit at 40 °C rated value  • at 400 V at 40 °C rated value  • at 400 V at inside-delta circuit at 40 °C rated value  Operating frequency 1 rated value  Operating frequency 2 rated value  relative negative tolerance of the operating frequency relative positive tolerance of the operating frequency minimum load [%]  power loss [W] for rated value of the current at AC  • at 40 °C after startup  • at 50 °C after startup  power loss [W] at AC at current limitation 350 %  • at 40 °C during startup  • at 50 °C during startup  type of the motor protection  Control circuit/ Control  type of voltage of the control supply voltage control supply voltage at AC	22 kW 22 kW 45 kW 50 Hz 60 Hz -10 % 10 % 10 %; Relative to set le  14 W 12 W 11 W  588 W 504 W 420 W Electronic, tripping in the event of thermal overload of the motor				
inside-delta circuit operating power for 3-phase motors  • at 230 V at 40 °C rated value • at 230 V at inside-delta circuit at 40 °C rated value • at 400 V at 40 °C rated value • at 400 V at inside-delta circuit at 40 °C rated value Operating frequency 1 rated value Operating frequency 2 rated value relative negative tolerance of the operating frequency relative positive tolerance of the operating frequency minimum load [%]  power loss [W] for rated value of the current at AC • at 40 °C after startup • at 50 °C after startup  • at 60 °C after startup  • at 60 °C during startup • at 60 °C during startup  • at 60 °C during startup  type of the motor protection  Control circuit/ Control  type of voltage of the control supply voltage control supply voltage at AC • at 50 Hz	22 kW 22 kW 45 kW 50 Hz 60 Hz -10 % 10 % 10 %; Relative to set le  14 W 12 W 11 W  588 W 504 W 420 W Electronic, tripping in the event of thermal overload of the motor				
inside-delta circuit  operating power for 3-phase motors  • at 230 V at 40 °C rated value  • at 400 V at 40 °C rated value  • at 400 V at inside-delta circuit at 40 °C rated value  • at 400 V at inside-delta circuit at 40 °C rated value  Operating frequency 1 rated value  Operating frequency 2 rated value  relative negative tolerance of the operating frequency relative positive tolerance of the operating frequency minimum load [%]  power loss [W] for rated value of the current at AC  • at 40 °C after startup  • at 50 °C after startup  power loss [W] at AC at current limitation 350 %  • at 40 °C during startup  • at 50 °C during startup  type of the motor protection  Control circuit/ Control  type of voltage of the control supply voltage  control supply voltage at AC  • at 50 Hz  • at 60 Hz  relative negative tolerance of the control supply	22 kW 22 kW 45 kW 50 Hz 60 Hz -10 % 10 % 10 %; Relative to set le  14 W 12 W 11 W  588 W 504 W 420 W Electronic, tripping in the event of thermal overload of the motor				
inside-delta circuit  operating power for 3-phase motors  • at 230 V at 40 °C rated value  • at 230 V at inside-delta circuit at 40 °C rated value  • at 400 V at 40 °C rated value  • at 400 V at inside-delta circuit at 40 °C rated value  Operating frequency 1 rated value  Operating frequency 2 rated value  relative negative tolerance of the operating frequency relative positive tolerance of the operating frequency minimum load [%]  power loss [W] for rated value of the current at AC  • at 40 °C after startup  • at 50 °C after startup  • at 60 °C after startup  power loss [W] at AC at current limitation 350 %  • at 40 °C during startup  • at 50 °C during startup  type of the motor protection  Control circuit/ Control  type of voltage of the control supply voltage  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	22 kW 22 kW 45 kW 50 Hz 60 Hz -10 % 10 % 10 %; Relative to set le  14 W 12 W 11 W  588 W 504 W 420 W Electronic, tripping in the event of thermal overload of the motor  AC  110 250 V 110 250 V				
inside-delta circuit  operating power for 3-phase motors  • at 230 V at 40 °C rated value  • at 400 V at inside-delta circuit at 40 °C rated value  • at 400 V at inside-delta circuit at 40 °C rated value  • at 400 V at inside-delta circuit at 40 °C rated value  Operating frequency 1 rated value  Operating frequency 2 rated value  relative negative tolerance of the operating frequency relative positive tolerance of the operating frequency minimum load [%]  power loss [W] for rated value of the current at AC  • at 40 °C after startup  • at 50 °C after startup  power loss [W] at AC at current limitation 350 %  • at 40 °C during startup  • at 50 °C during startup  • at 60 °C during startup  type of the motor protection  Control circuit/ Control  type of voltage of the control supply voltage  control supply voltage at AC  • at 50 Hz  • at 60 Hz  relative negative tolerance of the control supply voltage at AC at 50 Hz	22 kW 22 kW 45 kW 50 Hz 60 Hz -10 % 10 %; Relative to set le  14 W 12 W 11 W  588 W 504 W 420 W Electronic, tripping in the event of thermal overload of the motor  AC  110 250 V 110 250 V -15 %				

voltage at AC at 60 Hz	- dientudena			
relative positive tolerance of the control supply voltage at AC at 60 Hz	10% ( ) dientudong			
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	100 mA			
holding current in bypass operation rated value	180 mA			
locked-rotor current at close of bypass contact maximum	0.8 A			
inrush current peak at application of control supply voltage maximum	43 A			
duration of inrush current peak at application of control supply voltage	1.6 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	4			
parameterizable	4			
number of digital outputs	4			
number of digital outputs parameterizable	3			
number of digital outputs not parameterizable	1			
digital output version	3 normally-open contacts (NO) / 1 changeover contact (CO)			
number of analog outputs	1			
switching capacity current of the relay outputs				
<ul> <li>at AC-15 at 250 V rated value</li> </ul>	3 A			
<ul> <li>at DC-13 at 24 V rated value</li> </ul>	1 A			
Installation/ mounting/ dimensions				
Installation/ mounting/ dimensions mounting position	Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)			
	Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°) screw fixing			
mounting position				
mounting position fastening method	screw fixing			
mounting position fastening method height	screw fixing 306 mm			
mounting position fastening method height width	screw fixing 306 mm 185 mm			
mounting position fastening method height width depth	screw fixing 306 mm 185 mm			
mounting position fastening method height width depth required spacing with side-by-side mounting	screw fixing 306 mm 185 mm 203 mm			
mounting position fastening method height width depth required spacing with side-by-side mounting • forwards	screw fixing 306 mm 185 mm 203 mm			
mounting position fastening method height width depth required spacing with side-by-side mounting • forwards • backwards	screw fixing 306 mm 185 mm 203 mm 10 mm 0 mm			
mounting position fastening method height width depth required spacing with side-by-side mounting • forwards • backwards • upwards	screw fixing 306 mm 185 mm 203 mm  10 mm 0 mm 100 mm			
mounting position fastening method height width depth required spacing with side-by-side mounting	screw fixing 306 mm 185 mm 203 mm  10 mm 0 mm 100 mm 75 mm			
mounting position fastening method height width depth required spacing with side-by-side mounting	screw fixing 306 mm 185 mm 203 mm  10 mm 0 mm 100 mm 75 mm			
mounting position fastening method height width depth required spacing with side-by-side mounting	screw fixing 306 mm 185 mm 203 mm  10 mm 0 mm 100 mm 75 mm			
mounting position fastening method height width depth required spacing with side-by-side mounting • forwards • backwards • upwards • downwards • at the side weight without packaging  Connections/ Terminals	screw fixing 306 mm 185 mm 203 mm  10 mm 0 mm 100 mm 75 mm			
mounting position fastening method height width depth required spacing with side-by-side mounting	screw fixing 306 mm 185 mm 203 mm  10 mm 0 mm 100 mm 75 mm 5 mm 5.5 kg			
mounting position fastening method height width depth required spacing with side-by-side mounting	screw fixing 306 mm 185 mm 203 mm  10 mm 0 mm 100 mm 75 mm 5 mm 5.5 kg			
mounting position fastening method height width depth required spacing with side-by-side mounting	screw fixing 306 mm 185 mm 203 mm  10 mm 0 mm 100 mm 75 mm 5 mm 5.5 kg  box terminal spring-loaded terminals			
mounting position fastening method height width depth required spacing with side-by-side mounting	screw fixing 306 mm 185 mm 203 mm  10 mm 0 mm 100 mm 75 mm 5 mm 5.5 kg  box terminal spring-loaded terminals 25 mm  50 m			
mounting position fastening method height width depth required spacing with side-by-side mounting	screw fixing 306 mm 185 mm 203 mm  10 mm 0 mm 100 mm 75 mm 5 mm 5.5 kg  box terminal spring-loaded terminals 25 mm  50 m 150 m			
mounting position fastening method height width depth required spacing with side-by-side mounting	screw fixing 306 mm 185 mm 203 mm  10 mm 0 mm 100 mm 75 mm 5 mm 5.5 kg  box terminal spring-loaded terminals 25 mm  50 m			
mounting position fastening method height width depth required spacing with side-by-side mounting	screw fixing 306 mm 185 mm 203 mm  10 mm 0 mm 100 mm 75 mm 5 mm 5.5 kg  box terminal spring-loaded terminals 25 mm  50 m 150 m 250 m			
mounting position fastening method height width depth required spacing with side-by-side mounting	screw fixing 306 mm 185 mm 203 mm  10 mm 0 mm 100 mm 75 mm 5 mm 5.5 kg  box terminal spring-loaded terminals 25 mm  50 m 150 m 250 m			
mounting position fastening method height width depth required spacing with side-by-side mounting	screw fixing 306 mm 185 mm 203 mm  10 mm 0 mm 100 mm 75 mm 5 mm 5.5 kg  box terminal spring-loaded terminals 25 mm  50 m 150 m 250 m			
mounting position fastening method height width depth required spacing with side-by-side mounting	screw fixing 306 mm 185 mm 203 mm  10 mm 0 mm 100 mm 75 mm 5 mm 5.5 kg  box terminal spring-loaded terminals 25 mm  50 m 150 m 250 m			

<ul> <li>for main contacts for box terminal using the back clamping point solid</li> </ul>	1x (2.5 16 mm²) 1x (10 2/0)			
<ul> <li>at AWG cables for main contacts for box terminal using the back clamping point</li> </ul>				
<ul> <li>for main contacts for box terminal using both clamping points solid</li> </ul>	2x (2.5 16 mm²)			
<ul> <li>for main contacts for box terminal using both clamping points finely stranded with core end processing</li> </ul>	2x (2.5 35 mm²)			
<ul> <li>for main contacts for box terminal using both clamping points stranded</li> </ul>	2x (6 16 mm²), 2x (10 50 mm²)			
<ul> <li>for main contacts for box terminal using the back clamping point finely stranded with core end processing</li> </ul>	1x (2.5 50 mm²)			
for main contacts for box terminal using the back clamping point stranded	1x (10 70 mm²)			
type of connectable conductor cross-sections				
<ul> <li>for control circuit solid</li> </ul>	2x (0.25 1.5 mm²)			
<ul> <li>for control circuit finely stranded with core end processing</li> </ul>	2x (0.25 1.5 mm²)			
<ul> <li>at AWG cables for control circuit solid</li> </ul>	2x (24 16)			
at AWG cables for control circuit finely stranded with core end processing	2x (24 16)			
wire length				
<ul> <li>between soft starter and motor maximum</li> </ul>	800 m			
at the digital inputs at DC maximum	1 000 m			
tightening torque				
<ul> <li>for main contacts with screw-type terminals</li> </ul>	4.5 6 N·m			
<ul> <li>for auxiliary and control contacts with screw-type terminals</li> </ul>	0.8 1.2 N·m			
tightening torque [lbf·in]				
<ul> <li>for main contacts with screw-type terminals</li> </ul>	40 53 lbf·in			
<ul> <li>for auxiliary and control contacts with screw-type terminals</li> </ul>	7 10.3 lbf·in			
Ambient conditions	5 000 m. Derating as of 1000 m. see catalog			
Ambient conditions installation altitude at height above sea level maximum	5 000 m; Derating as of 1000 m, see catalog			
Ambient conditions installation altitude at height above sea level maximum ambient temperature				
Ambient conditions installation altitude at height above sea level maximum	5 000 m; Derating as of 1000 m, see catalog  -25 +60 °C; Please observe derating at temperatures of 40 °C or above			
Ambient conditions installation altitude at height above sea level maximum ambient temperature  • during operation	-25 +60 °C; Please observe derating at temperatures of 40 °C or			
Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage and transport	-25 +60 °C; Please observe derating at temperatures of 40 °C or above			
Ambient conditions installation altitude at height above sea level maximum ambient temperature  • during operation	-25 +60 °C; Please observe derating at temperatures of 40 °C or above			
Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage and transport environmental category	-25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C  3K6 (no ice formation, only occasional condensation), 3C3 (no salt			
Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage and transport environmental category • during operation according to IEC 60721	-25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C  3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6  1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must			
Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage and transport environmental category • during operation according to IEC 60721 • during storage according to IEC 60721	-25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C  3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6  1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4			
Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation  • during storage and transport environmental category • during operation according to IEC 60721  • during storage according to IEC 60721  • during transport according to IEC 60721	-25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C  3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6  1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4  2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)			
Ambient conditions installation altitude at height above sea level maximum ambient temperature	-25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C  3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6  1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4  2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)			
Ambient conditions installation altitude at height above sea level maximum ambient temperature	-25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C  3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6  1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4  2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)			
installation altitude at height above sea level maximum ambient temperature	-25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C  3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6  1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4  2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)  acc. to IEC 60947-4-2: Class A, Class B on request			
Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage and transport environmental category • during operation according to IEC 60721 • during storage according to IEC 60721 • during transport according to IEC 60721  EMC emitted interference Communication/ Protocol communication module is supported	-25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C  3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6  1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4  2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)  acc. to IEC 60947-4-2: Class A, Class B on request			
Ambient conditions installation altitude at height above sea level maximum ambient temperature	-25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C  3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6  1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4  2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)  acc. to IEC 60947-4-2: Class A, Class B on request  Yes  Yes			
installation altitude at height above sea level maximum  ambient temperature  • during operation  • during storage and transport  environmental category  • during operation according to IEC 60721  • during storage according to IEC 60721  • during transport according to IEC 60721  EMC emitted interference  Communication/ Protocol  communication module is supported  • PROFINET standard  • PROFINET high-feature  • EtherNet/IP  • Modbus RTU	-25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C  3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6  1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4  2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)  acc. to IEC 60947-4-2: Class A, Class B on request  Yes  Yes  Yes			
Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage and transport environmental category • during operation according to IEC 60721 • during storage according to IEC 60721 • during transport according to IEC 60721  EMC emitted interference Communication/ Protocol communication module is supported • PROFINET standard • PROFINET high-feature • EtherNet/IP • Modbus RTU • Modbus TCP	-25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C  3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6  1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4  2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)  acc. to IEC 60947-4-2: Class A, Class B on request  Yes  Yes  Yes  Yes  Yes			
Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage and transport environmental category • during operation according to IEC 60721 • during storage according to IEC 60721 • during transport according to IEC 60721  EMC emitted interference Communication/ Protocol communication module is supported • PROFINET standard • PROFINET high-feature • EtherNet/IP • Modbus RTU • Modbus TCP • PROFIBUS	-25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C  3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6  1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4  2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)  acc. to IEC 60947-4-2: Class A, Class B on request  Yes  Yes  Yes			
installation altitude at height above sea level maximum  ambient temperature  • during operation  • during storage and transport  environmental category  • during operation according to IEC 60721  • during storage according to IEC 60721  • during transport according to IEC 60721  • during transport according to IEC 60721  EMC emitted interference  Communication/ Protocol  communication module is supported  • PROFINET standard  • PROFINET high-feature  • EtherNet/IP  • Modbus RTU  • Modbus TCP  • PROFIBUS  UL/CSA ratings	-25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C  3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6  1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4  2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)  acc. to IEC 60947-4-2: Class A, Class B on request  Yes  Yes  Yes  Yes  Yes			
installation altitude at height above sea level maximum  ambient temperature  • during operation  • during storage and transport  environmental category  • during operation according to IEC 60721  • during storage according to IEC 60721  • during transport according to IEC 60721  EMC emitted interference  Communication/ Protocol  communication module is supported  • PROFINET standard  • PROFINET high-feature  • EtherNet/IP  • Modbus RTU  • Modbus TCP  • PROFIBUS  UL/CSA ratings  manufacturer's article number	-25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C  3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6  1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4  2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)  acc. to IEC 60947-4-2: Class A, Class B on request  Yes  Yes  Yes  Yes  Yes			
installation altitude at height above sea level maximum ambient temperature	-25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C  3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6  1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4  2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)  acc. to IEC 60947-4-2: Class A, Class B on request  Yes  Yes  Yes  Yes  Yes  Yes			
installation altitude at height above sea level maximum  ambient temperature  • during operation  • during storage and transport  environmental category  • during operation according to IEC 60721  • during storage according to IEC 60721  • during transport according to IEC 60721  EMC emitted interference  Communication/ Protocol  communication module is supported  • PROFINET standard  • PROFINET high-feature  • EtherNet/IP  • Modbus RTU  • Modbus TCP  • PROFIBUS  UL/CSA ratings  manufacturer's article number  • of circuit breaker  — usable for Standard Faults at 460/480 V according to UL	-25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C  3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6  1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4  2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)  acc. to IEC 60947-4-2: Class A, Class B on request  Yes Yes Yes Yes Yes Yes Yes Yes Yes			
installation altitude at height above sea level maximum ambient temperature	-25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C  3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6  1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4  2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)  acc. to IEC 60947-4-2: Class A, Class B on request  Yes  Yes  Yes  Yes  Yes  Yes			

Iq max = 65 kA - usable for High Faults at 460/480 V at inside-Siemens type: 3VA delta circuit according to UL - usable for Standard Faults at 575/600 V Siemens type: 3RV according to UL - usable for High Faults at 575/600 V at inside-Siemens type: 3VA51, max. 60 A; Iq max = 65 kA delta circuit according to UL - usable for Standard Faults at 575/600 V at Siemens type: 3VA51, max. 90 A; Iq = 5 kA inside-delta circuit according to UL — usable for Standard Faults up to 575/600 V Type: Class RK5 / K5, max. 175 A; Iq = 5 kA according to UL - usable for High Faults up to 575/600 V Type: Class J / L, max. 175 A; Iq = 100 kA according to UL - usable for Standard Faults at inside-delta Type: Class RK5 / K5, max. 175 A; Iq = 5 kA circuit up to 575/600 V according to UL - usable for High Faults at inside-delta circuit up Type: Class J / L, max. 175 A; Iq = 100 kA to 575/600 V according to UL operating power [hp] for 3-phase motors at 200/208 V at 50 °C rated value 10 hp 10 hp at 220/230 V at 50 °C rated value • at 460/480 V at 50 °C rated value 30 hp • at 200/208 V at inside-delta circuit at 50 °C rated 20 hp value • at 220/230 V at inside-delta circuit at 50 °C rated 25 hp • at 460/480 V at inside-delta circuit at 50 °C rated 50 hp value contact rating of auxiliary contacts according to UL R300-B300 Safety related data protection class IP on the front according to IEC IP00; IP20 with cover 60529 touch protection on the front according to IEC 60529 finger-safe, for vertical contact from the front with cover electromagnetic compatibility acc. to IEC 60947-4-2 **ATEX** certificate of suitability ATEX Yes IECEx Yes according to ATEX directive 2014/34/EU BVS 18 ATEX F 003 X type of protection according to ATEX directive II (2)G [Ex eb Gb] [Ex db Gb] [Ex pxb Gb], II (2)D [Ex tb Db] [Ex pxb Db], 2014/34/EU I (M2) [Ex db Mb] hardware fault tolerance according to IEC 61508 relating to ATEX PFDavg with low demand rate according to IEC 61508 0.008 relating to ATEX PFHD with high demand rate according to EN 62061 5E-7 1/h relating to ATEX Safety Integrity Level (SIL) according to IEC 61508 SII 1 relating to ATEX



Certificates/ approvals

General Product Approval

Confirmation

T1 value for proof test interval or service life

according to IEC 61508 relating to ATEX









**EMC** 

For use in hazardous locations	Declaration of Conformity	Test Certificates	Marine / Shipping

3s









Marine / Shipping

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=3RW5524-3HA14

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5524-3HA14

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

https://support.industry.siemens.com/cs/ww/en/ps/3RW5524-3HA14

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

http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RW5524-3HA14&lang=en

Characteristic: Tripping characteristics, I2t, Let-through current

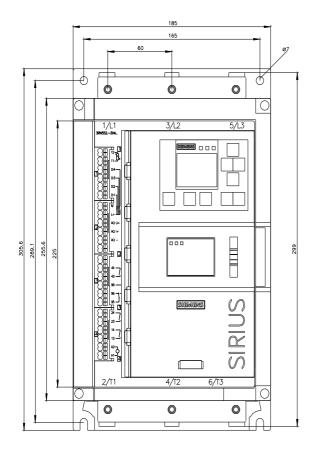
https://support.industry.siemens.com/cs/ww/en/ps/3RW5524-3HA14/char

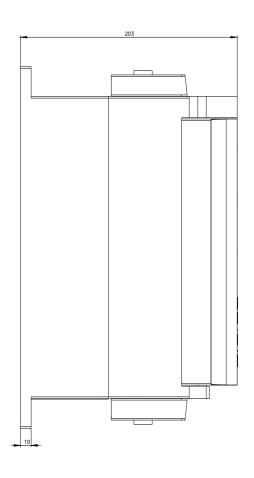
Characteristic: Installation altitude

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5524-3HA14&objecttype=14&gridview=view1

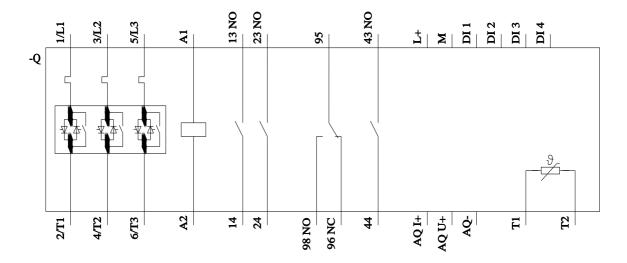
Simulation Tool for Soft Starters (STS)

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









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