## **SIEMENS**

product brand name

product category

Data sheet 3RW5525-3HA06

SIRIUS

Hybrid switching devices



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





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>	3VA2163-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10
<ul> <li>of circuit breaker usable at 500 V</li> </ul>	3VA2163-7MN32-0AA0; Type of coordination 1, lq = 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, Iq = 65 kA, CLASS 10
<ul> <li>of the gG fuse usable up to 690 V</li> </ul>	3NA3830-6; Type of coordination 1, Iq = 65 kA
<ul> <li>of the gG fuse usable at inside-delta circuit up to 500 V</li> </ul>	3NA3830-6; 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>	3NE1022-0; Type of coordination 2, Iq = 65 kA
<ul> <li>of back-up R fuse link for semiconductor protection usable up to 690 V</li> </ul>	3NE3227; Type of coordination 2, Iq = 65 kA
eneral 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	5 (based on IEC 61557-12)
certificate of suitability	
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
	3
number of controlled phases	
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	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 protective separation	
between main and auxiliary circuit	690 V; does not apply for thermistor connection
shock resistance	15 g / 11 ms, from 6 g / 11 ms with potential contact lifting
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
SVHC substance name	Lead - 7439-92-1
	Lead monoxide (lead oxide) - 1317-36-8 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one - 71868-10-5 Dibutylbis(pentane-2,4-dionato-O,O')tin - 22673-19-4 Lead titanium trioxide - 12060-00-3
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
adjustable current limitation	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
motor overload protection	Yes; Full motor protection (thermistor motor protection and electronic motor overload protection)
evaluation of thermistor motor protection	Yes; Type A PTC or Klixon / Thermoclick
inside-delta circuit	Yes; Only up to 600 V operating voltage
auto-RESET	Yes
manual RESET	Yes
• remote reset	Yes
communication function	Yes
	Yes
operating measured value display	
• event list	Yes
• error logbook	Yes
via software parameterizable	Yes
<ul> <li>via software configurable</li> </ul>	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
removable terminal for control circuit	Yes

Annua control	W
• torque control	Yes
combined braking	Yes
analog output	Yes; 4 20 mA (default) / 0 10 V
programmable control inputs/outputs	Yes
condition monitoring	Yes
<ul> <li>automatic parameterisation</li> </ul>	Yes
application wizards	Yes
alternative run-down	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	
at 40 °C rated value	63 A
<ul> <li>at 40 °C rated value minimum</li> </ul>	13 A
• at 50 °C rated value	55.5 A
at 60 °C rated value	50.5 A
operational current at inside-delta circuit	
<ul> <li>at 40 °C rated value</li> </ul>	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
<ul> <li>at 400 V at 40 °C rated value</li> </ul>	30 kW
<ul> <li>at 400 V at inside-delta circuit at 40 °C rated value</li> </ul>	55 kW
• at 500 V at 40 °C rated value	37 kW
• at 500 V at inside-delta circuit at 40 °C rated value	55 kW
• at 690 V at 40 °C rated value	55 kW
Operating frequency 1 rated value	50 Hz
Operating frequency 2 rated value	60 Hz
relative negative tolerance of the operating frequency	-10 %
relative positive tolerance of the operating frequency	10 %
minimum load [%]	10 %; Relative to set le
power loss [W] for rated value of the current at AC	
	19 W
<ul> <li>at 40 °C after startup</li> </ul>	
at 40 °C after startup      at 50 °C after startup	17 W
• at 50 °C after startup	
<ul> <li>at 50 °C after startup</li> <li>at 60 °C after startup</li> </ul>	17 W
<ul> <li>at 50 °C after startup</li> <li>at 60 °C after startup</li> <li>power loss [W] at AC at current limitation 350 %</li> </ul>	17 W 15 W
at 50 °C after startup     at 60 °C after startup  power loss [W] at AC at current limitation 350 %     at 40 °C during startup	17 W
<ul> <li>at 50 °C after startup</li> <li>at 60 °C after startup</li> <li>power loss [W] at AC at current limitation 350 %</li> <li>at 40 °C during startup</li> <li>at 50 °C during startup</li> </ul>	17 W 15 W 1 056 W 732 W
<ul> <li>at 50 °C after startup</li> <li>at 60 °C after startup</li> <li>power loss [W] at AC at current limitation 350 %</li> <li>at 40 °C during startup</li> <li>at 50 °C during startup</li> <li>at 60 °C during startup</li> </ul>	17 W 15 W 1 056 W 732 W 647 W
<ul> <li>at 50 °C after startup</li> <li>at 60 °C after startup</li> <li>power loss [W] at AC at current limitation 350 %</li> <li>at 40 °C during startup</li> <li>at 50 °C during startup</li> <li>at 60 °C during startup</li> <li>type of the motor protection</li> </ul>	17 W 15 W 1 056 W 732 W
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  type of the motor protection  Control circuit/ Control	17 W 15 W  1 056 W 732 W 647 W  Electronic, tripping in the event of thermal overload of the motor
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  type of the motor protection  Control circuit/ Control  type of voltage of the control supply voltage	17 W 15 W 1 056 W 732 W 647 W
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  type of the motor protection  Control circuit/ Control  type of voltage of the control supply voltage  control supply voltage at AC	17 W 15 W  1 056 W 732 W 647 W Electronic, tripping in the event of thermal overload of the motor
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  type of the motor protection  Control circuit/ Control  type of voltage of the control supply voltage  control supply voltage at AC  at 50 Hz rated value	17 W 15 W  1 056 W 732 W 647 W Electronic, tripping in the event of thermal overload of the motor
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  type of the motor protection  Control circuit/ Control  type of voltage of the control supply voltage  control supply voltage at AC  at 50 Hz rated value  at 60 Hz rated value	17 W 15 W  1 056 W 732 W 647 W Electronic, tripping in the event of thermal overload of the motor  AC/DC  24 V 24 V
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  type of the motor protection  Control circuit/ Control  type of voltage of the control supply voltage  control supply voltage at AC  at 50 Hz rated value	17 W 15 W  1 056 W 732 W 647 W Electronic, tripping in the event of thermal overload of the motor
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  type of the motor protection  Control circuit/ Control  type of voltage of the control supply voltage  control supply voltage at AC  at 50 Hz rated value  at 60 Hz rated value  relative negative tolerance of the control supply voltage at	17 W 15 W  1 056 W 732 W 647 W Electronic, tripping in the event of thermal overload of the motor  AC/DC  24 V 24 V
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  type of the motor protection  Control circuit/ Control  type of voltage of the control supply voltage  control supply voltage at AC  at 50 Hz rated value  relative negative tolerance of the control supply voltage at AC at 50 Hz  relative positive tolerance of the control supply voltage at	17 W 15 W  1 056 W 732 W 647 W Electronic, tripping in the event of thermal overload of the motor  AC/DC  24 V 24 V -20 %

Intelligence positive tolerance of the control supply voltage at 20 % 20 % 20 % 20 % 20 % 20 % 20 % 20		
Ac a tel fix  control supply voltage frequency relative negative tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency control supply voltage at DC * raide value * raide value * raide value * 24 V  relative negative tolerance of the control supply voltage at DC * voltage positive tolerance of the control supply voltage at DC * voltage positive tolerance of the control supply voltage at DC * voltage positive tolerance of the control supply voltage at DC * voltage positive tolerance of the control supply voltage * voltage * control supply current in standby mode rated value * Aformation current sets a staplication of control supply voltage * volt	AC at 60 Hz	
control supply voltage frequency   10%		20 %
Incident to regardive tolerance of the control supply voltage frequency   10 %		50 60 Hz
frequency requency re		
frequency  - rated value - value value - value value value - rated value - value value value value value val	117	10 //
anterior value   24 V		10 %
celative negative tolerance of the control supply voltage at DC	control supply voltage at DC	
poc "claitive positive tolerance of the control supply voltage at DC control supply current in standby mode rated value 440 mA holding current in bypass operation rated value 870 mA irrush current by closing the bypass contacts maximum 6.3 A irrush current peak at application of control supply voltage duration of invish current peak at application of control supply voltage design of the overvoltage protection 4 A gG face (New 1 NA), 6 A quick-acting fuse (tou-1 LA), C1 ministure circuit soppe of supply voltage 1 and	rated value	24 V
Control supply current in standby mode rated value holding current in bypass operation rated value holding current in bypass operation rated value inrush current peak at application of control supply votage maximum  duration of insus current peak at application of control supply votage duration of insus current peak at application of control supply votage design of short-circuit protection for control circuit brasker (cue = 000 A), C6 miniature circuit brasker (cue = 000 A), C6 miniature circuit brasker (cue = 000 A), C8 miniature circuit brask		-20 %
holding current in bypass operation rated value   10		20 %
inrush current by closing the bypass control supply voltage maximum duration of inrush current peak at application of control supply voltage maximum duration of inrush current peak at application of control supply voltage design of the overvoltage protection design of short-circuit protection for control circuit breaker (cu= 900 A), C8 miniature circuit breaker (cu= 900 A), C8 miniature circuit breaker (cu= 900 A), C8 miniature circuit breaker (cu= 300 A); Is not part of supply voltage and the protection of digital inputs 4.  • number of digital outputs 4.  • number of digital outputs 4.  • number of digital outputs parameterizable 4.  • number of digital outputs not parameterizable 5.  • number of digital outputs not parameterizable 6.  • number of digital outputs parameterizable 7.  • number of digital outputs not parameterizable 9.  • number of analog outputs 9.  • at AC-15 at 250 V rated value 9.  • at DC-13 at 24 V rated value 9.  • at DC-13 at 24 V rated value 14.  Installation mounting dimensions 9.  mounting position 9.  * section of the relation	control supply current in standby mode rated value	440 mA
Invasion current peak at application of control supply voltage maximum  duration of invash current peak at application of control supply voltage design of the overvoltage protection  design of short-circuit protection for control circuit  by a gravate (ou= 000 A), C ministure circuit breaker (ou= 300 A), is not part of sospe of supply  number of digital inputs  • number of digital inputs  • number of digital outputs  • number of digital outputs arameterizable  • number of digital outputs parameterizable  • number of digital outputs parameterizable  • number of aligital outputs  • number of aligital outputs arameterizable  • number of aligital outputs are parameterizable  • number of aligital outputs are parameterizable  • number of aligital outputs  • all AC-15 all 250 V rated value  • all AC-16 all 250 V rated valu	holding current in bypass operation rated value	870 mA
maximum duration of mush current peak at application of control supply voltage  design of the overvoltage protection design of short-circuit protection for control circuit breaker (icu= 800 A), C6 miniature circuit breaker (icu= 900 A), is not part of soupply  mumber of digital inputs  number of digital outputs  number of digital outputs  number of digital outputs parameterizable  number of digital outputs not parameterizable  number of digital outputs parameterizable  number of digital outputs not parameterizable  number of digital outputs not parameterizable  number of analog outputs  1 switching capacity current of the relay outputs  at AC-15 at 250 V rated value  at AC-15 at 250 V rated value  1 A [Installation/ mounting/ dimensions  mounting position  fastening method  server fixing  belight  depth  203 mm  required specing with side-by-side mounting  forwards  belowwards  upwards  upwards  of maximum  of the ministric connection  of main current circuit  of or control circuit  of or control circuit  width of connection bar maximum  will conductor cross-section = 0.5 mm² maximum  will conductor cross-section = 1.5 mm² maximum  evill conductor cross-section = 1.5 mm² maximum  evill conductor cross-section = 2.5 mm² maximum  evill conductor cross-section = 0.5 mm	inrush current by closing the bypass contacts maximum	6.3 A
voltage design of the overvoltage protection  design of short-circuit protection for control circuit  breaker (lou= 500 A), C6 ministure circuit breaker (lou= 500 A), C7 ministure circuit breaker (	maximum	7.5 A
design of short-circuit protection for control circuit broaker (ou= 500 A), C6 ministure circuit broaker (ou= 500 A), Is not part of supply  number of digital inputs  number of digital outputs  number of digital outputs  number of digital outputs parameterizable  number of digital outputs parameterizable  number of digital outputs parameterizable  number of analog outputs  at AC-15 at 250 V rated value  at AC-15 at 250 V rated value  at Cb-13 at 24 V rated value  at Cb-13 at 250 V rated value  at Cb-13		
Inputs/ Outputs		
number of digital inputs	design of short-circuit protection for control circuit	breaker (Icu= 600 A), C6 miniature circuit breaker (Icu= 300 A); Is not part of
• number of digital outputs     • number of digital outputs parameterizable     • number of digital outputs parameterizable     • number of digital outputs not parameterizable     • number of data parameterizable     • number of valed vales     • number	Inputs/ Outputs	
• number of digital outputs     • number of digital outputs parameterizable     • number of digital outputs parameterizable     • number of digital outputs not parameterizable     • number of data parameterizable     • number of valed vales     • number	number of digital inputs	4
number of digital outputs not parameterizable     number of digital outputs not parameterizable     idigital output version     sumber 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     at DC-13 at 24 V rated value     installation/ mounting/ dimensions  ### Mounting position  fastenling method     height     width     idles pacing with side-by-side mounting     informatis     indepth     installation/ mounting  **Forwards**  **Forwards**  **Forwards**  **Forwards**  **Forwards**  **Forwards**  **Formatis**  **Formatis**  **Formatis**  **John Mail Standards		4
number of digital outputs not parameterizable     number of digital outputs not parameterizable     idigital output version     sumber 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     at DC-13 at 24 V rated value     A DC-13 at 24 V rated value     Installation/ mounting/ dimensions      mounting position     fastening method     screw fixing     height     vidth     depth     vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)     fastening method     height     vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)     fastening method     leight     vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)     fastening method     leight     vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)     fastening method     leight     vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)     fastening method     leight     vertical connection     vertical connection = 0.5 mm² maximum     vertical connection to tamping point field yetranded with core      type of connectable conductor cross-sections for main contacts for box terminal     vusing the front clamping point solid     vusing the front clamping point field yetranded with core     tx (2.5 16 mm²)     vusing the front clamping point field yetranded with core		
In uniber of digital outputs not parameterizable digital output version number of analog outputs  It is at AC-15 at 250 V rated value at DC-13 at 24 V rated value at DC-13 at 24 V rated value bright of mounting of dimensions  Tourning position  It is fastening method bright of owner of owner of owner own	<ul> <li>number of digital outputs</li> </ul>	4
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 A  Installation/ mounting/ dimensions  mounting position  Screw fixing fastening method  screw fixing height  306 mm  width  485 mm  depth  • forwards • upwards • upwards • at the side  weight without packaging  Connections/ Terminals  type of electrical connection • for main current circuit • for control circuit • with conductor cross-section = 0.5 mm² maximum • with conductor cross-section = 1.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • with confuctor cross-section = 2.5 mm² maxim	<ul> <li>number of digital outputs parameterizable</li> </ul>	3
number of analog outputs  switching capacity current of the relay outputs  • at AC-15 at 250 V rated value • at DC-13 at 24 V rated value  1 A  Installation/ mounting/ dimensions  mounting position  fastening method height 306 mm width 185 mm depth 203 mm  required spacing with side-by-side mounting • forwards • upwards • upwards • at the side weight without packaging  connections/ Terminals  type of electrical connection • for control circuit • for control circuit with conductor cross-section = 1.5 mm² maximum • with conductor cross-section = 1.5 mm² maximum • with connectable conductor cross-sections for main contacts for box terminal • using the front clamping point solid • using the front clamping point finely stranded with core  1 A  A A  A A  A A  A A  A A  A A  A	number of digital outputs not parameterizable	1
switching capacity current of the relay outputs  at AC-15 at 250 V rated value  at DC-13 at 24 V rated value  1 A  Installation/mounting/dimensions  mounting position  Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)  fastening method  screw fixing  height  306 mm  width  depth  203 mm  required spacing with side-by-side mounting  forwards  backwards  backwards  0 mm  4 downwards  at the side  soft main current circuit  for control circuit  width of connections bar maximum  wire length for thermistor connection  with conductor cross-section = 0.5 mm² maximum  with conductor cross-section = 2.5 mm² maximum  with conductor cross-section = 2.5 mm² maximum  with connectable conductor cross-sections for main contacts for box terminal  u using the front clamping point solid  u using the front clamping point finely stranded with core  1x (2.5 16 mm²)  1x (2.5 50 mm²)	digital output version	3 normally-open contacts (NO) / 1 changeover contact (CO)
at AC-15 at 250 V rated value  at DC-13 at 24 V rated value  1 A  Installation/ mounting/ dimensions  Wertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)  fastening method  screw fixing  height  306 mm  width  485 mm  depth  203 mm  required spacing with side-by-side mounting  forwards  backwards  0 mm  outh side with side side  5 mm  with side side  5 mm  weight without packaging  Connections/ Terminals  type of electrical connection  for main current circuit  for control circuit  with conductor cross-section = 0.5 mm² maximum  with conductor cross-section = 1.5 mm² maximum  with conductor cross-section = 1.5 mm² maximum  with conductor cross-section = 1.5 mm² maximum  type of connectable conductor cross-section = 2.5 mm² maximum  with conductor cross-section = 2.5 mm² maximum  type of connectable conductor cross-section = 2.5 mm² maximum  type of connectable conductor cross-section = 2.5 mm² maximum  vitye of connectable conductor cross-section = 2.5 mm² maximum  vitye of connectable conductor cross-section = 2.5 mm² maximum  vitye of connectable conductor cross-section = 2.5 mm² maximum  vitye of connectable conductor cross-section = 2.5 mm² maximum  vitye of connectable conductor cross-sections for main contacts for box terminal  u using the front clamping point finely stranded with core  1x (2.5 16 mm²)  1x (2.5 50 mm²)	number of analog outputs	1
■ at DC-13 at 24 V rated value Installation/ mounting/ dimensions  mounting position     Screw fixing fastening method     Screw fixing     Beight     So mm  width     So mm  width     So mm  vedured spacing with side-by-side mounting     So mm  equired spacing with side-by-side mounting     So backwards     So mm  so downwards     So mm  e downwards     So mm  weight without packaging  Connections/ Terminals  type of electrical connection     So for control circuit     So for control circuit     with conductor cross-section = 0.5 mm² maximum     with conductor cross-section = 1.5 mm² maximum     with conductor cross-section = 1.5 mm² maximum     with conductor cross-section = 1.5 mm² maximum     with connectable conductor cross-sections = 1.5 mm² maximum     So m  type of connectable conductor cross-section = 2.5 mm² maximum     So m  with conductor cross-section = 1.5 mm² maximum     So m  type of connectable conductor cross-sections for main contacts for box terminal     susing the front clamping point solid     using the front clamping point finely stranded with core     Ix (2.5 16 mm²)     1x (2.5 50 mm²)	switching capacity current of the relay outputs	
mounting position  fastening method  height  306 mm  width  depth  203 mm  required spacing with side-by-side mounting  • forwards  • backwards  • upwards  • downwards  • downwards  • of own ards  • of or main current circuit  • for control circuit  • for control circuit  • for control circuit  • for control circuit  • with conductor cross-section = 0.5 mm² maximum  • with conductor cross-section = 1.5 mm² maximum  • with conductor cross-section = 0.5 mm² maximum  • with conductor cross-section = 1.5 mm² maximum  • using the front clamping point finely stranded with core  • (25 16 mm²)  • using the front clamping point finely stranded with core   Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)  screw fixing  306 mm  Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)  screw fixing  306 mm  408 mm  408 mm  409 mm  400 mm		
mounting position         Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)           fastening method         screw fixing           height         306 mm           width         185 mm           depth         203 mm           required spacing with side-by-side mounting         10 mm           o forwards         0 mm           o backwards         0 mm           o upwards         100 mm           o downwards         75 mm           at the side         5 mm           weight without packaging         5.9 kg           Connections/ Terminals         5 mm           type of electrical connection         6 for control circuit         box terminal           of control circuit         spring-loaded terminals           with conductor cross-section = 0.5 mm² maximum         50 m           with conductor cross-section = 0.5 mm² maximum         150 m           with conductor cross-section = 2.5 mm² maximum         250 m           type of connectable conductor cross-sections for main contacts for box terminal         1x (2.5 16 mm²)           using the front clamping point finely stranded with core         1x (2.5 50 mm²)		1 A
fastening method  height  306 mm  width  485 mm  depth  203 mm  required spacing with side-by-side mounting  • forwards • backwards • upwards • downwards • at the side  weight without packaging  Connections/ Terminals  type of electrical connection • for main current circuit • for control circuit width of connection bar maximum  wire length for thermistor connection • with conductor cross-section = 0.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum  type of connectable conductor cross-sections for main contacts for box terminal  o using the front clamping point solid • using the front clamping point finely stranded with core  1x (2.5 16 mm²) • using the front clamping point finely stranded with core  1x (2.5 50 mm²)		
height 306 mm  width 185 mm  depth 203 mm  required spacing with side-by-side mounting  • forwards 10 mm  • backwards 0 mm  • upwards 100 mm  • downwards 75 mm  • at the side 5 mm  weight without packaging 5.9 kg  Connections/ Terminals  type of electrical connection  • for main current circuit box terminal spring-loaded terminals  width of connection bar maximum 25 mm  wire length for thermistor connection  • with conductor cross-section = 0.5 mm² maximum 50 m  • with conductor cross-section = 2.5 mm² maximum 150 m  • with connectable conductor cross-sections for main contacts for box terminal  • using the front clamping point solid 1x (2.5 16 mm²)  • using the front clamping point finely stranded with core 1x (2.5 50 mm²)		·
width     185 mm       depth     203 mm       required spacing with side-by-side mounting     10 mm       • forwards     0 mm       • backwards     0 mm       • downwards     100 mm       • downwards     5 mm       • at the side     5 mm       weight without packaging     5.9 kg       Connections/ Terminals       type of electrical connection     5 m       • for control circuit     box terminal       • for control circuit     spring-loaded terminals       width of connection bar maximum     25 mm       wire length for thermistor connection     50 m       • with conductor cross-section = 0.5 mm² maximum     50 m       • with conductor cross-section = 1.5 mm² maximum     150 m       • with conductor cross-section = 2.5 mm² maximum     250 m       type of connectable conductor cross-sections for main contacts for box terminal     using the front clamping point solid     1x (2.5 16 mm²)       • using the front clamping point finely stranded with core     1x (2.5 50 mm²)		ů
depth     203 mm       required spacing with side-by-side mounting     10 mm       • forwards     0 mm       • backwards     0 mm       • upwards     100 mm       • downwards     75 mm       • at the side     5 mm       weight without packaging     5.9 kg       Connections/ Terminals       type of electrical connection     6 or main current circuit     box terminal       • for control circuit     spring-loaded terminals       width of connection bar maximum     25 mm       wire length for thermistor connection     with conductor cross-section = 0.5 mm² maximum     50 m       • with conductor cross-section = 1.5 mm² maximum     150 m       • with conductor cross-section = 2.5 mm² maximum     250 m       type of connectable conductor cross-sections for main contacts for box terminal     using the front clamping point solid     1x (2.5 16 mm²)       • using the front clamping point finely stranded with core     1x (2.5 50 mm²)		
required spacing with side-by-side mounting  • forwards • backwards • upwards • downwards • at the side • at the side • for main current circuit • for control circuit • for control circuit • with conductor cross-section = 0.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • upwards • for box terminals  10 mm • mm • box mm • box mm • box terminal • box terminal • box terminal • box terminals  box terminal • box terminals  25 mm  150 m • with conductor cross-section = 0.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • with conductor cross-section sor main contacts for box terminal • using the front clamping point solid • using the front clamping point finely stranded with core  1x (2.5 16 mm²) • using the front clamping point finely stranded with core		
• forwards • backwards • backwards • upwards • upwards • downwards • at the side • at the side • the side • smm  weight without packaging  Connections/ Terminals  type of electrical connection • for main current circuit • for control circuit • for control circuit • spring-loaded terminals  width of connection bar maximum  wire length for thermistor connection • with conductor cross-section = 0.5 mm² maximum • with conductor cross-section = 1.5 mm² maximum • with conductor cross-section = 1.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • with conductor cross-sections for main contacts for box terminal • using the front clamping point solid • using the front clamping point finely stranded with core  1x (2.5 16 mm²) • using the front clamping point finely stranded with core		203 111111
backwards     upwards     upwards     downwards     at the side     5 mm      weight without packaging     5.9 kg  Connections/ Terminals  type of electrical connection     for main current circuit     for control circuit     for control circuit     width of connection bar maximum  wire length for thermistor connection     with conductor cross-section = 0.5 mm² maximum     with conductor cross-section = 1.5 mm² maximum     with conductor cross-section = 2.5 mm² maximum     with conductor cross-section = 2.5 mm² maximum     with conductor cross-section = 2.5 mm² maximum     with conductor cross-sections for main contacts for box terminal      using the front clamping point solid     using the front clamping point finely stranded with core  1x (2.5 16 mm²)  1x (2.5 50 mm²)		10 mm
<ul> <li>upwards</li> <li>downwards</li> <li>at the side</li> <li>5 mm</li> <li>weight without packaging</li> <li>5.9 kg</li> </ul> Connections/ Terminals type of electrical connection <ul> <li>for main current circuit</li> <li>for control circuit</li> <li>spring-loaded terminals</li> </ul> width of connection bar maximum <ul> <li>wire length for thermistor connection</li> <li>with conductor cross-section = 0.5 mm² maximum</li> <li>with conductor cross-section = 1.5 mm² maximum</li> <li>with conductor cross-section = 2.5 mm² maximum</li> <li>with conductor cross-section = 2.5 mm² maximum</li> <li>using the front clamping point solid</li> <li>using the front clamping point finely stranded with core</li> <li>1x (2.5 16 mm²)</li> <li>using the front clamping point finely stranded with core</li> </ul>		
o downwards     o at the side     o m  weight without packaging     5.9 kg  Connections/ Terminals  type of electrical connection     o for main current circuit     o for control circuit     o for control circuit     indicate the side  width of connection bar maximum  wire length for thermistor connection     o with conductor cross-section = 0.5 mm² maximum     o with conductor cross-section = 1.5 mm² maximum     o with conductor cross-section = 2.5 mm² maximum     o with conductor cross-section = 2.5 mm² maximum     o with conductor cross-sections for main contacts for box terminal     o using the front clamping point solid     o using the front clamping point finely stranded with core  1x (2.5 16 mm²)  1x (2.5 50 mm²)		
• at the side     weight without packaging     5.9 kg  Connections/ Terminals  type of electrical connection     • for main current circuit     • for control circuit     • for control circuit     indit of connection bar maximum  wire length for thermistor connection     • with conductor cross-section = 0.5 mm² maximum     • with conductor cross-section = 1.5 mm² maximum     • with conductor cross-section = 2.5 mm² maximum     • with conductor cross-section = 2.5 mm² maximum     • with conductor cross-sections for main contacts for box terminal     • using the front clamping point solid     • using the front clamping point finely stranded with core  1x (2.5 16 mm²)  1x (2.5 50 mm²)	•	
weight without packaging  Connections/ Terminals  type of electrical connection  • for main current circuit box terminal  • for control circuit spring-loaded terminals  width of connection bar maximum 25 mm  wire length for thermistor connection  • with conductor cross-section = 0.5 mm² maximum 50 m  • with conductor cross-section = 1.5 mm² maximum 150 m  • with conductor cross-section = 2.5 mm² maximum 250 m  • with conductor cross-section = 2.5 mm² maximum 250 m  • with conductor cross-section = 2.5 mm² maximum 250 m  type of connectable conductor cross-sections for main contacts for box terminal  • using the front clamping point solid 1x (2.5 16 mm²)  • using the front clamping point finely stranded with core 1x (2.5 50 mm²)		
type of electrical connection  • for main current circuit • for control circuit  • for connection bar maximum  25 mm  wire length for thermistor connection • with conductor cross-section = 0.5 mm² maximum  • with conductor cross-section = 1.5 mm² maximum  • with conductor cross-section = 2.5 mm² maximum  • using the front clamping point solid • using the front clamping point finely stranded with core  1x (2.5 50 mm²)		
type of electrical connection  • for main current circuit  • for control circuit  • for control circuit  width of connection bar maximum  25 mm  wire length for thermistor connection  • with conductor cross-section = 0.5 mm² maximum  • with conductor cross-section = 1.5 mm² maximum  • with conductor cross-section = 2.5 mm² maximum  • with conductor cross-section = 2.5 mm² maximum  250 m  type of connectable conductor cross-sections for main contacts for box terminal  • using the front clamping point solid  • using the front clamping point finely stranded with core  1x (2.5 16 mm²)  1x (2.5 50 mm²)		
<ul> <li>for main current circuit</li> <li>for control circuit</li> <li>spring-loaded terminals</li> </ul> width of connection bar maximum <ul> <li>wire length for thermistor connection</li> <li>with conductor cross-section = 0.5 mm² maximum</li> <li>with conductor cross-section = 1.5 mm² maximum</li> <li>with conductor cross-section = 2.5 mm² maximum</li> <li>with conductor cross-section = 2.5 mm² maximum</li> <li>with conductor cross-sections for main contacts for box terminal</li> <li>using the front clamping point solid</li> <li>using the front clamping point finely stranded with core</li> <li>1x (2.5 16 mm²)</li> <li>using the front clamping point finely stranded with core</li> </ul>	type of electrical connection	
width of connection bar maximum  wire length for thermistor connection  with conductor cross-section = 0.5 mm² maximum  with conductor cross-section = 1.5 mm² maximum  with conductor cross-section = 2.5 mm² maximum  with conductor cross-section = 2.5 mm² maximum  type of connectable conductor cross-sections for main contacts for box terminal  using the front clamping point solid  using the front clamping point finely stranded with core  1x (2.5 16 mm²)  1x (2.5 50 mm²)	• for main current circuit	box terminal
wire length for thermistor connection  • with conductor cross-section = 0.5 mm² maximum  • with conductor cross-section = 1.5 mm² maximum  • with conductor cross-section = 2.5 mm² maximum  • with conductor cross-section = 2.5 mm² maximum  250 m  type of connectable conductor cross-sections for main contacts for box terminal  • using the front clamping point solid  • using the front clamping point finely stranded with core  1x (2.5 16 mm²)  1x (2.5 50 mm²)	• for control circuit	spring-loaded terminals
<ul> <li>with conductor cross-section = 0.5 mm² maximum</li> <li>with conductor cross-section = 1.5 mm² maximum</li> <li>with conductor cross-section = 2.5 mm² maximum</li> <li>with conductor cross-section = 2.5 mm² maximum</li> <li>type of connectable conductor cross-sections for main contacts for box terminal</li> <li>using the front clamping point solid</li> <li>using the front clamping point finely stranded with core</li> <li>1x (2.5 16 mm²)</li> <li>using the front clamping point finely stranded with core</li> </ul>	width of connection bar maximum	25 mm
<ul> <li>with conductor cross-section = 1.5 mm² maximum</li> <li>with conductor cross-section = 2.5 mm² maximum</li> <li>type of connectable conductor cross-sections for main contacts for box terminal</li> <li>using the front clamping point solid</li> <li>using the front clamping point finely stranded with core</li> <li>1x (2.5 16 mm²)</li> <li>ux (2.5 50 mm²)</li> </ul>	wire length for thermistor connection	
with conductor cross-section = 2.5 mm² maximum  type of connectable conductor cross-sections for main contacts for box terminal  using the front clamping point solid  using the front clamping point finely stranded with core  1x (2.5 16 mm²)  1x (2.5 50 mm²)	• with conductor cross-section = 0.5 mm² maximum	50 m
type of connectable conductor cross-sections for main contacts for box terminal  • using the front clamping point solid  • using the front clamping point finely stranded with core  1x (2.5 16 mm²)  1x (2.5 50 mm²)	• with conductor cross-section = 1.5 mm² maximum	150 m
<ul> <li>using the front clamping point solid</li> <li>using the front clamping point finely stranded with core</li> <li>1x (2.5 16 mm²)</li> <li>1x (2.5 50 mm²)</li> </ul>	• with conductor cross-section = 2.5 mm² maximum	250 m
• using the front clamping point finely stranded with core 1x (2.5 50 mm²)		
	<ul> <li>using the front clamping point solid</li> </ul>	1x (2.5 16 mm²)
	<ul> <li>using the front clamping point finely stranded with core end processing</li> </ul>	1x (2.5 50 mm²)

r	
using the front clamping point stranded	1x (10 70 mm²)
<ul> <li>using the back clamping point solid</li> </ul>	1x (2.5 16 mm²)
<ul> <li>r box terminal using the back clamping point</li> </ul>	1x (10 2/0)
<ul> <li>using both clamping points solid</li> </ul>	2x (2.5 16 mm²)
<ul> <li>using both clamping points finely stranded with core end processing</li> </ul>	2x (2.5 35 mm²)
<ul> <li>using both clamping points stranded</li> </ul>	2x (6 16 mm²), 2x (10 50 mm²)
<ul> <li>using the back clamping point finely stranded with core end processing</li> </ul>	1x (2.5 50 mm²)
using the back clamping point stranded	1x (10 70 mm²)
type of connectable conductor cross-sections	
for control circuit solid	2x (0.25 1.5 mm²)
for control circuit finely stranded with core end processing	2x (0.25 1.5 mm²)
<ul> <li>for AWG cables for control circuit solid</li> </ul>	2x (24 16)
for 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</li> </ul>	0.8 1.2 N·m
terminals	
tightening torque [lbf·in]	40 50 11 61
for main contacts with screw-type terminals	40 53 lbf-in
<ul> <li>for auxiliary and control contacts with screw-type terminals</li> </ul>	7 10.3 lbf·in
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m; Derating as of 1000 m, see catalog
ambient temperature	2 500 m, Beruing as or 1000 m, see catalog
during operation	-25 +60 °C; Please observe derating at temperatures of 40 °C or above
during storage and transport	-40 +80 °C
environmental category	10 m 100 C
during operation according to IEC 60721	3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6
<ul> <li>during storage according to IEC 60721</li> </ul>	1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4
<ul> <li>during transport according to IEC 60721</li> </ul>	2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)
Environmental footprint	
Siemens Eco Profile (SEP)	Siemens EcoTech
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
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
— 60/480 V according to UL	Siemens type: 3VA51, max. 125 A; Iq max = 65 kA
— at 460/480 V at inside-delta circuit according to UL	Siemens type: 3VA51, max. 125 A; Iq = 10 kA
— 60/480 V at inside-delta circuit according to UL	Siemens type: 3VA51, max. 125 A; Iq max = 65 kA
— at 575/600 V according to UL	Siemens type: 3RV2742, max. 70 A or 3VA51, max. 125 A; Iq = 10 kA
— 75/600 V at inside-delta circuit according to UL	Siemens type: 3VA51, max. 125 A; Iq max = 65 kA
— 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
according to DE	7,

UL	
<ul> <li>usable for Standard Faults at inside-delta circuit up to 575/600 V according to UL</li> </ul>	Type: Class RK5 / K5, max. 200 A; Iq = 10 kA
<ul> <li>usable for High Faults at inside-delta circuit up to 575/600 V according to UL</li> </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
<ul> <li>at 220/230 V at 50 °C rated value</li> </ul>	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
Electrical Safety	
protection class IP on the front according to IEC 60529	IP00; IP20 with cover
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front with cover
ATEX	
Safety Integrity Level (SIL) according to IEC 61508 relating to ATEX	SIL1
PFHD with high demand rate according to IEC 61508 relating to ATEX	5E-7 1/h
PFDavg with low demand rate according to IEC 61508 relating to ATEX	0.008
hardware fault tolerance according to IEC 61508 relating to ATEX	0
T1 value for proof test interval or service life according to IEC 61508 relating to ATEX	3 a
certificate of suitability	
• ATEX	Yes
• IECEx	Yes
<ul> <li>according to ATEX directive 2014/34/EU</li> </ul>	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]
Approvals Certificates	

## General Product Approval







Confirmation





EMV For use in hazardous locations Test Certificates Marine / Shipping



<u>KC</u>





Type Test Certificates/Test Report



Marine / Shipping other Environment



Lloyd's Register urs



Confirmation



Siemens EcoTech



Environment

Environmental Confirmations

## Further information

Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

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

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

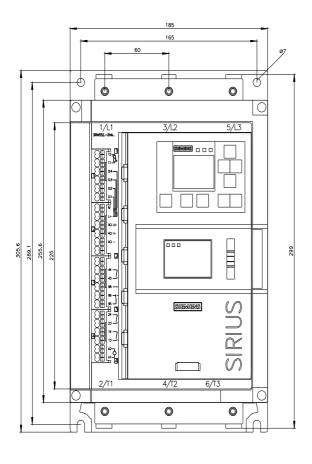
https://support.industry.siemens.com/cs/ww/en/ps/3RW5525-3HA06/char

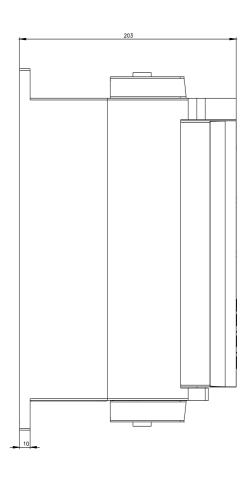
Characteristic: Installation altitude

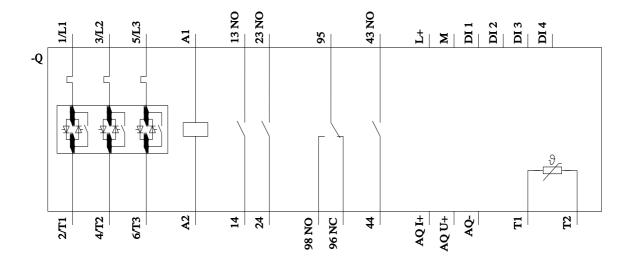
 $\underline{\text{http://www.automation.siemens.com/bilddb/index.aspx?view=Search\&mlfb=3RW5525-3HA06\&objecttype=14\&gridview=view1}$ 

Simulation Tool for Soft Starters (STS)

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







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