# **SIEMENS**

Data sheet 3RW5544-2HA06



SIRIUS soft starter 200-690 V 250 A, 24 V AC/DC spring-type terminals

product brand name product category product designation product type designation manufacturer's article number

- of high feature HMI module usable
- of communication module PROFINET standard usable
- of communication module PROFINET high-feature usable
- of communication module PROFIBUS usable
- of communication module Modbus TCP usable
- of communication module Modbus RTU usable
- of communication module Ethernet/IP
- of circuit breaker usable at 400 V
- of circuit breaker usable at 500 V
- of circuit breaker usable at 400 V at inside-delta circuit
- of circuit breaker usable at 500 V at inside-delta circuit
- of the gG fuse usable up to 690 V
- of the gG fuse usable at inside-delta circuit up to 500 V
- $\bullet$  of full range R fuse link for semiconductor protection usable up to 690 V
- $\bullet$  of back-up R fuse link for semiconductor protection usable up to 690 V

**SIRIUS** 

Hybrid switching devices

Soft starter

3RW55

3RW5980-0HF00

3RW5980-0CS00

3RW5950-0CH00

3RW5980-0CP00

3RW5980-0CT00

3RW5980-0CR00

3RW5980-0CE00

3VA2440-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10

<u>3VA2440-7MN32-0AA0</u>; Type of coordination 1, Iq = 65 kA, CLASS 10

3VA2450-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10

3VA2450-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10

2x3NA3354-6; Type of coordination 1, Iq = 65 kA

2x3NA3354-6; Type of coordination 1, Iq = 65 kA

3NE1331-0; Type of coordination 2, Iq = 65 kA

3NE3335; Type of coordination 2, Iq = 65 kA

## General technical data

starting voltage [%]

stopping voltage [%]

start-up ramp time of soft starter

ramp-down time of soft starter

start torque [%]

stopping torque [%]

torque limitation [%]

current limiting value [%] adjustable breakaway voltage [%] adjustable

breakaway time adjustable

number of parameter sets

accuracy class according to IEC 61557-12

certificate of suitability

- CE marking
- UL approval

20 ... 100 %

50 %; non-adjustable

0 ... 360 s

0 ... 360 s

10 ... 100 %

10 ... 100 %

20 ... 200 %

125 ... 800 %

40 ... 100 %

 $0 \dots 2 s$ 

3

5 %

Yes

Yes

CSA approval	Yes
product component	
HMI-High Feature	Yes
• is supported HMI-High Feature	Yes
product feature integrated bypass contact system	Yes
number of controlled phases	3
trip class	CLASS 10A / 10E (default) / 20E / 30E; acc. to IEC 60947-4-2
current unbalance limiting value [%]	10 60 %
ground-fault monitoring limiting value [%]	10 95 %
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 degree of pollution	690 V 3, acc. to IEC 60947-4-2
impulse voltage rated value	5, acc. to IEC 60947-4-2 8 kV
blocking voltage of the thyristor maximum	1 800 V
service factor	1.15
surge voltage resistance rated value	8 kV
maximum permissible voltage for safe isolation	
between main and auxiliary circuit	690 V; does not apply for thermistor connection
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  ■ ramp-up (soft starting)	Yes
• ramp-down (soft stop)	Yes
breakaway pulse	Yes
adjustable current limitation	Yes
<ul> <li>creep speed in both directions of rotation</li> </ul>	Yes
<ul><li>pump ramp down</li></ul>	Yes
<ul> <li>DC braking</li> </ul>	Yes
<ul><li>motor heating</li></ul>	Yes
slave pointer function	Yes
• trace function	Yes
intrinsic device protection     meter everland protection	Yes
motor overload protection	Yes; Full motor protection (thermistor motor protection and electronic motor overload protection)
<ul> <li>evaluation of thermistor motor protection</li> </ul>	Yes; Type A PTC or Klixon / Thermoclick
• inside-delta circuit	Yes; Only up to 600 V operating voltage
• auto-RESET	Yes
manual RESET	Yes
• remote reset	Yes
communication function	Yes
operating measured value display	Yes
event list	Yes
error logbook     via software parameterizable	Yes
<ul><li>via software parameterizable</li><li>via software configurable</li></ul>	Yes Yes
screw terminal	No
spring-loaded terminal	Yes
PROFlenergy	Yes; in connection with the PROFINET Standard and PROFINET High-
• firmware update	Feature communication modules Yes
removable terminal for control circuit	Yes
voltage ramp	Yes
• torque control	Yes
combined braking	Yes
analog output	Yes; 4 20 mA (default) / 0 10 V
<ul> <li>programmable control inputs/outputs</li> </ul>	Yes
<ul> <li>condition monitoring</li> </ul>	Yes

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automatic parameterisation     application wizards	Yes
<ul><li>application wizards</li><li>alternative run-down</li></ul>	Yes Yes
emergency operation mode	Yes
reversing operation	Yes
soft starting at heavy starting conditions	Yes
Power Electronics	
operational current	
• at 40 °C rated value	250 A
at 40 °C rated value minimum	50 A
at 50 °C rated value	220 A
at 60 °C rated value	200 A
operational current at inside-delta circuit	
at 40 °C rated value	433 A
<ul> <li>at 50 °C rated value</li> </ul>	381 A
<ul> <li>at 60 °C rated value</li> </ul>	346 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	10 %
inside-delta circuit	
operating power for 3-phase motors  • at 230 V at 40 °C rated value	75 kW
at 230 V at 40 °C rated value     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
at 500 V at 40 °C rated value	160 kW
at 500 V at inside-delta circuit at 40 °C rated value	315 kW
<ul> <li>at 690 V at 40 °C rated value</li> </ul>	250 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	
• at 40 °C after startup	75 W
• at 50 °C after startup	66 W
• at 60 °C after startup	60 W
power loss [W] at AC at current limitation 350 %  • at 40 °C during startup	3 806 W
at 40 °C during startup      at 50 °C during startup	3 176 W
at 60 °C during startup      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	
type of voltage of the control supply voltage	AC/DC
control supply voltage at AC	
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 %
<u> </u>	

### ### #### #########################	control supply voltage	
relative negative tolerance of the control supply voltage at DC control supply current in standby mode rated value holding current in bypass operation rated value incrish current by closing the bypass contacts maximum incrish current by closing the bypass contacts maximum incrish current per section of control supply voltage incrish current per section of control supply voltage increase increase in the overvoltage protection design of short-circuit protection for control circuit design of short-circuit protection for control circuit increase in the overvoltage protection design of short-circuit protection for control circuit increase in the overvoltage protection design of short-circuit protection for control circuit increase in the overvoltage protection design of short-circuit protection for control circuit increase in the overvoltage protection of control supply.  Imputs/ Outputs  Imputs/ Outputs/ Outputs  Imputs/ Outputs/ Outputs  Imputs/ Outputs/ Outputs  Imputs/ Outputs/ Outputs/ Outputs  Imputs/ Outputs/		24 V
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maximum duration of inrush current peak at application of control supply voltage design of the overvoltage protection design of short-circuit protection for control circuit circuit breaker (cu= 600 A), C6 miniature circuit breaker (cu= 300 A). Is number of digital inputs  • parameterizable • number of digital outputs parameterizable • number of digital outputs parameterizable • number of digital outputs 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 DC-13 at 24 V rated value • breathing method height vivith • backwards • ownwards • backwards • ownwards • backwards • ownwards • ownwards • ownwards • ownwards • of ownwards • o	inrush current by closing the bypass contacts	6.7 A
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inputs/ Outputs  number of digital inputs	design of the overvoltage protection	Varistor
number of digital inputs  • parameterizable • number of digital outputs • number of digital outputs parameterizable • number of digital outputs parameterizable • number of digital outputs parameterizable digital output version number of analog outputs  • at AC-15 at 250 V rated value • at DC-13 at 24 V rated value • at DC-13 at 24 V rated value  mounting position fastening method height vidth depth 200 mm depth 200 mm depth 200 mm equired spacing with side-by-side mounting • forwards • upwards • upwards • at the side • downwards • at the side • odwnwards • at the side • with conductor cross-section = 0.5 mm² maximum • with conductor cross-section = 1.5 mm² maximum • with conductor cross-section = 0.5 mm² maximum •	design of short-circuit protection for control circuit	circuit breaker (Icu= 600 A), C6 miniature circuit breaker (Icu= 300 A); Is
number of digital outputs     number of digital outputs parameterizable     number of digital outputs not parameterizable     number of digital outputs not parameterizable     number of analigo 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 250 V rated value     at DC-13 at 250 V rated value     at DC-13 at 250 V rated value     at DC-13 at 26 V rated value	Inputs/ Outputs	
number of digital outputs     number of digital outputs parameterizable     number of digital outputs not parameterizable digital output version number of analog outputs     at AC-15 at 250 V rated value     1 A  Installation/mounting/dimensions  mounting position fastening method height     393 mm width     200 mm depth required spacing with side-by-side mounting     informards     a thread of work of the side     in upwards     in the side     in the side     without packaging  connections/ Terminals  type of connection armaximum     with conductor cross-section = 1.5 mm² maximum     with conductor cross-section = 2.5 mm² maximum     with conductor cross-sections     if or DIN cable lug for main contacts stranded     if or Cross-section = 2.5 mm² maximum     with conductor cross-sections     if or for Inic able lug for main contacts stranded     if or for Inic able lug for main contacts stranded     if or control circuit solid     if the digital inputs at DC maximum     if the digital i	number of digital inputs	4
• number of digital outputs parameterizable • number of 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  • at DC-13 at 24 V rated value  Installation mounting dimensions  mounting position fastening method height width depth vidth ceptine • forwards • backwards • downwards • downwards • at the side • at whe side • at whe side • for Din's cable lug for main contacts isnanded • for Din's cable lug for main contacts isnanded • for Connectable conductor cross-sections • for control circuit finely stranded with core end processing • at AWG cables for control circuit solid • at AWG cables for control circuit finely stranded with core end processing  • at AWG cables for control circuit finely stranded with core end processing  • at AWG cables for control circuit finely stranded with core end processing  • at AWG cables for control circuit finely stranded with core end processing  • wire length • between soft starter and motor maximum • at the digital inputs at DC maximum  • at the digital inputs at DC maximum  • at the digital inputs at DC maximum  1 at AWG and the start and motor maximum • at the digital inputs at DC maximum  1 at AWG and the start and motor maximum • at the digital inputs at DC maximum  1 at AWG and the start and motor maximum • at the digital inputs at DC maximum  1 at AWG and the start and motor maximum • at the digital inputs at DC maximum  1 at the digital inputs at DC maximum  1 at AWG and the start and motor maximum  2 at AWG and the start and motor maximum • at the digital inputs at DC maximum  1 at AWG and the start and motor maximum • at the digital inputs at DC maximum  1 at AWG and the start and motor maximum • at the digital inputs at DC maximum  1 at AWG and the start and motor maximum • at the digital inputs at DC maximum  1 at AWG and the start and motor maximum	parameterizable	4
Installation with the side with side-by-side mounting of backwards at the side without packaging to make of onnections of control circuit side 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 = 0.5 mm² maximum with conductor cross-section = 0.5 mm² maximum to ror control circuit side of cont		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  Installation/ mounting/ dimensions  mounting position fastening method height width depth 210 mm depth required spacing with side-by-side mounting • forwards • backwards • at which as a specific promise of the relation of	0 1 1	
number of analog outputs  witching capacity current of the relay outputs  at Installation frounting dimensions  wounting position fastening method height width depth convards forwards depwards		
witching capacity current of the relay outputs  at AC-15 at 25 0 V rated value  at BC-15 at 25 0 V rated value  1 A  Installation/ mounting/ dimensions  mounting position fastening method height  width depth 210 mm depth 203 mm required spacing with side-by-side mounting  forwards 10 mm  backwards 0 mm  upwards 100 mm  downwards 3 mm  veight without packaging  Connections/ Terminals  type of electrical connection  for control circuit with conductor cross-section = 0.5 mm² maximum with conductor cross-section = 1.5 mm² maximum with conductor cross-sections for DIN cable lug for main contacts finely stranded type of connectable conductor cross-sections for control circuit finely stranded with core end processing  at AWG cables for control circuit finely stranded with core end processing  wire length between soft starter and motor maximum at the digital inputs at DC maximum between soft starter and motor maximum at the digital inputs at DC maximum between soft starter and motor maximum at the digital inputs at DC maximum and the digital inputs at DC maximum at the digital inputs at DC maximum and the digital inputs at DC maximum and the digital inputs at DC maximum and the rotated 4/- 90° and title	•	, , , , , , , , , , , , , , , , , , , ,
* at AC-15 at 250 V rated value 1 A Installation/ mounting/ dimensions  mounting position fastening method screw fixing height 9393 mm width 210 mm equired spacing with side-by-side mounting forwards 10 mm backwards 0 mm equired shackwards 0 mm equired shackwards 100 mm backwards 100 mm downwards 75 mm edight without packaging 10.2 kg  Connections/ Terminals  type of electrical connection for control circuit solid or of mountion control circuit finely stranded with core end processing at AWG cables for control circuit finely stranded with core end processing wire length or the digital inputs at DC maximum at at the digital inputs at DC maximum at the digital inputs at D	<b>.</b>	1
installation/ mounting/ dimensions  mounting position fastening method height 393 mm width 40th 210 mm 40th 40th 210 mm 40th 40th 210 mm 40th 40th 210 mm 40th 40th 40th 40th 40th 40th 40th 40th		ο Λ
Installation/ mounting/ dimensions         Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)           fastening method height         393 mm           width         210 mm           dopth         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         10.2 kg           Connections/ Terminals           type of electrical connection         6 for control circuit         busbar connection           • for control circuit         spring-loaded terminals           with conductor cross-section = 0.5 mm² maximum         45 mm           • with conductor cross-section = 1.5 mm² maximum         50 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 stranded         2x (0.25 1.5 mm²)           type of connectable conductor cross-sections         2x (0.25 1.5 mm²)           • for control circuit solid         2x (0.25 1.5 mm²)           • for con		
mounting position fastening method height screw fixing height 210 mm depth 2203 mm required spacing with side-by-side mounting		
fastening method height 393 mm width 210 mm depth 203 mm required spacing with side-by-side mounting  • forwards • backwards • o upwards • downwards • at the side • at the side • for ontrol circuit solid • for control circuit sye of connectable conductor cross-sections • for control circuit sye of connectable conductor cross-sections • for control circuit sye of connectable conductor cross-sections • for control circuit solid • for control circuit finely stranded with core end processing wire length • between soft starter and motor maximum • at the digital inputs at DC maximum  10 mm  10 m		Vertical (can be retated 1/ 00° and tilted forward or backward 1/ 22 5°)
height width depth 210 mm depth 203 mm required spacing with side-by-side mounting  • forwards 0 mm • backwards 0 mm • upwards 100 mm • downwards 5 mm • at the side 5 mm weight without packaging 10.2 kg  Connections/ Terminals  type of electrical connection • for main current circuit 5 for control circuit width of connection bar maximum wire length for thermistor connection = 0.5 mm² maximum with conductor cross-section = 0.5 mm² maximum with conductor cross-section = 2.5 mm² maximum but connectable conductor cross-sections • for DIN cable lug for main contacts finely stranded type of connectable conductor cross-sections • for control circuit solid 6 of control circuit finely stranded with core end processing • at AWG cables for control circuit finely stranded with core end processing • between soft starter and motor maximum on the digital inputs at DC maximum • with cligital inputs at DC maximum and the digital inputs at DC maximum • at the digital inputs at DC maximum   200 mm  100 mm   boshwara on mm  100 mm  10		·
width depth 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 consection = 0.5 mm² maximum wire length for thermistor connection • with conductor cross-section = 0.5 mm² maximum with conductor cross-section = 0.5 mm² maximum with conductor cross-section = 0.5 mm² maximum type of connectable conductor cross-sections • for DIN cable lug for main contacts finely stranded type of connectable conductor cross-sections • for control circuit solid of control circuit finely stranded with core end processing • at AWG cables for control circuit finely stranded with core end processing wire length • between soft starter and motor maximum • at the digital inputs at DC maximum  100 mm  20 mm  10 mm  1		· · · · · · · · · · · · · · · · · · ·
required spacing with side-by-side mounting  • forwards • backwards • upwards • downwards • at the side • at the side  weight without packaging  Connections/ Terminals  type of electrical connection • for main current circuit • for control circuit mitype of connectable conductor cross-section = 0.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum type of connectable conductor cross-sections • for DIN cable lug for main contacts stranded • for DIN cable lug for main contacts firely stranded type of connectable conductor cross-sections • for control circuit finely stranded with core end processing • at AWG cables for control circuit finely stranded with core end processing wire length • between soft starter and motor maximum • at the digital inputs at DC maximum • at the digital inputs at DC maximum  100 mm	•	
required spacing with side-by-side mounting  • forwards • backwards • upwards • downwards • at the side • beackwards • at the side • beackwards • at the side • at the side • for control circuit to per of control circuit solid • for control circuit tinel by stranded with core end processing • at AWG cables for control circuit finely stranded with core end processing • for ward sude starks and sold substance on the starks and sold ment and substance on the starks and substance on the starker and motor maximum • wire length • for control circuit solid • for control circuit solid • for control circuit solid • at AWG cables for control circuit finely stranded with core end processing • between soft starter and motor maximum • wire length • between soft starter and motor maximum • at the digital inputs at DC maximum  100 mm  100 m		203 mm
backwards     upwards     upwards     downwards     at the side     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 conductor cross-section = 2.5 mm² maximum     type of connectable conductor cross-sections     for DIN cable lug for main contacts stranded     for or control circuit solid     for control circuit finely stranded with core end processing     at AWG cables for control circuit finely stranded with core end processing wire length      between soft starter and motor maximum     at the digital inputs at DC maximum     at the digital inputs at DC maximum     outh conductor comaximum     at the digital inputs at DC maximum     100 mm       100 mm	required spacing with side-by-side mounting	
upwards     downwards     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     wirl lonductor 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-section = 2.5 mm² maximum     with conductor cross-sections     for DIN cable lug for main contacts stranded     for control circuit solid     for control circuit solid     for control circuit finely stranded with core end processing     at AWG cables for control circuit finely stranded with core end processing  wire length     between soft starter and motor maximum     at the digital inputs at DC maximum     10.0 mm   busbar connection     busbar connection     spring-loaded terminals     busbar connection     spring-loaded terminals     busbar connection     spring-loaded terminals     busbar connection     spring-loaded terminals     wing-loaded terminals     vibusar connection     spring-loaded terminals     vibusar connection     vibusar connectio	• forwards	10 mm
o downwards     o at the side     o mm     output weight without packaging  Connections/ Terminals  type of electrical connection     o for main current circuit     o for control circuit     width of connection bar maximum     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 for DIN cable lug for main contacts finely stranded     o for DIN cable lug for main contacts finely stranded type of connectable conductor cross-sections     o for control circuit solid     o for control circuit finely stranded with core end processing     at AWG cables for control circuit finely stranded with core end processing     at AWG cables for control circuit finely stranded with core end processing wire length     between soft starter and motor maximum     o at the digital inputs at DC maximum      1000 m      100 m	<ul><li>backwards</li></ul>	0 mm
at the side     weight without packaging     10.2 kg  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 = 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 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 finely stranded with core end processing     • at AWG cables for control circuit finely stranded with core end processing  wire length      • between soft starter and motor maximum     • at the digital inputs at DC maximum  10.2 kg  busbar connection  connection  busbar connection  busbar connection  con acid terminals  due to maximum  busbar connection  busbar connection  control circuit  busbar connection  connection  busbar connection  control circuit finely  con maximum  2x (50 240 mm²)  2x (70 240 mm²)  2x (0.25 1.5 mm²)  2x (0.25 1.5 mm²)  2x (0.25 1.5 mm²)  2x (24 16)  2x (24 16)  2x (24 16)  2x (24 16)	• upwards	100 mm
type of electrical connection  • for main current 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 = 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 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  • for control circuit solid  • at AWG cables for control circuit solid  • at AWG cables for control circuit finely stranded with core end processing  wire length  • between soft starter and motor maximum  • at the digital inputs at DC maximum  10.2 kg  busbar connection  busbar conne	<ul><li>downwards</li></ul>	75 mm
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-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  • for control circuit finely stranded with core end processing  • at AWG cables for control circuit solid  • at AWG cables for control circuit finely stranded with core end processing  wire length  • between soft starter and motor maximum  • at the digital inputs at DC maximum  1 000 m		
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  • 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  • for control circuit finely stranded with core end processing  • at AWG cables for control circuit finely stranded with core end processing  • at AWG cables for control circuit finely stranded with core end processing  wire length  • between soft starter and motor maximum  • at the digital inputs at DC maximum  busbar connection  spring-loaded terminals  45 mm  50 m  250 m  250 m  22x (50 240 mm²)  22x (70 240 mm²)  22x (70 240 mm²)  22x (0.25 1.5 mm²)  22x (0.25 1.5 mm²)  22x (0.25 1.5 mm²)  22x (24 16)  22x (24 16)  22x (24 16)		10.2 kg
<ul> <li>for main current circuit</li> <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>with conductor cross-sections = 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>for control circuit finely stranded with core end processing</li> <li>at AWG cables for control circuit solid</li> <li>at AWG cables for control circuit finely stranded with core end processing</li> <li>wire length</li> <li>between soft starter and motor maximum</li> <li>at the digital inputs at DC maximum</li> <li>both maximum</li> <li>both mm²</li> <li></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>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>for control circuit solid</li> <li>for control circuit finely stranded with core end processing</li> <li>at AWG cables for control circuit solid</li> <li>at AWG cables for control circuit finely stranded with core end processing</li> <li>wire length</li> <li>between soft starter and motor maximum</li> <li>at the digital inputs at DC maximum</li> <li>spring-loaded terminals</li> <li>45 mm</li> <li>50 m</li> <li>2x (50 240 mm²)</li> <li>2x (70 240 mm²)</li> <li>2x (70 240 mm²)</li> <li>2x (0 240 mm²)</li> <li>2x (24 16)</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  • with conductor cross-section = 2.5 mm² maximum 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 • for control circuit solid • for control circuit finely stranded with core end processing • at AWG cables for control circuit solid • at AWG cables for control circuit finely stranded with core end processing wire length • between soft starter and motor maximum • at the digital inputs at DC maximum  45 mm  50 m  50 m  2x (50 240 mm²)  2x (70 240 mm²)  2x (0.25 1.5 mm²)  2x (0.25 1.5 mm²)  2x (24 16)  2x (24 16)  800 m  1 000 m		
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  type of connectable conductor cross-sections • for control circuit solid • for control circuit solid • for control circuit finely stranded with core end processing • at AWG cables for control circuit finely stranded with core end processing  wire length • between soft starter and motor maximum • at the digital inputs at DC maximum  50 m  60 m		
<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>for control circuit solid</li> <li>for control circuit solid</li> <li>for control circuit finely stranded with core end processing</li> <li>at AWG cables for control circuit finely stranded with core end processing</li> <li>at AWG cables for control circuit finely stranded with core end processing</li> <li>wire length</li> <li>between soft starter and motor maximum</li> <li>at the digital inputs at DC maximum</li> <li>1000 m</li> </ul>		TO 111111
<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>for control circuit solid</li> <li>for control circuit finely stranded with core end processing</li> <li>at AWG cables for control circuit finely stranded with core end processing</li> <li>wire length</li> <li>between soft starter and motor maximum</li> <li>at the digital inputs at DC maximum</li> </ul>	_	50 m
<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>for control circuit finely stranded with core end processing</li> <li>at AWG cables for control circuit solid</li> <li>at AWG cables for control circuit finely stranded with core end processing</li> <li>wire length</li> <li>between soft starter and motor maximum</li> <li>at the digital inputs at DC maximum</li> <li>250 m</li> <li>2x (50 240 mm²)</li> <li>2x (70 240 mm²)</li> <li>2x (0.25 1.5 mm²)</li> <li>2x (0.25 1.5 mm²)</li> <li>2x (24 16)</li> <li>2x (24 16)</li> <li>2x (24 16)</li> </ul>		
<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>for control circuit finely stranded with core end processing</li> <li>at AWG cables for control circuit solid</li> <li>at AWG cables for control circuit finely stranded with core end processing</li> <li>wire length</li> <li>between soft starter and motor maximum</li> <li>at the digital inputs at DC maximum</li> <li>1000 m</li> </ul>		
<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>for control circuit finely stranded with core end processing</li> <li>at AWG cables for control circuit solid</li> <li>at AWG cables for control circuit finely stranded with core end processing</li> <li>wire length</li> <li>between soft starter and motor maximum</li> <li>at the digital inputs at DC maximum</li> <li>1000 m</li> </ul>		
<ul> <li>type of connectable conductor cross-sections</li> <li>for control circuit solid</li> <li>for control circuit finely stranded with core end processing</li> <li>at AWG cables for control circuit solid</li> <li>at AWG cables for control circuit finely stranded with core end processing</li> <li>wire length</li> <li>between soft starter and motor maximum</li> <li>at the digital inputs at DC maximum</li> <li>1000 m</li> </ul>		2x (50 240 mm²)
<ul> <li>for control circuit solid</li> <li>for control circuit finely stranded with core end processing</li> <li>at AWG cables for control circuit solid</li> <li>at AWG cables for control circuit finely stranded with core end processing</li> <li>wire length</li> <li>between soft starter and motor maximum</li> <li>at the digital inputs at DC maximum</li> <li>2x (0.25 1.5 mm²)</li> <li>2x (24 16)</li> <li>2x (24 16)</li> <li>2x (24 16)</li> <li>2x (24 16)</li> </ul>	<ul> <li>for DIN cable lug for main contacts finely stranded</li> </ul>	2x (70 240 mm²)
<ul> <li>for control circuit finely stranded with core end processing</li> <li>at AWG cables for control circuit solid</li> <li>at AWG cables for control circuit finely stranded with core end processing</li> <li>wire length</li> <li>between soft starter and motor maximum</li> <li>at the digital inputs at DC maximum</li> </ul> 2x (0.25 1.5 mm²) 2x (24 16) 2x (24 16) 2x (24 16) 300 m 1 000 m	type of connectable conductor cross-sections	
processing  • at AWG cables for control circuit solid  • at AWG cables for control circuit finely stranded with core end processing  wire length  • between soft starter and motor maximum  • at the digital inputs at DC maximum  2x (24 16)  2x (24 16)  2x (24 16)  2x (24 16)		
<ul> <li>at AWG cables for control circuit solid</li> <li>at AWG cables for control circuit finely stranded with core end processing</li> <li>wire length</li> <li>between soft starter and motor maximum</li> <li>at the digital inputs at DC maximum</li> </ul> 2x (24 16)  2x (24 16)  800 m  1 000 m		2x (0.25 1.5 mm²)
<ul> <li>at AWG cables for control circuit finely stranded with core end processing</li> <li>wire length</li> <li>between soft starter and motor maximum</li> <li>at the digital inputs at DC maximum</li> <li>2x (24 16)</li> <li>800 m</li> <li>1000 m</li> </ul>		27 (24 15)
core end processing  wire length  • between soft starter and motor maximum  • at the digital inputs at DC maximum  1 000 m		
<ul> <li>wire length</li> <li>between soft starter and motor maximum</li> <li>at the digital inputs at DC maximum</li> <li>1 000 m</li> </ul>		۸ (۲ <del>۹</del> ۱۵)
<ul> <li>between soft starter and motor maximum</li> <li>at the digital inputs at DC maximum</li> <li>1 000 m</li> </ul>		
	_	800 m
tightening torque	<ul> <li>at the digital inputs at DC maximum</li> </ul>	1 000 m
	tightening torque	

- for main contacts with screw-type terminals
- for auxiliary and control contacts with screw-type terminals

## tightening torque [lbf·in]

- for main contacts with screw-type terminals
- for auxiliary and control contacts with screw-type terminals

14 ... 24 N·m 0.8 ... 1.2 N·m

124 ... 210 lbf·in 7 ... 10.3 lbf·in

#### **Ambient conditions**

installation altitude at height above sea level maximum ambient temperature

- during operation
- during storage and transport

#### environmental category

- during operation according to IEC 60721
- during storage according to IEC 60721
- during transport according to IEC 60721

#### **EMC** emitted interference

2 000 m; Derating as of 1000 m, see catalog

-25 ... +60 °C; Please observe derating at temperatures of 40 °C or above

-40 ... +80 °C

3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6

1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4

2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)

acc. to IEC 60947-4-2: Class A

# Communication/ Protocol

# communication module is supported

- PROFINET standardPROFINET high-feature
- EtherNet/IP
- Modbus RTU
- Modbus TCP
- PROFIBUS

## Yes

- Yes
- Yes
- Yes Yes
- Yes

# UL/CSA ratings

### manufacturer's article number

#### of circuit breaker

- usable for Standard Faults at 460/480 V according to UL
- usable for High Faults at 460/480 V according to UL
- usable for Standard Faults at 460/480 V at inside-delta circuit according to UL
- usable for High Faults at 460/480 V at insidedelta circuit according to UL
- usable for Standard Faults at 575/600 V according to UL
- usable for High Faults at 575/600 V at insidedelta circuit according to UL
- usable for Standard Faults at 575/600 V at inside-delta circuit according to UL  $\,$

#### of the fuse

- usable for Standard Faults up to 575/600 V according to UL
- usable for High Faults up to 575/600 V according to UL
- usable for Standard Faults at inside-delta circuit up to 575/600 V according to UL
- usable for High Faults at inside-delta circuit up to 575/600 V according to UL

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

- at 200/208 V at 50 °C rated value
- at 220/230 V at 50 °C rated value
- at 460/480 V at 50 °C rated value
- at 575/600 V at 50 °C rated value
- at 200/208 V at inside-delta circuit at 50 °C rated value
- at 220/230 V at inside-delta circuit at 50 °C rated value
- at 460/480 V at inside-delta circuit at 50 °C rated value
- at 575/600 V at inside-delta circuit at 50 °C rated value

Siemens type: 3VA53, max. 400 A or 3VA54, max. 600 A; Iq = 18 kA

Siemens type: 3VA53, max. 400 A or 3VA54, max. 600 A; Iq max = 65

kA

Siemens type: 3VA54, max. 600 A; Iq = 18 kA

Siemens type: 3VA54, max. 600 A; Iq max = 65 kA

Siemens type: 3VA53, max. 400 A or 3VA54, max. 600 A; Iq = 18 kA

Siemens type: 3VA54, max. 600 A; Iq max = 65 kA

Siemens type: 3VA54, max. 600 A; Iq = 18 kA

Type: Class J / L, max. 800 A; Iq = 18 kA

Type: Class J / L, max. 800 A; Iq = 100 kA

Type: Class J / L, max. 800 A; Iq = 18 kA

Type: Class J / L, max. 800 A; Iq = 100 kA

60 hp

75 hp

150 hp

200 hp 125 hp

150 hp

300 hp

350 hp

contact rating of auxiliary contacts according to UL	R300-B300
	K300-B300
Safety related data	
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
electromagnetic compatibility	acc. to IEC 60947-4-2
ATEX	
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
Cartificates/approvals	

Certificates/ approvals

**General Product Approval** 

**EMC** 



Confirmation









For use in hazardous locations

**Declaration of** Conformity

**Test Certificates** 

Marine / Shipping









Type Test Certificates/Test Report





Marine / Shipping

other







Confirmation

## **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=3RW5544-2HA06

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5544-2HA06

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

https://support.industry.siemens.com/cs/ww/en/ps/3RW5544-2HA06

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

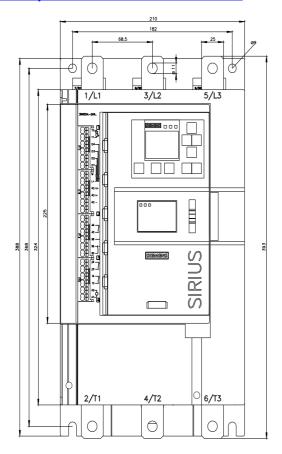
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RW5544-2HA06&lang=en

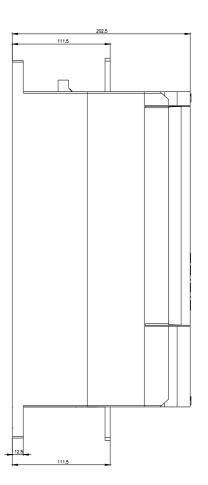
Characteristic: Tripping characteristics, I2t, Let-through current

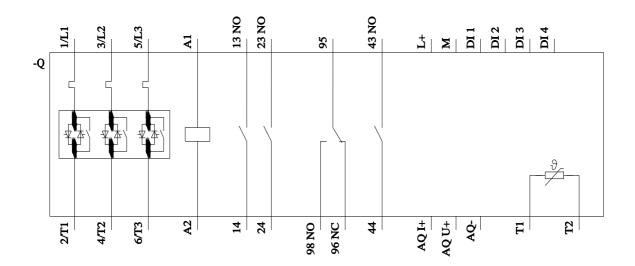
https://support.industry.siemens.com/cs/ww/en/ps/3RW5544-2HA06/char

Characteristic: Installation altitude

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5544-2HA06&objecttvpe=14&gridview=view1







last modified: 1/13/2023 🖸