## **SIEMENS**

product brand name

Data sheet 3RW5544-2HA04

SIRIUS



SIRIUS soft starter 200-480 V 250 A, 24 V AC/DC spring-type terminals

product category	Hybrid switching devices
product designation	Soft starter
product type designation	3RW55
manufacturer's article number	
<ul> <li>of high feature HMI module usable</li> </ul>	3RW5980-0HF00
<ul> <li>of communication module PROFINET standard usable</li> </ul>	3RW5980-0CS00
• of communication module PROFINET high-feature usable	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>	3VA2440-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10
<ul> <li>of circuit breaker usable at 500 V</li> </ul>	3VA2440-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10
<ul> <li>of circuit breaker usable at 400 V at inside-delta circuit</li> </ul>	3VA2450-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10
<ul> <li>of circuit breaker usable at 500 V at inside-delta circuit</li> </ul>	3VA2450-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10
<ul> <li>of the gG fuse usable up to 690 V</li> </ul>	2x3NA3354-6; Type of coordination 1, Iq = 65 kA
• of the gG fuse usable at inside-delta circuit up to 500 V	2x3NA3354-6; 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>	3NE1331-0; 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>	3NE3335; Type of coordination 2, Iq = 65 kA
General technical data	
starting voltage [%]	20 100 %
stopping voltage [%]	50 %; non-adjustable
start-up ramp time of soft starter	0 360 s
ramp-down time of soft starter	0 360 s
start torque [%]	10 100 %
stopping torque [%]	10 100 %
torque limitation [%]	20 200 %
current limiting value [%] adjustable	125 800 %
breakaway voltage [%] adjustable	40 100 %
breakaway time adjustable	0 2 s
number of parameter sets	3
accuracy class	5 (based on IEC 61557-12)
certificate of suitability	
CE marking	Yes
UL approval	Yes
	Yes
CSA approval	1 65
CSA approval     product component	165

• is supported HMI-High Feature	Yes
product feature integrated bypass contact system	Yes
number of controlled phases	3
trip class	CLASS 10A / 10E (default) / 20E / 30E; acc. to IEC 60947-4-2
current unbalance limiting value [%]	10 60 %
ground-fault monitoring limiting value [%]	10 95 %
buffering time in the event of power failure	
for main current circuit	100 ms
for control circuit	100 ms
idle time adjustable	0 255 s
insulation voltage rated value	480 V
degree of pollution	3, acc. to IEC 60947-4-2
impulse voltage rated value	6 kV
blocking voltage of the thyristor maximum	1 400 V
service factor	1.15
surge voltage resistance rated value	6 kV
maximum permissible voltage for protective separation	
between main and auxiliary circuit	480 V; does not apply for thermistor connection
shock resistance	15 g / 11 ms, from 6 g / 11 ms with potential contact lifting
vibration resistance	15 mm up to 6 Hz; 2 g up to 500 Hz
recovery time after overload trip adjustable	60 1 800 s
utilization category according to IEC 60947-4-2	AC 53a
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	02/15/2018
product function	02/13/2010
• ramp-up (soft starting)	Yes
• ramp-down (soft stop)	Yes
	Yes
breakaway pulse     adii atable surrent limitation	Yes
adjustable current limitation	
creep speed in both directions of rotation	Yes
pump ramp down	Yes
DC braking	Yes
motor heating	Yes
slave pointer function	Yes
trace function	Yes
<ul> <li>intrinsic device protection</li> </ul>	Yes
motor overload protection	Yes; Full motor protection (thermistor motor protection and electronic motor overload protection) / When using the motor overload protection according to ATEX, an upstream contactor is required in inside-delta circuit.
<ul> <li>evaluation of thermistor motor protection</li> </ul>	Yes; Type A PTC or Klixon / Thermoclick
• inside-delta circuit	Yes
• auto-RESET	Yes
• manual RESET	Yes
• remote reset	Yes
communication function	Yes
operating measured value display	Yes
• event list	Yes
error logbook	Yes
via software parameterizable	Yes
via software configurable	Yes
screw terminal	No
spring-loaded terminal	Yes
PROFlenergy	Yes; in connection with the PROFINET Standard and PROFINET High-Feature
Frorienergy     firmware update	communication modules  Yes
removable terminal for control circuit	Yes
	Yes
voltage ramp     torque control	
torque control	Yes
	Yes
combined braking     applies output	Vac. 4 20 m \ (defecth) / 0 40 \ /
analog output     programmable control inputs/outputs	Yes; 4 20 mA (default) / 0 10 V Yes

<ul> <li>automatic parameterisation</li> </ul>	Yes
<ul> <li>application wizards</li> </ul>	Yes
<ul> <li>alternative run-down</li> </ul>	Yes
<ul> <li>emergency operation mode</li> </ul>	Yes
<ul> <li>reversing operation</li> </ul>	Yes
<ul> <li>soft starting at heavy starting conditions</li> </ul>	Yes
Power Electronics	
operational current	
<ul> <li>at 40 °C rated value</li> </ul>	250 A
<ul> <li>at 40 °C rated value minimum</li> </ul>	50 A
<ul> <li>at 50 °C rated value</li> </ul>	220 A
• at 60 °C rated value	200 A
operational current at inside-delta circuit	
• at 40 °C rated value	433 A
• at 50 °C rated value	381 A
• at 60 °C rated value	346 A
operating voltage	
• rated value	200 480 V
at inside-delta circuit rated value	200 480 V
relative negative tolerance of the operating voltage	-15 %
relative positive tolerance of the operating voltage	10 %
relative negative tolerance of the operating voltage at	-15 %
inside-delta circuit	
relative positive tolerance of the operating voltage at inside-delta circuit	10 %
operating power for 3-phase motors	
at 230 V at 40 °C rated value	75 kW
at 230 V at inside-delta circuit at 40 °C rated value	132 kW
at 400 V at 40 °C rated value	132 kW
at 400 V at inside-delta circuit at 40 °C rated value	250 kW
	50 Hz
Operating frequency 1 rated value Operating frequency 2 rated value	60 Hz
relative negative tolerance of the operating frequency	-10 %
relative negative tolerance of the operating frequency	10 %
minimum load [%]	10 %; Relative to set le
power loss [W] for rated value of the current at AC	75 W
• at 40 °C after startup	66 W
at 50 °C after startup	
• at 60 °C after startup	60 W
power loss [W] at AC at current limitation 350 %	0.000.14
• at 40 °C during startup	3 806 W
at 50 °C during startup	3 176 W
• at 60 °C during startup	2 787 W
type of the motor protection	Electronic, tripping in the event of thermal overload of the motor
Control circuit/ Control	AOIDO
type of voltage of the control supply voltage	AC/DC
control supply voltage at AC	2414
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	

relative negative tolerance of the control supply voltage at DC relative positive tolerance of the control supply voltage at DC control supply current in standby moder rated value holding current in bypass operation rated value holding current in bypass operation rated value rinsah 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 along of short-circuit protection for control circuit  **Control Service**  **Impulsi Coutouts	- at DC rated value	24.)/
Control supply current in standby mode rated value	at DC rated value  Taleting registive talerance of the control complex valters at	24 V
control supply current in standby mode rated value holding current in bypass operation rated value inrush current by closing the bypass contacts maximum inrush current peak at application of control supply voltage maximum  design of the overvoltage protection  Varistor  design of the overvoltage protection or control circuit braker (cu= 600 A), C 6 miniature circuit braker (cu= 500 A), C 6 miniature circuit braker (cu= 600 A), C 6 miniature circu	DC	
holding current In bypass operation rated value inrush current pack at application of control supply voltage maximum duration of insush current peak at application of control supply voltage maximum design of the overvoltage protection  design of the overvoltage protection for control circuit  design of short-circuit protection for control circuit  **Parameterizable**  **number of digital inputs**  **number of digital outputs*  **number of digital outputs parameterizable  **number of digital outputs at 250 V rated value  **number of digital outputs at 250 V rated value  **al AC-15 at 250		20 %
inrush current by closing the bypass contracts maximum inrush current peak at application of control supply voltage maximum duration of inrush current peak at application of control supply voltage design of the overvoltage protection  design of short-circuit protection for control circuit  # A g G luse (icu=1 kA), 6 A quick-acting fuse (icu=1 kA), C 1 miniature circuit breaker (icu=300 A), Is not part sopper of supply  # A g G luse (icu=1 kA), 6 A quick-acting fuse (icu=1 kA), C 1 miniature circuit breaker (icu=300 A), Is not part sopper of supply  # A g G luse (icu=1 kA), 6 A quick-acting fuse (icu=1 kA), C 1 miniature circuit breaker (icu=300 A), Is not part sopper of supply  # A g G luse (icu=1 kA), 6 A quick-acting fuse (icu=1 kA), C 1 miniature circuit breaker (icu=300 A), Is not part sopper of supply  # A g G luse (icu=1 kA), 6 A quick-acting fuse (icu=1 kA), C 1 miniature circuit breaker (icu=300 A), Is not part sopper of supply  # A g G luse (icu=1 kA), 6 A quick-acting fuse (icu=1 kA), C 1 miniature circuit breaker (icu=300 A), Is not part sopper of supply  # A g G luse (icu=1 kA), 6 A quick-acting fuse (icu=1 kA), C 1 miniature circuit breaker (icu=300 A), Is not part sopper of digital outputs  # A g G luse (icu=1 kA), 6 A quick-acting fuse (icu=1 kA), C 1 miniature circuit breaker (icu=300 A), Is not part # A g G luse (icu=1 kA), 6 A quick-acting fuse (icu=1 kA), C 1 miniature circuit breaker (icu=300 A), Is not part # A g G luse (icu=1 kA), 6 A quick-acting fuse (ic	control supply current in standby mode rated value	440 mA
Incush current peak at application of control supply voltage maximum duration of innush current peak at application of control supply voltage design of the overvoltage protection voltage from the control supply design of the overvoltage protection for control circuit based (incus 1 kA), 6 A quick-acting fuse (incus 1 kA), C1 miniature circuit protection for control circuit based (incus 200 A), C6 miniature circuit breaker (incus 300 A), is not part scope of supply inputs outputs  **parameter/zable**  **number of digital outputs  **number of digital outputs parameter/zable**  **number of digital outputs parameter/zable**  **number of digital outputs parameter/zable**  **number of digital outputs not parameter/zable**  **a tal C-15 at 250 V rated value**  **a tal C-13 at 250 V rated value**  **a t	holding current in bypass operation rated value	720 mA
maximum duration of insush current peak at application of control supply voltage  design of the overvoltage protection design of short-circuit protection for control circuit  supports Outputs  number of digital inputs  • number of digital inputs  • number of digital outputs  • number of digital outputs  • number of digital outputs parameterizable  • number of digital outputs  • number o	inrush current by closing the bypass contacts maximum	6.7 A
design of the overvoltage protection design of the overvoltage protection design of short-circuit protection for control circuit design of short-circuit protection for control circuit breaker (fcu= 500 A). 6 miniature circuit breaker (fcu= 300 A); is not part scope of supply  **mputal Outputs**  **number of digital inputs**  **number of digital outputs**  **number of digital outputs parameterizable**  **number of adigital outputs parameterizable**  **number of adigital outputs not parameterizable**  **number of adigital outputs not parameterizable**  **a stack-15 at 250 V rated value**  **a stack-15 at 250 V rated value**  **a tack-15 at 250 V rated value**  **a tack-15 at 250 V rated value**  **a tack-15 at 250 V rated value**  **a tack-16 at		7.5 A
design of short-circuit protection for control circuit  protection for control circuit  protection for control circuit  protection for short-circuit protection for control circuit  protection for control circuit  protection for control circuit  protection for short-circuit protection for control circuit  protection for short-circuit protection for control circuit  protection for control circuit connection  protection for control circuit connection  protection for main current circuit solution contacts finely stranded  protection for main contacts finely stranded  protection for control circuit solution contacts finely strand		20 ms
breaker ((oue 600 A), C6 miniature circuit breaker ((oue 300 A); Is not part scope of supply)  number of digital inputs	design of the overvoltage protection	Varistor
number of digital inputs	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
• number of digital outputs     • number of digital outputs parameterizable     • number of digital outputs parameterizable     • number of digital outputs not parameterizable     • number of digital outputs not parameterizable     • digital output version     • number of analog outputs     • at AC-15 at 250 V rated value     • at AC-15 at 250 V rated value     • at AC-15 at 250 V rated value     • at DC-13 at 24 V rated value     • at DC-13 at 250 V rated value     • backwards     • downwards     • for main current circuit     • for control circuit     • for control circuit     • for control circuit     • with conductor cross-section = 0.5 mm² maximum     • for DIN cable lug for main contacts finely stranded     • for DIN cable lug for main contacts finely stranded     • for control circu	Inputs/ Outputs	
• number of digital outputs     • number of digital outputs parameterizable     • number of digital outputs not parameterizable     • number of digital output not parameterizable     • number of analog outputs     • at AC-15 at 250 V rated value     • at AC-15 at 250 V rated value     • at DC-13 at 24 V rated value     • at	number of digital inputs	4
• number of digital outputs not parameterizable • number of digital output so not parameterizable digital output version number of analog outputs 1 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 • at DC-13 at 24 V rated value  • at DC-13 at 24 V rated value  • at DC-13 at 24 V rated value  • at DC-13 at 24 V rated value  • at DC-13 at 24 V rated value  • at DC-13 at 24 V rated value  • at DC-13 at 24 V rated value  • at DC-13 at 24 V rated value  • at DC-13 at 24 V rated value  • at DC-13 at 24 V rated value  • at DC-13 at 24 V rated value  • at DC-13 at 24 V rated value  • fastenling method  • screw fixing  • screw fixing  • sate in parameter	parameterizable	4
• number of digital outputs not parameterizable • number of digital output so not parameterizable digital output version number of analog outputs  • at AC-15 at 250 V rated value • at DC-15 at 250 V rated value • at DC-13 at 24 V rated value • at DC-13 at 24 V rated value  • at DC-13 at 24 V rated value  • at DC-13 at 24 V rated value  • at DC-13 at 24 V rated value  • at DC-13 at 24 V rated value  • at DC-13 at 24 V rated value  • at DC-13 at 24 V rated value  • at DC-13 at 24 V rated value  • at DC-13 at 24 V rated value  • at DC-13 at 24 V rated value  • at DC-13 at 24 V rated value  • at DC-13 at 24 V rated value  • at DC-13 at 24 V rated value  • screw fixing  fastening method  • screw fixing  • say mm  width  • depth  • soy mm  • forwards  • low mm  • backwards  • own mm  • upwards  • downwards  • downwards  • at the side  • som mm  weight without packaging  Connections/ Torminals   *type of electrical connection  • for ormin 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 conductor cross-sections  • for DIN cable lug for main contacts finely stranded  • for DIN cable lug for main contacts finely stranded  • for control circuit solid		
• number of digital outputs not parameterizable • number of digital output so not parameterizable digital output version number of analog outputs  • at AC-15 at 250 V rated value • at DC-15 at 250 V rated value • at DC-13 at 24 V rated value • at DC-13 at 24 V rated value  • at DC-13 at 24 V rated value  • at DC-13 at 24 V rated value  • at DC-13 at 24 V rated value  • at DC-13 at 24 V rated value  • at DC-13 at 24 V rated value  • at DC-13 at 24 V rated value  • at DC-13 at 24 V rated value  • at DC-13 at 24 V rated value  • at DC-13 at 24 V rated value  • at DC-13 at 24 V rated value  • at DC-13 at 24 V rated value  • at DC-13 at 24 V rated value  • screw fixing  fastening method  • screw fixing  • say mm  width  • depth  • soy mm  • forwards  • low mm  • backwards  • own mm  • upwards  • downwards  • downwards  • at the side  • som mm  weight without packaging  Connections/ Torminals   *type of electrical connection  • for ormin 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 conductor cross-sections  • for DIN cable lug for main contacts finely stranded  • for DIN cable lug for main contacts finely stranded  • for control circuit solid	number of digital outputs	4
• number of digital outputs not parameterizable   1   1   1   1   1   1   1   1   1		3
digital output version     3 normally-open contacts (NO) / 1 changeover contact (CO)       number of analog outputs     1       switching capacity current of the relay outputs     3 A       • at DC-13 at 250 V rated value     1 A       instaliction/ mounting/ dimensions     Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)       fastening method     screw fixing       height     393 mm       width     210 mm       depth     203 mm       required spacing with side-by-side mounting     0 mm       • forwards     100 mm       • backwards     0 mm       • downwards     75 mm       • at the side     5 mm       weight without packaging     102 kg       Connections / Terminals       type of electrical connection     6 for main current circuit     busbar connection       • for ornal current circuit     busbar connection       with conductor cross-section = 0.5 mm² maximum     45 mm       with conductor cross-section = 2.5 mm² maximum     150 m       • with conductor cross-section = 2.5 mm² maximum     250 m       • for DIN cable lug for main contacts stranded     2x (50 240 mm²)       • for DIN cable lug for main contacts stranded     4x (70 240 mm²)       • for control circuit solid     2x (70 240 mm²)		1
mumber 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  screw fixing  mounting position  fastening method  screw fixing  height vidth 210 mm  depth 203 mm  required spacing with side-by-side mounting • forwards • backwards • outpwards • outpwards • outpwards • at the side • at the side • at the side  veight without packaging  connections/ Terminals  type of electrical connection • for main current circuit • for control circuit consection = 0.5 mm² maximum • with conductor cross-section = 0.5 mm² maximum • for DIN cable lug for main contacts stranded • for control circuit solid • for DIN cable lug for main contacts finely stranded • for control circuit solid		3 normally-open contacts (NO) / 1 changeover contact (CO)
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 width depth 203 mm  required spacing with side-by-side mounting forwards to nome backwards o mm clowards downwards downwards downwards downwards downwards downwards downwards for main current circuit for main current circuit for control circuit with conductor cross-section = 1.5 mm² maximum with conductor cross-section = 1.5 mm² maximum with conductor cross-section = 1.5 mm² maximum effor DIN cable lug for main contacts firely stranded for control circuit solid  for connectable conductor cross-sections efor control circuit solid  for connectable conductor cross-sections efor control circuit solid  for control circuit solid  for control control cross-sections efor DIN cable lug for main contacts firely stranded efor DIN cable lug for main contacts firely stranded efor control circuit solid  for control circuit solid  for control circuit solid  for control circuit solid	<u> </u>	
at AC-15 at 250 V rated value at DC-13 at 24 V rated value installation/ mounting dimensions  mounting position  Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)  fastening method screw fixing  height 393 mm  width depth 210 mm depth equired spacing with side-by-side mounting forwards backwards bac		
• at DC-13 at 24 V rated value  Installation/ mounting/ dimensions  mounting position fastening method screw fixing height 393 mm  width 210 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 • with conductor cross-section = 0.5 mm² maximum • with conductor cross-sections • for DIN cable lug for main contacts stranded • for DIN cable lug for main contacts stranded • for connectable conductor cross-sections • for control circuit solid  **Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)  **Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)  **Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)  **Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)  **Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)  **Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)  **Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)  **Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)  **Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)  **Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)  **Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)  **Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)  **Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)  **Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)  **Vertical (can be rotated +/- 90° and tilted forward or backwar		3 A
mounting position  fastening method  height  393 mm  width  depth  203 mm  required spacing with side-by-side mounting  • forwards  • upwards  • upwards  • at the side  at the side  weight without packaging  Connections/ Terminals  type of electrical connection  • for control circuit  with conductor cross-section = 0.5 mm² maximum  • with conductor cross-section = 2.5 mm² maximum  • with conductor cross-sections  • for DIN cable lug for main contacts finely stranded  • for control circuit solid  type of connectable conductor cross-sections  • for control circuit solid  • for connectable conductor cross-sections  • for connectable conductor cross-sections  • for connectable conductor cross-sections  • for control circuit solid  • for control circuit solid  • for connectable conductor cross-sections  • for connectable conductor cross-sections  • for control circuit solid  • vith conductor cross-sections  • for control circuit solid  • for control circuit solid		1 A
mounting position         Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)           fastening method         screw fixing           height         393 mm           width         210 mm           depth         203 mm           e forwards         10 mm           • backwards         0 mm           • backwards         0 mm           • downwards         75 mm           • at the side         5 mm           weight without packaging         10.2 kg           Connections/Terminals         type of electrical connection           • for main current circuit         busbar connection           • for control circuit         spring-loaded terminals           width of connection bar maximum         45 mm           wire length for thermistor connection         50 m           • with conductor cross-section = 0.5 mm² maximum         50 m           • with conductor cross-section = 2.5 mm² maximum         250 m           • yor of connectable conductor cross-sections         2x (50 240 mm²)           • for DIN cable lug for main contacts finely stranded         2x (70 240 mm²)           • for control circuit solid         2x (0.25 1.5 mm²)		
fastening method  height  393 mm  width  210 mm  depth  203 mm  required spacing with side-by-side mounting  • forwards • backwards • upwards • downwards • downwards • at the side  **of main current circuit • for control circuit **with conductor cross-section = 0.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • for DIN cable lug for main contacts finely stranded • for connectable conductor cross-sections • for DIN cable lug for main contacts finely stranded • for connectable conductor cross-sections • for control circuit solid  2x (50 240 mm²)  type of connectable conductor cross-sections • for control circuit solid  2x (25 1.5 mm²)	·	Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)
height     393 mm       width     210 mm       depth     203 mm       required spacing with side-by-side mounting     10 mm       • forwards     10 mm       • backwards     0 mm       • upwards     100 mm       • downwards     75 mm       • at the side     5 mm       weight without packaging     10.2 kg       Connections/ Terminals       type of electrical connection     6 or control circuit       • for control circuit     spring-loaded terminals       width of connection bar maximum     45 mm       wire length for thermistor connection     45 mm       • with conductor cross-section = 0.5 mm² maximum     50 m       • with conductor cross-section = 2.5 mm² maximum     150 m       • with conductor cross-section = 2.5 mm² maximum     250 m       type of connectable conductor cross-sections     2x (50 240 mm²)       • for DIN cable lug for main contacts finely stranded     2x (70 240 mm²)       type of connectable conductor cross-sections     6 for control circuit solid	<u> </u>	
width 210 mm   depth 203 mm   required spacing with side-by-side mounting 10 mm   • forwards 10 mm   • backwards 0 mm   • upwards 100 mm   • downwards 75 mm   • at the side 5 mm   weight without packaging 10.2 kg   Connections/ Terminals   type of electrical connection   • for main current circuit busbar connection   • for control circuit spring-loaded terminals   width of connection bar maximum 45 mm   wire length for thermistor connection 50 m   • with conductor cross-section = 0.5 mm² maximum 50 m   • with conductor cross-section = 2.5 mm² maximum 250 m   type of connectable conductor cross-sections 50 m   • for DIN cable lug for main contacts stranded 2x (50 240 mm²)   • for DIN cable lug for main contacts finely stranded 2x (70 240 mm²)   type of connectable conductor cross-sections 6 for control circuit solid		,
depth     203 mm       required spacing with side-by-side mounting     10 mm       • backwards     0 mm       • upwards     100 mm       • downwards     75 mm       • at the side     5 mm       weight without packaging       Connections/ Terminals       type of electrical connection       • for main current circuit     busbar connection       • for control circuit     spring-loaded terminals       width of connection bar maximum       • with conductor cross-section = 0.5 mm² maximum     45 mm       • with conductor cross-section = 0.5 mm² maximum     50 m       • with conductor cross-section = 2.5 mm² maximum     250 m       • with conductor cross-sections     50 m       • for DIN cable lug for main contacts stranded     2x (50 240 mm²)       • for DIN cable lug for main contacts finely stranded     2x (70 240 mm²)       • for connectable conductor cross-sections     6 for connectable conductor cross-sections       • for control circuit solid     2x (0.25 1.5 mm²)		
required spacing with side-by-side mounting  • forwards • backwards • upwards • downwards • at the side  weight without packaging  Connections/ Terminals  type of electrical connection • for control circuit • with conductor cross-section = 0.5 mm² maximum • with conductor cross-sections • for DIN cable lug for main contacts finely stranded • for control circuit spring-loaded terminals  type of connectable conductor cross-sections • for DIN cable lug for main contacts finely stranded • for control circuit spring-loaded terminals  2x (0.25 1.5 mm²)		
• forwards • backwards • backwards • upwards • upwards • downwards • at the side • the side • the side • to mm  weight without packaging  type of electrical connection • for main current circuit • for control circuit • for control circuit  with 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-sections • for DIN cable lug for main contacts stranded • for DIN cable lug for main contacts finely stranded • for control circuit solid  2x (0.25 1.5 mm²)		203 111111
<ul> <li>backwards</li> <li>upwards</li> <li>downwards</li> <li>at the side</li> <li>5 mm</li> <li>weight without packaging</li> <li>10.2 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>type of connectable conductor cross-sections</li> <li>for DIN cable lug for main contacts stranded</li> <li>for DIN cable lug for main contacts finely stranded</li> <li>for control circuit solid</li> <li>2x (0.25 1.5 mm²)</li> </ul>		10 mm
<ul> <li>upwards</li> <li>downwards</li> <li>at the side</li> <li>5 mm</li> <li>weight without packaging</li> <li>10.2 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-sections</li> <li>for DIN cable lug for main contacts stranded</li> <li>for DIN cable lug for main contacts finely stranded</li> <li>type of connectable conductor cross-sections</li> <li>for control circuit solid</li> <li>2x (0.25 1.5 mm²)</li> </ul>		
<ul> <li>downwards</li> <li>at the side</li> <li>5 mm</li> <li>weight without packaging</li> <li>10.2 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>for DIN cable lug for main contacts stranded</li> <li>for DIN cable lug for main contacts finely stranded</li> <li>for connectable conductor cross-sections</li> <li>for control circuit solid</li> <li>for control circuit solid</li> <li>2x (0.25 1.5 mm²)</li> </ul>		
• at the side 5 mm      weight without packaging 10.2 kg  Connections/ Terminals  type of electrical connection     • for main current circuit busbar connection     • for control circuit spring-loaded terminals  width of connection bar maximum 45 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-sections     • for DIN cable lug for main contacts stranded 2x (50 240 mm²)     • for DIN cable lug for main contacts finely stranded 2x (70 240 mm²)  type of connectable conductor cross-sections     • for control circuit solid 2x (0.25 1.5 mm²)	•	
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 = 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  • for DIN cable lug for main contacts stranded • for DIN cable lug for main contacts finely stranded  • for control circuit solid  2x (0.25 1.5 mm²)		
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 = 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 DIN cable lug for main contacts stranded  • for DIN cable lug for main contacts finely stranded  type of connectable conductor cross-sections  • for control circuit solid  2x (0.25 1.5 mm²)		
type of electrical connection  • for main current circuit  • for control circuit  width of connection bar maximum  45 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  • with conductor cross-section = 2.5 mm² maximum  250 m  type of connectable conductor cross-sections  • for DIN cable lug for main contacts stranded  2x (50 240 mm²)  • for DIN cable lug for main contacts finely stranded  type of connectable conductor cross-sections  • for control circuit solid  2x (0.25 1.5 mm²)		10.2 kg
<ul> <li>for main current circuit</li> <li>for control circuit</li> <li>spring-loaded terminals</li> <li>width of connection bar maximum</li> <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>for DIN cable lug for main contacts stranded</li> <li>for DIN cable lug for main contacts finely stranded</li> <li>type of connectable conductor cross-sections</li> <li>for control circuit solid</li> <li>2x (0.25 1.5 mm²)</li> </ul>		
<ul> <li>for control circuit</li> <li>width of connection bar maximum</li> <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>for DIN cable lug for main contacts stranded</li> <li>for DIN cable lug for main contacts finely stranded</li> <li>for connectable conductor cross-sections</li> <li>for connectable conductor cross-sections</li> <li>for connectable conductor cross-sections</li> <li>for connectable conductor cross-sections</li> <li>for control circuit solid</li> <li>2x (0.25 1.5 mm²)</li> </ul>		
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  250 m  type of connectable conductor cross-sections  • for DIN cable lug for main contacts stranded  • for DIN cable lug for main contacts finely stranded  type of connectable conductor cross-sections  • for control circuit solid  2x (0.25 1.5 mm²)		
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 DIN cable lug for main contacts stranded  • for DIN cable lug for main contacts finely stranded  2x (50 240 mm²)  type of connectable conductor cross-sections  • for control circuit solid  2x (0.25 1.5 mm²)		
<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</li> <li>for DIN cable lug for main contacts stranded</li> <li>for DIN cable lug for main contacts finely stranded</li> <li>type of connectable conductor cross-sections</li> <li>for control circuit solid</li> <li>2x (0.25 1.5 mm²)</li> </ul>		45 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</li> <li>for DIN cable lug for main contacts stranded</li> <li>for DIN cable lug for main contacts finely stranded</li> <li>type of connectable conductor cross-sections</li> <li>for control circuit solid</li> <li>2x (50 240 mm²)</li> <li>2x (70 240 mm²)</li> <li>2x (0.25 1.5 mm²)</li> </ul>	•	
<ul> <li>with conductor cross-section = 2.5 mm² maximum</li> <li>type of connectable conductor cross-sections</li> <li>for DIN cable lug for main contacts stranded</li> <li>for DIN cable lug for main contacts finely stranded</li> <li>type of connectable conductor cross-sections</li> <li>for control circuit solid</li> <li>2x (50 240 mm²)</li> <li>2x (70 240 mm²)</li> <li>2x (0.25 1.5 mm²)</li> </ul>		
type of connectable conductor cross-sections  • for DIN cable lug for main contacts stranded 2x (50 240 mm²)  • for DIN cable lug for main contacts finely stranded 2x (70 240 mm²)  type of connectable conductor cross-sections  • for control circuit solid 2x (0.25 1.5 mm²)	• with conductor cross-section = 1.5 mm² maximum	150 m
<ul> <li>for DIN cable lug for main contacts stranded</li> <li>for DIN cable lug for main contacts finely stranded</li> <li>type of connectable conductor cross-sections</li> <li>for control circuit solid</li> <li>2x (50 240 mm²)</li> <li>2x (70 240 mm²)</li> <li>2x (0.25 1.5 mm²)</li> </ul>	• with conductor cross-section = 2.5 mm² maximum	250 m
◆ for DIN cable lug for main contacts finely stranded  2x (70 240 mm²)  type of connectable conductor cross-sections      ◆ for control circuit solid  2x (0.25 1.5 mm²)	type of connectable conductor cross-sections	
type of connectable conductor cross-sections  • for control circuit solid 2x (0.25 1.5 mm²)	<ul> <li>for DIN cable lug for main contacts stranded</li> </ul>	2x (50 240 mm²)
• for control circuit solid 2x (0.25 1.5 mm²)	<ul> <li>for DIN cable lug for main contacts finely stranded</li> </ul>	2x (70 240 mm²)
	type of connectable conductor cross-sections	
for control circuit finally attended with care and an arrangement of the control	<ul> <li>for control circuit solid</li> </ul>	2x (0.25 1.5 mm²)
• for control circuit finely stranged with core end processing 2x (0.25 1.5 mm²)	• for control circuit finely stranded with core end processing	2x (0.25 1.5 mm²)
• for AWG cables for control circuit solid 2x (24 16)	<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	wire length	
between soft starter and motor maximum     800 m		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>	14 24 N·m
<ul> <li>for auxiliary and control contacts with screw-type terminals</li> </ul>	0.8 1.2 N·m
tightening torque [lbf-in]	404 040    51
for main contacts with screw-type terminals	124 210 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	5 000 m; Derating as of 1000 m, see catalog
ambient temperature	
during operation	-25 +60 °C; Please observe derating at temperatures of 40 °C or above
<ul> <li>during storage and transport</li> </ul>	-40 +80 °C
environmental category	
<ul> <li>during operation according to IEC 60721</li> </ul>	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)
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	
<ul> <li>usable for Standard Faults at 460/480 V according to UL</li> </ul>	Siemens type: 3VA53, max. 400 A or 3VA54, max. 600 A; Iq = 18 kA
<ul> <li>usable for High Faults at 460/480 V according to UL</li> </ul>	Siemens type: 3VA53, max. 400 A or 3VA54, max. 600 A; Iq max = 65 kA
<ul> <li>usable for Standard Faults at 460/480 V at inside- delta circuit according to UL</li> </ul>	Siemens type: 3VA54, max. 600 A; Iq = 18 kA
<ul> <li>usable for High Faults at 460/480 V at inside-delta circuit according to UL</li> </ul>	Siemens type: 3VA54, max. 600 A; Iq max = 65 kA
<ul> <li>— usable for Standard Faults at 575/600 V according to UL</li> </ul>	Siemens type: 3VA53, max. 400 A or 3VA54, max. 600 A; lq = 18 kA
<ul> <li>usable for High Faults at 575/600 V at inside-delta circuit according to UL</li> </ul>	Siemens type: 3VA54, max. 600 A; lq max = 65 kA
<ul> <li>usable for Standard Faults at 575/600 V at inside- delta circuit according to UL</li> </ul>	Siemens type: 3VA54, max. 600 A; Iq = 18 kA
<ul> <li>of the fuse</li> <li>usable for Standard Faults up to 575/600 V</li> </ul>	Type: Class J / L, max. 800 A; Iq = 18 kA
according to UL  — usable for High Faults up to 575/600 V according to	Type: Class J / L, max. 800 A; Iq = 100 kA
UL  — usable for Fight Faults up to 575/000 v according to UL  — usable for Standard Faults at inside-delta circuit up	Type: Class J / L, max. 800 A; Iq = 100 kA  Type: Class J / L, max. 800 A; Iq = 18 kA
to 575/600 V according to UL  — usable for High Faults at inside-delta circuit up to	Type: Class J / L, max. 800 A; Iq = 100 kA
575/600 V according to UL	., p. 5. 5.000 0 7 E, 110.10 00 7 G 19 100 10 1
operating power [hp] for 3-phase motors	
• at 200/208 V at 50 °C rated value	60 hp
• at 220/230 V at 50 °C rated value	75 hp
<ul> <li>at 460/480 V at 50 °C rated value</li> </ul>	150 hp
<ul> <li>at 200/208 V at inside-delta circuit at 50 °C rated value</li> </ul>	125 hp
• at 220/230 V at inside-delta circuit at 50 °C rated value	150 hp
at 460/480 V at inside-delta circuit at 50 °C rated value	300 hp
contact rating of auxiliary contacts according to UL	R300-B300
Safety related data	IDOO: IDOO with cover
protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529	IP00; IP20 with cover
electromagnetic compatibility	finger-safe, for vertical contact from the front with cover acc. to IEC 60947-4-2
ATEX	400. 10 120 000T1 T Z
THE 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]
hardware fault tolerance according to IEC 61508 relating to ATEX	0
PFDavg with low demand rate according to IEC 61508 relating to ATEX	0.008
PFHD with high demand rate according to EN 62061 relating to ATEX	5E-7 1/h
Safety Integrity Level (SIL) according to IEC 61508 relating to ATEX	SIL1
T1 value for proof test interval or service life according to IEC 61508 relating to ATEX	3 a

Certificates/ approvals

General Product Approval EMC





Confirmation







For use in hazardous locations

Declaration of Con-

**Test Certificates** 

Marine / Shipping







Type Test Certificates/Test Report





Marine / Shipping

other





Confirmation

## **Further information**

Siemens has decided to exit the Russian market (see here).

https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

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=3RW5544-2HA04

Cax online generator

 $\underline{\text{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RW5544-2HA04}\\$ 

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3RW5544-2HA04

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

http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RW5544-2HA04&lang=en

Characteristic: Tripping characteristics, I2t, Let-through current

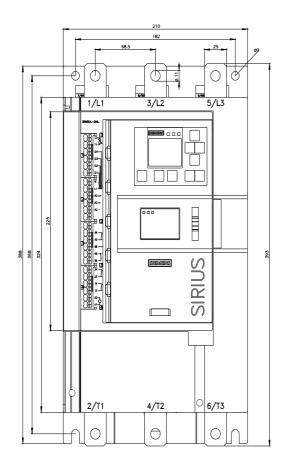
https://support.industry.siemens.com/cs/ww/en/ps/3RW5544-2HA04/char

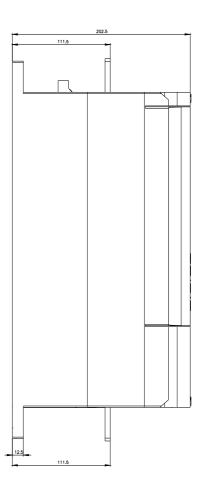
Characteristic: Installation altitude

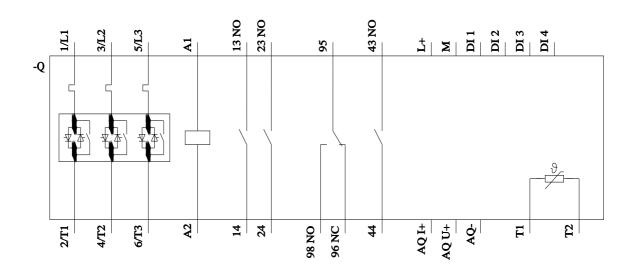
 $\underline{\text{http://www.automation.siemens.com/bilddb/index.aspx?view=Search\&mlfb=3RW5544-2HA04\&objecttype=14\&gridview=view1}$ 

Simulation Tool for Soft Starters (STS)

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







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