SIEMENS

Data sheet 3RW5525-3HA06



SIRIUS soft starter 200-690 V 63 A, 24 V AC/DC spring-type terminals

product brand name	SIRIUS
product category	Hybrid switching devices
product designation	Soft starter
product type designation	3RW55
manufacturer's article number	
 of high feature HMI module usable 	3RW5980-0HF00
 of communication module PROFINET standard usable 	3RW5980-0CS00
 of communication module PROFINET high-feature usable 	3RW5950-0CH00
 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 	3VA2163-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10
 of circuit breaker usable at 500 V 	3VA2163-7MN32-0AA0; Type of coordination 1, Iq = 20 kA, CLASS 10
 of circuit breaker usable at 400 V at inside-delta circuit 	3VA2110-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10
 of circuit breaker usable at 500 V at inside-delta circuit 	3VA2110-7MN32-0AA0; Type of coordination 1, lq = 65 kA, CLASS 10
 of the gG fuse usable up to 690 V 	3NA3830-6; Type of coordination 1, Iq = 65 kA
 of the gG fuse usable at inside-delta circuit up to 500 V 	3NA3830-6; Type of coordination 1, Iq = 65 kA
 of full range R fuse link for semiconductor protection usable up to 690 V 	3NE1022-0; Type of coordination 2, Iq = 65 kA
 of back-up R fuse link for semiconductor protection usable up to 690 V 	3NE3227; Type of coordination 2, Iq = 65 kA

General technical data	
starting voltage [%]	20 100 %
stopping voltage [%]	50 50 %
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

	5 0/
accuracy class acc. to IEC 61557-12	5 %
certificate of suitability	V
CE marking	Yes
UL approval	Yes
CSA approval	Yes
product component	
HMI-High Feature	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 %
recovery time after overload trip adjustable	60 1 800 s
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	690 V
degree of pollution	3, acc. to IEC 60947-4-2
impulse voltage rated value	8 kV
blocking voltage of the thyristor maximum	1 800 V
service factor	1.15
surge voltage resistance rated value	8 kV
maximum permissible voltage for safe isolation	
between main and auxiliary circuit	690 V; does not apply for thermistor connection
utilization category acc. to IEC 60947-4-2	AC 53a
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
reference code acc. to IEC 81346-2	Q
	15.02.2018 00:00:00
Substance Prohibitance (Date) product function	15.02.2018 00:00:00
Substance Prohibitance (Date) product function	15.02.2018 00:00:00 Yes
Substance Prohibitance (Date)	
Substance Prohibitance (Date) product function • ramp-up (soft starting)	Yes
Substance Prohibitance (Date) product function • ramp-up (soft starting) • ramp-down (soft stop) • breakaway pulse	Yes Yes
Substance Prohibitance (Date) product function • ramp-up (soft starting) • ramp-down (soft stop) • breakaway pulse • adjustable current limitation	Yes Yes Yes
Substance Prohibitance (Date) product function • ramp-up (soft starting) • ramp-down (soft stop) • breakaway pulse • adjustable current limitation • creep speed in both directions of rotation	Yes Yes Yes
Substance Prohibitance (Date) product function • ramp-up (soft starting) • ramp-down (soft stop) • breakaway pulse • adjustable current limitation • creep speed in both directions of rotation • pump ramp down	Yes Yes Yes Yes Yes
Substance Prohibitance (Date) product function • ramp-up (soft starting) • ramp-down (soft stop) • breakaway pulse • adjustable current limitation • creep speed in both directions of rotation	Yes Yes Yes Yes Yes Yes Yes
Substance Prohibitance (Date) product function • ramp-up (soft starting) • ramp-down (soft stop) • breakaway pulse • adjustable current limitation • creep speed in both directions of rotation • pump ramp down • DC braking • motor heating	Yes Yes Yes Yes Yes Yes Yes Yes
Substance Prohibitance (Date) product function • ramp-up (soft starting) • ramp-down (soft stop) • breakaway pulse • adjustable current limitation • creep speed in both directions of rotation • pump ramp down • DC braking	Yes
Substance Prohibitance (Date) product function • ramp-up (soft starting) • ramp-down (soft stop) • breakaway pulse • adjustable current limitation • creep speed in both directions of rotation • pump ramp down • DC braking • motor heating • slave pointer function	Yes
Substance Prohibitance (Date) product function ramp-up (soft starting) ramp-down (soft stop) breakaway pulse adjustable current limitation creep speed in both directions of rotation pump ramp down DC braking motor heating slave pointer function trace function intrinsic device protection	Yes
Substance Prohibitance (Date) product function	Yes
Substance Prohibitance (Date) product function ramp-up (soft starting) ramp-down (soft stop) breakaway pulse adjustable current limitation creep speed in both directions of rotation pump ramp down DC braking motor heating slave pointer function trace function intrinsic device protection	Yes
Substance Prohibitance (Date) product function	Yes
Substance Prohibitance (Date) product function	Yes
Substance Prohibitance (Date) product function	Yes
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Substance Prohibitance (Date) product function	Yes
Substance Prohibitance (Date) product function	Yes
Substance Prohibitance (Date) product function	Yes
Substance Prohibitance (Date) product function	Yes
Substance Prohibitance (Date) product function	Yes
Substance Prohibitance (Date) product function • ramp-up (soft starting) • ramp-down (soft stop) • breakaway pulse • adjustable current limitation • creep speed in both directions of rotation • pump ramp down • DC braking • motor heating • slave pointer function • trace function • intrinsic device protection • motor overload protection • evaluation of thermistor motor protection • inside-delta circuit • auto-RESET • manual RESET • remote reset • communication function • operating measured value display • event list • error logbook • via software parameterizable • via software configurable • screw terminal	Yes
Substance Prohibitance (Date) product function	Yes

	Feature communication modules
• firmware update	Yes
removable terminal for control circuit	Yes
voltage ramp	Yes
torque control	Yes
combined braking	Yes
analog output	Yes; 4 20 mA (default) / 0 10 V
programmable control inputs/outputs	Yes
• condition monitoring	Yes
automatic parameterisation	Yes
application wizards	Yes
alternative run-down	Yes
emergency operation mode	Yes
reversing operation	Yes
soft starting at heavy starting conditions	Yes
Power Electronics	
operational current	
 at 40 °C rated value 	63 A
 at 40 °C rated value minimum 	13 A
 at 50 °C rated value 	55.5 A
at 60 °C rated value	50.5 A
operational current at inside-delta circuit	
 at 40 °C rated value 	109 A
 at 50 °C rated value 	96 A
at 60 °C rated value	87.5 A
operating voltage	
rated value	200 690 V
at inside-delta circuit rated value	200 600 V
relative negative tolerance of the operating voltage	-15 %
relative positive tolerance of the operating voltage	10 %
relative negative tolerance of the operating voltage at inside-delta circuit	-15 %
relative positive tolerance of the operating voltage at inside-delta circuit	10 %
operating power for 3-phase motors	
 at 230 V at 40 °C rated value 	18.5 kW
 at 230 V at inside-delta circuit at 40 °C rated value 	30 kW
 at 400 V at 40 °C rated value 	
	30 kW
• at 400 V at inside-delta circuit at 40 °C rated value	55 kW
 at 400 V at inside-delta circuit at 40 °C rated value at 500 V at 40 °C rated value 	55 kW 37 kW
 at 400 V at inside-delta circuit at 40 °C rated value at 500 V at 40 °C rated value at 500 V at inside-delta circuit at 40 °C rated value 	55 kW 37 kW 55 kW
 at 400 V at inside-delta circuit at 40 °C rated value at 500 V at 40 °C rated value at 500 V at inside-delta circuit at 40 °C rated value at 690 V at 40 °C rated value 	55 kW 37 kW 55 kW
 at 400 V at inside-delta circuit at 40 °C rated value at 500 V at 40 °C rated value at 500 V at inside-delta circuit at 40 °C rated value at 690 V at 40 °C rated value Operating frequency 1 rated value	55 kW 37 kW 55 kW 55 kW
 at 400 V at inside-delta circuit at 40 °C rated value at 500 V at 40 °C rated value at 500 V at inside-delta circuit at 40 °C rated value at 690 V at 40 °C rated value Operating frequency 1 rated value Operating frequency 2 rated value	55 kW 37 kW 55 kW 55 kW 50 Hz
 at 400 V at inside-delta circuit at 40 °C rated value at 500 V at 40 °C rated value at 500 V at inside-delta circuit at 40 °C rated value at 690 V at 40 °C rated value Operating frequency 1 rated value Operating frequency 2 rated value relative negative tolerance of the operating frequency 	55 kW 37 kW 55 kW 55 kW 50 Hz 60 Hz -10 %
 at 400 V at inside-delta circuit at 40 °C rated value at 500 V at 40 °C rated value at 500 V at inside-delta circuit at 40 °C rated value at 690 V 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 	55 kW 37 kW 55 kW 55 kW 50 Hz 60 Hz -10 %
at 400 V at inside-delta circuit at 40 °C rated value at 500 V at 40 °C rated value at 500 V at inside-delta circuit at 40 °C rated value at 690 V 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 [%]	55 kW 37 kW 55 kW 55 kW 50 Hz 60 Hz -10 %
at 400 V at inside-delta circuit at 40 °C rated value at 500 V at 40 °C rated value at 500 V at inside-delta circuit at 40 °C rated value at 690 V 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	55 kW 37 kW 55 kW 55 kW 50 Hz 60 Hz -10 % 10 %; Relative to set le
 at 400 V at inside-delta circuit at 40 °C rated value at 500 V at 40 °C rated value at 500 V at inside-delta circuit at 40 °C rated value at 690 V 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 	55 kW 37 kW 55 kW 55 kW 50 Hz 60 Hz -10 % 10 %; Relative to set le
 at 400 V at inside-delta circuit at 40 °C rated value at 500 V at 40 °C rated value at 500 V at inside-delta circuit at 40 °C rated value at 690 V 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 	55 kW 37 kW 55 kW 55 kW 50 Hz 60 Hz -10 % 10 % 10 %; Relative to set le
 at 400 V at inside-delta circuit at 40 °C rated value at 500 V at 40 °C rated value at 500 V at inside-delta circuit at 40 °C rated value at 690 V 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 	55 kW 37 kW 55 kW 55 kW 50 Hz 60 Hz -10 % 10 %; Relative to set le
 at 400 V at inside-delta circuit at 40 °C rated value at 500 V at 40 °C rated value at 500 V at inside-delta circuit at 40 °C rated value at 690 V 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 %	55 kW 37 kW 55 kW 55 kW 50 Hz 60 Hz -10 % 10 % 10 %; Relative to set le 19 W 17 W 15 W
 at 400 V at inside-delta circuit at 40 °C rated value at 500 V at 40 °C rated value at 500 V at inside-delta circuit at 40 °C rated value at 690 V 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 60 °C after startup power loss [W] at AC at current limitation 350 % at 40 °C during startup 	55 kW 37 kW 55 kW 55 kW 50 Hz 60 Hz -10 % 10 %; Relative to set le 19 W 17 W 15 W
 at 400 V at inside-delta circuit at 40 °C rated value at 500 V at 40 °C rated value at 500 V at inside-delta circuit at 40 °C rated value at 690 V 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 	55 kW 37 kW 55 kW 55 kW 50 Hz 60 Hz -10 % 10 % 10 %; Relative to set le 19 W 17 W 15 W 1 056 W 732 W
 at 400 V at inside-delta circuit at 40 °C rated value at 500 V at 40 °C rated value at 500 V at inside-delta circuit at 40 °C rated value at 690 V 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 at 60 °C during startup 	55 kW 37 kW 55 kW 55 kW 50 Hz 60 Hz -10 % 10 % 10 %; Relative to set le 19 W 17 W 15 W 1 056 W 732 W 647 W
 at 400 V at inside-delta circuit at 40 °C rated value at 500 V at 40 °C rated value at 500 V at inside-delta circuit at 40 °C rated value at 690 V 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 	55 kW 37 kW 55 kW 55 kW 50 Hz 60 Hz -10 % 10 % 10 %; Relative to set le 19 W 17 W 15 W 1 056 W 732 W
 at 400 V at inside-delta circuit at 40 °C rated value at 500 V at 40 °C rated value at 500 V at inside-delta circuit at 40 °C rated value at 690 V 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 40 °C during startup at 50 °C during startup at 60 °C during startup at 60 °C during startup at 60 °C during startup type of the motor protection Control circuit/ Control 	55 kW 37 kW 55 kW 55 kW 50 Hz 60 Hz -10 % 10 % 10 %; Relative to set le 19 W 17 W 15 W 1 056 W 732 W 647 W Electronic, tripping in the event of thermal overload of the motor
 at 400 V at inside-delta circuit at 40 °C rated value at 500 V at 40 °C rated value at 500 V at inside-delta circuit at 40 °C rated value at 690 V 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 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 of the motor protection	55 kW 37 kW 55 kW 55 kW 50 Hz 60 Hz -10 % 10 % 10 %; Relative to set le 19 W 17 W 15 W 1 056 W 732 W 647 W

• at 50 Hz rated value	24 V
at 60 Hz rated value	24 V
relative negative tolerance of the control supply voltage at AC at 50 Hz	-20 %
relative positive tolerance of the control supply voltage at AC at 50 Hz	20 %
relative negative tolerance of the control supply voltage at AC at 60 Hz	-20 %
relative positive tolerance of the control supply voltage at AC at 60 Hz	20 %
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 voltage	
at DC rated value	24 V
relative negative tolerance of the control supply voltage at DC	-20 %
relative positive tolerance of the control supply voltage at DC	20 %
control supply current in standby mode rated value	440 mA
holding current in bypass operation rated value	870 mA
locked-rotor current at close of bypass contact maximum	6.3 A
inrush current peak at application of control supply voltage maximum	7.5 A
duration of inrush current peak at application of control supply voltage	20 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	
Inputs/ Outputs number of digital inputs	4
	4 4
number of digital inputs	
number of digital inputs • parameterizable	4
number of digital inputs • parameterizable number of inputs for thermistor connection	4 1; Type A PTC or Klixon / Thermoclick
number of digital inputs • parameterizable number of inputs for thermistor connection • number of digital outputs	4 1; Type A PTC or Klixon / Thermoclick 4
number of digital inputs • parameterizable number of inputs for thermistor connection • number of digital outputs • number of digital outputs parameterizable	4 1; Type A PTC or Klixon / Thermoclick 4 3
number of digital inputs • parameterizable number of inputs for thermistor connection • number of digital outputs • number of digital outputs parameterizable • number of digital outputs not parameterizable	1; Type A PTC or Klixon / Thermoclick 4 3 1
number of digital inputs • parameterizable number of inputs for thermistor connection • number of digital outputs • number of digital outputs parameterizable • number of digital outputs not parameterizable digital output version	1; Type A PTC or Klixon / Thermoclick 4 3 1 3 normally-open contacts (NO) / 1 changeover contact (CO)
number of digital inputs • parameterizable number of inputs for thermistor connection • number of digital outputs • number of digital outputs parameterizable • number of digital outputs not parameterizable digital output version number of analog outputs	1; Type A PTC or Klixon / Thermoclick 4 3 1 3 normally-open contacts (NO) / 1 changeover contact (CO)
number of digital inputs • parameterizable number of inputs for thermistor connection • number of digital outputs • number of digital outputs parameterizable • number of digital outputs not parameterizable digital output version number of analog outputs switching capacity current of the relay outputs	1; Type A PTC or Klixon / Thermoclick 4 3 1 3 normally-open contacts (NO) / 1 changeover contact (CO)
number of digital inputs • parameterizable number of inputs for thermistor connection • number of digital outputs • number of digital outputs parameterizable • number of digital outputs not parameterizable digital output version number of analog outputs switching capacity current of the relay outputs • at AC-15 at 250 V rated value	1; Type A PTC or Klixon / Thermoclick 4 3 1 3 normally-open contacts (NO) / 1 changeover contact (CO) 1
number of digital inputs • parameterizable number of inputs for thermistor connection • number of digital outputs • number of digital outputs parameterizable • number of digital outputs not parameterizable digital output version 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; Type A PTC or Klixon / Thermoclick 4 3 1 3 normally-open contacts (NO) / 1 changeover contact (CO) 1
number of digital inputs • parameterizable number of inputs for thermistor connection • number of digital outputs • number of digital outputs parameterizable • number of digital outputs not parameterizable digital output version 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 Installation/ mounting/ dimensions	1; Type A PTC or Klixon / Thermoclick 4 3 1 3 normally-open contacts (NO) / 1 changeover contact (CO) 1 3 A 1 A
number of digital inputs • parameterizable number of inputs for thermistor connection • number of digital outputs • number of digital outputs parameterizable • number of digital outputs not parameterizable digital output version 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 Installation/ mounting/ dimensions mounting position	1; Type A PTC or Klixon / Thermoclick 4 3 1 3 normally-open contacts (NO) / 1 changeover contact (CO) 1 3 A 1 A Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)
number of digital inputs • parameterizable number of inputs for thermistor connection • number of digital outputs • number of digital outputs parameterizable • number of digital outputs not parameterizable digital output version 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 Installation/ mounting/ dimensions mounting position fastening method	1; Type A PTC or Klixon / Thermoclick 4 3 1 3 normally-open contacts (NO) / 1 changeover contact (CO) 1 3 A 1 A Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°) screw fixing
number of digital inputs • parameterizable number of inputs for thermistor connection • number of digital outputs • number of digital outputs parameterizable • number of digital outputs not parameterizable digital output version 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 Installation/ mounting/ dimensions mounting position fastening method height	1; Type A PTC or Klixon / Thermoclick 4 3 1 3 normally-open contacts (NO) / 1 changeover contact (CO) 1 3 A 1 A Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°) screw fixing 306 mm
number of digital inputs • parameterizable number of inputs for thermistor connection • number of digital outputs • number of digital outputs parameterizable • number of digital outputs not parameterizable digital output version 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 Installation/ mounting/ dimensions mounting position fastening method height width	1; Type A PTC or Klixon / Thermoclick 4 3 1 3 normally-open contacts (NO) / 1 changeover contact (CO) 1 3 A 1 A Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°) screw fixing 306 mm 185 mm
number of digital inputs • parameterizable number of inputs for thermistor connection • number of digital outputs • number of digital outputs parameterizable • number of digital outputs not parameterizable digital output version 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 Installation/ mounting/ dimensions mounting position fastening method height width depth	1; Type A PTC or Klixon / Thermoclick 4 3 1 3 normally-open contacts (NO) / 1 changeover contact (CO) 1 3 A 1 A Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°) screw fixing 306 mm 185 mm 203 mm 10 mm
number of digital inputs • parameterizable number of inputs for thermistor connection • number of digital outputs • number of digital outputs parameterizable • number of digital outputs not parameterizable digital output version 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 Installation/ mounting/ dimensions mounting position fastening method height width depth required spacing with side-by-side mounting	1; Type A PTC or Klixon / Thermoclick 4 3 1 3 normally-open contacts (NO) / 1 changeover contact (CO) 1 3 A 1 A Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°) screw fixing 306 mm 185 mm 203 mm
number of digital inputs • parameterizable number of inputs for thermistor connection • number of digital outputs • number of digital outputs parameterizable • number of digital outputs not parameterizable digital output version 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 Installation/ mounting/ dimensions mounting position fastening method height width depth required spacing with side-by-side mounting • forwards	1; Type A PTC or Klixon / Thermoclick 4 3 1 3 normally-open contacts (NO) / 1 changeover contact (CO) 1 3 A 1 A Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°) screw fixing 306 mm 185 mm 203 mm 10 mm
number of digital inputs	1; Type A PTC or Klixon / Thermoclick 4 3 1 3 normally-open contacts (NO) / 1 changeover contact (CO) 1 3 A 1 A Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°) screw fixing 306 mm 185 mm 203 mm 10 mm 0 mm 100 mm 75 mm
number of digital inputs	1; Type A PTC or Klixon / Thermoclick 4 3 1 3 normally-open contacts (NO) / 1 changeover contact (CO) 1 3 A 1 A Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°) screw fixing 306 mm 185 mm 203 mm 10 mm 0 mm 100 mm
number of digital inputs	1; Type A PTC or Klixon / Thermoclick 4 3 1 3 normally-open contacts (NO) / 1 changeover contact (CO) 1 3 A 1 A Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°) screw fixing 306 mm 185 mm 203 mm 10 mm 0 mm 100 mm 75 mm
number of digital inputs	1; Type A PTC or Klixon / Thermoclick 4 3 1 3 normally-open contacts (NO) / 1 changeover contact (CO) 1 3 A 1 A Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°) screw fixing 306 mm 185 mm 203 mm 10 mm 0 mm 100 mm 75 mm 5 mm
number of digital inputs	1; Type A PTC or Klixon / Thermoclick 4 3 1 3 normally-open contacts (NO) / 1 changeover contact (CO) 1 3 A 1 A Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°) screw fixing 306 mm 185 mm 203 mm 10 mm 0 mm 100 mm 75 mm 5 mm
number of digital inputs	1; Type A PTC or Klixon / Thermoclick 4 3 1 3 normally-open contacts (NO) / 1 changeover contact (CO) 1 3 A 1 A Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°) screw fixing 306 mm 185 mm 203 mm 10 mm 0 mm 100 mm 75 mm 5 mm

wire length for thermistor connection with conductor cross-section = 1.5 mm² maximum with conductor cross-section = 1.5 mm² maximum with conductor cross-section = 2.5 mm² maximum type of connectable conductor cross-section for main contacts for box terminal using the front clamping point solid of the main contacts for box terminal using the front clamping point standed of at AWC cables for main contacts for box terminal using the front clamping point standed of at AWC cables for main contacts for box terminal using the font clamping point standed of a which cables for main contacts for box terminal using the back clamping point solid of a main contacts for box terminal using both clamping points sinded of or main contacts for box terminal using both clamping points finely stranded with core end processing of or main contacts for box terminal using the back clamping point stranded of or main contacts for box terminal using the back clamping point stranded of or main contacts for box terminal using the back clamping point stranded of or main contacts for box terminal using the back clamping point stranded with core end processing of or main contacts for box terminal using the back clamping point stranded of or main contacts for box terminal using the back clamping point stranded of or main contacts for box terminal using the back clamping point stranded of or main contacts for box terminal using the back clamping point stranded of or main contacts for box terminal using the back clamping point stranded of or main contacts with core end processing of or main contacts with screw-type terminals of or auxiliany and control circuit finely stranded with core end processing of or main contacts with screw-type terminals of or auxiliany and control contacts with screw-type terminals of or auxiliany and control contacts with screw-type terminals of or auxiliany and control contacts with screw-type terminals of or auxiliany and control contacts with screw-type terminals of or auxiliany and contr	for control circuit	spring-loaded terminals
with conductor cross-section = 1.5 mm² maximum vith conductor cross-section = 2.5 mm² maximum type of connectable conductor cross-sections • for main contacts for box terminal using the front clamping point finely stranded with core end processing • for main contacts for box terminal using the front clamping point stranded • at AWG cables for main contacts for box terminal using the foot clamping point stranded • or main contacts for box terminal using the front clamping point stranded • at AWG cables for main contacts for box terminal using the back clamping point stranded • for main contacts for box terminal using both clamping points stranded • for main contacts for box terminal using both clamping points stranded • for main contacts for box terminal using both clamping point stranded with core end processing • for main contacts for box terminal using both clamping point stranded with core end processing • for main contacts for box terminal using the back clamping point stranded with core end processing • for main contacts for box terminal using the back clamping point stranded with core end processing • for main contacts for box terminal using the back clamping point stranded with core end processing • for main contacts for box terminal using the back clamping point stranded with core end processing • for main contacts for box terminal using the back clamping point stranded with core end processing • for main contacts for box terminal using the back clamping point stranded with core end processing • for main contacts for box terminal using the back clamping point stranded with core end processing • for main contacts for box terminal using the back clamping point stranded with core end processing • for main contacts for box terminal using the back clamping point stranded with core end processing • for control circuit solid • for control circuit solid • for control circuit finely stranded with core end processing • for main contacts with screev-type terminals • for suciliary and contr		- · · ·
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• for main contacts for box terminal using both clamping points stranded • for main contacts for box terminal using the back clamping point finely stranded with core end processing • for main contacts for box terminal using the back clamping point stranded type of connectable conductor cross-sections • for control circuit solid • at AWG cables for control circuit solid • at AWG cables for control circuit finely stranded with core end processing wire length • between soft starter and motor maximum • at the digital inputs at DC maximum • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type • during operation • during operation • during storage and transport • during operation • during operation acc. to IEC 60721 • during storage acc. to IEC 60721	clamping points finely stranded with core end	2x (2.5 35 mm²)
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type of connectable conductor cross-sections • for control circuit solid • for control circuit finely stranded with core end processing • at AWG cables for control circuit solid • at AWG cables for control circuit finely stranded with core end processing • at AWG cables for control circuit finely stranded with core end processing wire length • between soft starter and motor maximum • at the digital inputs at DC maximum • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for during torque [lbf-in] • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type • during operation **Ambient conditions** installation altitude at height above sea level maximum ambient temperature • during operation • during operation acc. to IEC 60721 **AGE (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 **IK6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand not get inside the devices), 1M4	clamping point finely stranded with core end	1x (2.5 50 mm²)
• for control circuit solid • for control circuit finely stranded with core end processing • at AWG cables for control circuit finely stranded with core end processing • at AWG cables for control circuit finely stranded with core end processing wire length • between soft starter and motor maximum • at the digital inputs at DC maximum • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and contr		1x (10 70 mm²)
• for control circuit finely stranded with core end processing • at AWG cables for control circuit solid • at AWG cables for control circuit finely stranded with core end processing wire length • between soft starter and motor maximum • at the digital inputs at DC maximum • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and con	type of connectable conductor cross-sections	
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at AWG cables for control circuit finely stranded with core end processing wire length between soft starter and motor maximum at the digital inputs at DC maximum 1 000 m tightening torque for main contacts with screw-type terminals for auxiliary and control contacts with screw-type terminals tightening torque [lbf-in] for auxiliary and control contacts with screw-type terminals for auxiliary and control contacts with screw-type terminals for auxiliary and control contacts with screw-type terminals Ambient conditions installation altitude at height above sea level maximum ambient temperature during operation during storage and transport during storage and transport evidence of the condition of the condition altitude at the condition of the con		2x (0.25 1.5 mm²)
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 for main contacts with screw-type terminals for auxiliary and control contacts with screw-type terminals Ambient conditions installation altitude at height above sea level maximum ambient temperature during operation during storage and transport during operation acc. to IEC 60721 during storage acc. to IEC 60721 during storage acc. to IEC 60721 for auxiliary and control contacts with screw-type terminals 10.3 lbf-in 10.3 lbf-in 10.3 lbf-in 10.4 lbf-in 10.5 lbf-in 10.6 lbf-in 10.7 lbf-in 10.8 lbf-in 10.9 lb	,	/ <u>L</u> ()
 for main contacts with screw-type terminals for auxiliary and control contacts with screw-type terminals Ambient conditions installation altitude at height above sea level maximum ambient temperature during operation during storage and transport during operation acc. to IEC 60721 during storage acc. to IEC 60721 during storage acc. to IEC 60721 for auxiliary and control contacts with screw-type terminals 10.3 lbf-in 10.3 lbf-in 10.3 lbf-in 7 10.3 lbf-in 8 10.3 lbf-in 8 10.3 lbf-in 8 10.3 lbf-in 9 10.3 lbf-in 9 10.3 lbf-in 9 10.3 lbf-in 10.3 lbf-in	tightening torque [lbf·in]	
 ◆ for auxiliary and control contacts with screw-type terminals Ambient conditions installation altitude at height above sea level maximum ambient temperature ◆ during operation → during storage and transport ← during operation acc. to IEC 60721 ★ during storage acc. to IEC 60721 ★ during storage acc. to IEC 60721 ★ G (only occasional condensation), 1C2 (no salt mist), 1S2 (sand mot get inside the devices), 1M4 		40 53 lbf·in
installation altitude at height above sea level maximum ambient temperature during operation during storage and transport during operation acc. to IEC 60721 during storage acc. to IEC 60721 during storage acc. to IEC 60721 during storage acc. to IEC 60721 Alto one installation altitude at height above sea level maximum 2 000 m; Derating as of 1000 m, see catalog -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 Alto one installation altitude at height above sea level maximum -2 000 m; Derating as of 1000 m, see catalog -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 Alto one installation at temperatures of 40 °C or above -40 +80 °C	 for auxiliary and control contacts with screw-type 	7 10.3 lbf·in
installation altitude at height above sea level maximum ambient temperature during operation during storage and transport during operation acc. to IEC 60721 during storage acc. to IEC 60721 during storage acc. to IEC 60721 during storage acc. to IEC 60721 Alto one installation altitude at height above sea level maximum 2 000 m; Derating as of 1000 m, see catalog -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 4 K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand not get inside the devices), 1M4	Ambient conditions	
 ambient temperature during operation during storage and transport during storage and transport 40 +80 °C environmental category during operation acc. to IEC 60721 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 during storage acc. to IEC 60721 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand not get inside the devices), 1M4 		2 000 m; Derating as of 1000 m, see catalog
 during operation during storage and transport during storage and transport environmental category during operation acc. to IEC 60721 during storage acc. to IEC 60721 during storage acc. to IEC 60721 MK6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 MK6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand not get inside the devices), 1M4 	-	
environmental category • during operation acc. to IEC 60721 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 • during storage acc. to IEC 60721 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand not get inside the devices), 1M4	•	
 during operation acc. to IEC 60721 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 during storage acc. to IEC 60721 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand not get inside the devices), 1M4 	 during storage and transport 	-40 +80 °C
mist), 3S2 (sand must not get into the devices), 3M6 • during storage acc. to IEC 60721 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand not get inside the devices), 1M4	environmental category	
 during storage acc. to IEC 60721 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand not get inside the devices), 1M4 		
• during transport acc. to IEC 60721 2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)	• during storage acc. to IEC 60721	1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must
	 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
PROFINET high-feature	Yes
• EtherNet/IP	Yes
Modbus RTU	Yes
Modbus TCP	Yes
PROFIBUS	Yes
	165
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. 70 A or 3VA51, max. 125 A; Iq = 10 kA
usable for High Faults at 460/480 V according to UL	Siemens type: 3VA51, max. 125 A; Iq max = 65 kA
usable for Standard Faults at 460/480 V at inside-delta circuit according to UL	Siemens type: 3VA51, max. 125 A; lq = 10 kA
 usable for High Faults at 460/480 V at inside- delta circuit according to UL 	Siemens type: 3VA51, max. 125 A; Iq max = 65 kA
 usable for Standard Faults at 575/600 V according to UL 	Siemens type: 3RV2742, max. 70 A or 3VA51, max. 125 A; Iq = 10 kA
 usable for High Faults at 575/600 V at inside- delta circuit according to UL 	Siemens type: 3VA51, max. 125 A; lq max = 65 kA
 usable for Standard Faults at 575/600 V at inside-delta circuit according to UL 	Siemens type: 3VA51, max. 125 A; Iq = 10 kA
• of the fuse	
 usable for Standard Faults up to 575/600 V according to UL 	Type: Class RK5 / K5, max. 200 A; Iq = 10 kA
 usable for High Faults up to 575/600 V according to UL 	Type: Class J / L, max. 225 A; lq = 100 kA
 usable for Standard Faults at inside-delta circuit up to 575/600 V according to UL 	Type: Class RK5 / K5, max. 200 A; Iq = 10 kA
usable for High Faults at inside-delta circuit up to 575/600 V according to UL	Type: Class J / L, max. 225 A; Iq = 100 kA
operating power [hp] for 3-phase motors	
● at 200/208 V at 50 °C rated value	15 hp
 at 220/230 V at 50 °C rated value 	20 hp
 at 460/480 V at 50 °C rated value 	40 hp
 at 575/600 V at 50 °C rated value 	50 hp
 at 200/208 V at inside-delta circuit at 50 °C rated value 	30 hp
 at 220/230 V at inside-delta circuit at 50 °C rated value 	30 hp
 at 460/480 V at inside-delta circuit at 50 °C rated value 	75 hp
at 575/600 V at inside-delta circuit at 50 °C rated value	75 hp
contact rating of auxiliary contacts according to UL	R300-B300
Safety related data	
protection class IP on the front acc. to IEC 60529	IP00; IP20 with cover
touch protection on the front acc. to IEC 60529	finger-safe, for vertical contact from the front with cover
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 2014/34/EU	II (2)G [Ex eb Gb] [Ex db Gb] [Ex pxb Gb], II (2)D [Ex tb Db] [Ex pxb Db], I (M2) [Ex db Mb]
hardware fault tolerance acc. to IEC 61508 relating to ATEX	0
PFDavg with low demand rate acc. to IEC 61508	0.008

relating to ATEX	
PFHD with high demand rate acc. to EN 62061 relating to ATEX	0.0000005 1/h
Safety Integrity Level (SIL) acc. to IEC 61508 relating to ATEX	SIL1
T1 value for proof test interval or service life acc. to IEC 61508 relating to ATEX	3 y

Certificates/ approvals

General Product Approval

EMC

For use in hazardous locations













For use in hazardous locations 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=3RW5525-3HA06

Cax online generator

 $\underline{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RW5525-3HA06}$

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

https://support.industry.siemens.com/cs/ww/en/ps/3RW5525-3HA06

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5525-3HA06&lang=en

Characteristic: Tripping characteristics, I2t, Let-through current

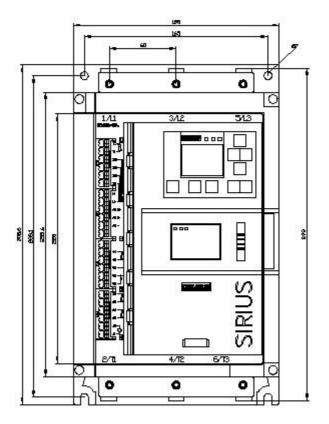
https://support.industry.siemens.com/cs/ww/en/ps/3RW5525-3HA06/char

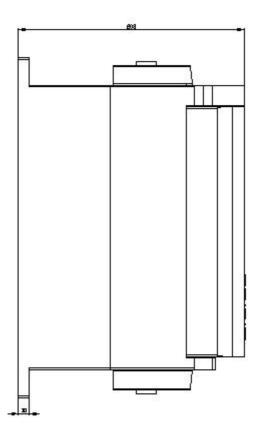
Characteristic: Installation altitude

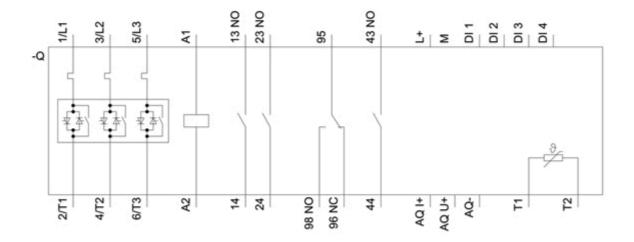
 $\underline{\text{http://www.automation.siemens.com/bilddb/index.aspx?view=Search\&mlfb=3RW5525-3HA06\&objecttype=14\&gridview=view1}$

Simulation Tool for Soft Starters (STS)

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







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