SIEMENS

Data sheet 3RW5543-2HF14



SIRIUS soft starter 200-480 V 210 A, 110-250 V AC, spring-type terminals Fail-safe





product brand name	SIRIUS
product category	Hybrid switching devices
product designation	Failsafe soft starters
product type designation	3RW55
manufacturer's article number	
 of high feature HMI module usable 	3RW5980-0HF00
 of communication module PROFINET standard usable 	3RW5980-0CS00
• of communication module PROFINET high-feature usable	3RW5950-0CH00
 of communication module PROFIBUS usable 	3RW5980-0CP00
 of communication module Modbus TCP usable 	3RW5980-0CT00
 of communication module Modbus RTU usable 	3RW5980-0CR00
 of communication module Ethernet/IP 	3RW5980-0CE00
 of circuit breaker usable at 400 V 	3VA2325-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10
 of circuit breaker usable at 500 V 	3VA2325-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10
 of circuit breaker usable at 400 V at inside-delta circuit 	3VA2440-7MN32-0AA0; Type of coordination 1, lq = 65 kA, CLASS 10
 of circuit breaker usable at 500 V at inside-delta circuit 	3VA2440-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10
 of the gG fuse usable up to 690 V 	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
 of full range R fuse link for semiconductor protection usable up to 690 V 	3NE1230-2; for supply systems up to 500 V; type of coordination 2, Iq = 65 kA
 of back-up R fuse link for semiconductor protection usable up to 690 V 	3NE3333; Type of coordination 2, Iq = 65 kA
 of the redundant contactor for applications > SIL 1 according to EN 62061 	3RT1075
 of the redundant contactor for applications > SIL 1 at inside-delta circuit according to EN 62061 	<u>3RT1075</u>
 of the redundant contactor for applications > SIL 1 according to EN ISO 13849-1 	3RT1076
 of the redundant contactor for applications > SIL 1 at inside-delta circuit according to EN ISO 13849-1 	3RT1076
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
CSA approval	Yes
product component	
HMI-High Feature	Yes
is supported HMI-High Feature is supported HMI-High Feature	Yes
product feature integrated bypass contact system	Yes
number of controlled phases	3
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)	11/22/2019
SVHC substance name	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one - 71868-10-5 Dibutylbis(pentane-2,4-dionato-0,0')tin - 22673-19-4
	Lead titanium trioxide - 12060-00-3
Weight	11.5 kg
Weight product function	
product function	11.5 kg
product function • ramp-up (soft starting)	11.5 kg Yes
product functionramp-up (soft starting)ramp-down (soft stop)	11.5 kg Yes Yes
 product function ramp-up (soft starting) ramp-down (soft stop) breakaway pulse 	11.5 kg Yes Yes Yes
 product function ramp-up (soft starting) ramp-down (soft stop) breakaway pulse adjustable current limitation 	Yes Yes Yes Yes Yes
 product function ramp-up (soft starting) ramp-down (soft stop) breakaway pulse adjustable current limitation creep speed in both directions of rotation 	Yes Yes Yes Yes Yes Yes Yes
product function	Yes Yes Yes Yes Yes Yes Yes Yes
product function	Yes
product function	Yes
product function	Yes
product function	Yes
product function	Yes
product function	Yes
product function	Yes
product function	Yes
product function	Yes
product function	Yes
product function	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
firmware update	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
 programmable control inputs/outputs 	Yes
• condition monitoring	Yes
automatic parameterisation	Yes
application wizards	Yes
alternative run-down	Yes
emergency operation mode	Yes
reversing operation	Yes
soft starting at heavy starting conditions	Yes
Power Electronics	
operational current	
• at 40 °C rated value	210 A
 at 40 °C rated value minimum 	42 A
• at 50 °C rated value	186 A
• at 60 °C rated value	170 A
operational current at inside-delta circuit	
• at 40 °C rated value	364 A
• at 50 °C rated value	322 A
• at 60 °C rated value	294 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 inside-delta circuit	-15 %
relative positive tolerance of the operating voltage at inside-delta circuit	10 %
operating power for 3-phase motors	
• at 230 V at 40 °C rated value	55 kW
• at 230 V at inside-delta circuit at 40 °C rated value	110 kW
 at 400 V at 40 °C rated value 	110 kW
at 400 V at inside-delta circuit at 40 °C rated value	200 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	C2.W
at 40 °C after startup at 50 °C after startup	63 W
at 50 °C after startup at 60 °C after startup	56 W
at 60 °C after startup TOWARD LOGGE FIAT OF ACCUSE AT A CONTROL LIBERTATION 250 %	51 W
power loss [W] at AC at current limitation 350 %	2 FFO W
at 40 °C during startup	3 550 W
at 50 °C during startup	2 967 W
at 60 °C during startup	2 605 W
type of the motor protection	Electronic, tripping in the event of thermal overload of the motor
Control circuit/ Control	100
type of voltage of the control supply voltage	AC

control supply voltage at AC * at 50 Hz * at 60 Hz		
### 40 Hz **Cat 4	control supply voltage at AC	
relative positive tolerance of the control supply voltage at AC at 50 Hz. relative positive tolerance of the control supply voltage at AC at 50 Hz. relative positive tolerance of the control supply voltage at AC at 50 Hz. AC at 50 Hz. control supply voltage frequency frequency frequency control supply voltage frequency frequency frequency control supply voltage frequency frequency frequency control supply current in standby mode rated value holding current in bypase operation rated value holding current in bypase operation rated value holding current in bypase operation rated value furnal numeral peak at application of control supply voltage design of the overvoltage protection design of affect-circuit protection for control circuit ediagn of short-circuit protection for control circuit events of digital inputs • with fail-sade • parametrizable • number of digital outputs with fail-sade • parametrizable • number of digital outputs with fail-sade • parametrizable • number of digital outputs with fail-sade • parametrizable • number of digital outputs outputs with fail-sade • number of digital outputs outputs outputs • number of stigis outputs parameterizable • number of digital outputs outputs outputs • al AC-15 at 250 V rated value • al CC-13 at 250 V rated value • browards • conversion frequency • conversion	● at 50 Hz	110 250 V
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AC at 60 Hz relative positive tolerance of the control supply voltage at AC at 60 Hz control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency control supply current in standby mode rated value Increan try closing the bypass contacts maximum numbur current pack at application of control supply voltage maximum reach current pack at application of control supply voltage maximum design of the overvoltage protection for control circuit the specific fice 900 A), C0 ministure circuit breaker (icu= 500 A); is not part of very the fair-safe **Unimber of digital inputs** **Unimber of digital outputs** **Number of digital outputs with fail-safe **Number of digital outputs with fail-safe **Unimber of digital outputs with fail-safe **A C-C1 sa 250 V rated value *		10 %
AC at 69 Hz rolative negative tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage frequency control supply current in standby mode rated value bolding current in bypass operation rated value linush current by closing the bypass contacts maximum inush current peak at application of control supply voltage maximum maximum current peak at application of control supply voltage design of fer user current peak at application of control supply voltage design of the overvoltage protection design of short-circuit protection for control circuit bracker (closing to by		-15 %
relative negative tolerance of the control supply voltage frequency relative positive tolerance of the control supply voltage requency control supply current in standby mode rated value holding current in bypass operation rated value florish current peak at application of control supply voltage maximum mush current peak at application of control supply voltage design of the overvoltage protection design of short-circuit protection for control supply voltage design of the overvoltage protection design of short-circuit protection for control circuit **Transport of digital inputs** **Unit fall-safe** **Inputs Occupation** **Inputs Occupation** **Inputs Occupation** **Inputs Occupa		10 %
requency relative positive tolerance of the control supply voltage frequency Incomtrol supply current in standby mode rated value Incomtrol supply current in standby mode rated value Incomtrol supply current in bypass operation rated value Incomtrol supply current in bypass operation rated value Incomtrol supply current peak at application of control supply voltage maximum resh current peak at application of control supply voltage design of the overvoltage protection Varietor 4 A gG suse ((cu=1 kA), S A quick-acting fuse ((cu=1 kA), C I ministure circuit breaker (cu=500 A), C G ministure circuit breaker (cu=500 A), is not part of scope of supply Inputs / Cutputs Inputs / Cutputs ** ** ** ** ** ** ** ** **	control supply voltage frequency	50 60 Hz
requency control supply current in standby mode rated value holding current in bypass operation rated value lincush current by closing the bypass contacts maximum nursh current peak at application of control supply voltage maximum duration of intush current peak at application of control supply voltage maximum duration of intush current peak at application of control supply voltage design of the overvoltage protection design of short-circuit protection for control circuit that are supply from the overvoltage protection design of short-circuit protection for control circuit that are supply from the overvoltage protection design of short-circuit protection for control circuit that are supply from the overvoltage protection design of short-circuit protection for control circuit that are supply from the overvoltage protection design of short-circuit protection for control circuit that are supply from the overvoltage protection design of short-circuit protection for control circuit that are supply from the overvoltage protection design of short-circuit protection for control circuit that are supply from the overvoltage protection that are supply from the overvoltage from the supply from the overvoltage (current of supply from the su		-10 %
holding current in bypass operation rated value linnah current by closing the bypass contacts maximum nursh current pack at application of control supply voltage maximum duration of innush current peak at application of control supply voltage design of the overvoltage protection design of short-circuit protection for control circuit the protection of the overvoltage protection of control supply voltage 1.6 ms		10 %
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maximum duration of innosh current peak at application of control supply voltage design of the overvoltage protection design of the overvoltage protection design of short-circuit protection for control circuit bracker (leu= 500 A), C6 miniature circuit breaker (leu= 500 A), 15 mot part of scope of supply Inputs/ Outputs number of digital inputs with fail-safe number of digital outputs maximum 2 normally-open contacts (NO) / 1 normally-closed contact (NC) / 1 changeover contact (CO) number of analog outputs 1 contact (CO) number of analog outputs 2 normally-open contacts (NO) / 1 normally-closed contact (NC) / 1 changeover contact (CO) number of analog outputs 1 contact (CO) number of analog outputs 1 normally-closed contact (NC) / 1 changeover contact (CO) number of analog outputs 2 normally-open contacts (NO) / 1 normally-closed contact (NC) / 1 changeover contact (CO) number of analog outputs 2 normally-open contacts (NO) / 1 normally-closed contact (NC) / 1 changeover contact (CO) number of analog outputs 2 normally-open contacts (NO) / 1 normally-closed contact (NC) / 1 changeover contact (CO) number of analog outputs 1 normally-closed contact (NC) / 1 changeover contact (CO) number of analog outputs 1 normally-closed contact (NC) / 1 normally-closed contact (NC) / 1 changeover contact (CO) number of analog outputs 1 normally-closed contact (NC) / 1	inrush current by closing the bypass contacts maximum	0.87 A
voltage design of the overvoltage protection Varistor design of short-circuit protection for control circuit **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 **Imputs/ Outputs** **Unit fail-asife** **unither of digital inputs** **Number of digital outputs with fail-asife** **number of digital outputs parameterizable** **number of aligital outputs parameterizable** **number of aligital outputs not parameterizable** **at NC-15 at 250 V rated value** **at AC-15 at 250 V rated value** **at AC-15 at 250 V rated value** **at AC-15 at 250 V rated value** **A GC-15 at 250 V rated value** **A GC-15 at 250 V rated value** **A GC-16 at 250 V rated value** **A		43 A
design of short-circuit protection for control circuit St. Ag. (St. set (Icu=1 kA), 6. A quick-acting fuse (Icu=1 kA), C1 ministure circuit breaker (Icu=600 A), 6. B ministure circuit breaker (Icu=300 A), Is not part of scape of supply		1.6 ms
Inputs / Outputs	design of the overvoltage protection	Varistor
number of digital inputs with fail-safe parameterizable 1 number of digital outputs Number of digital outputs Number of digital outputs with fail-safe number of digital outputs with fail-safe number of digital outputs parameterizable number of digital outputs parameterizable number of adigital outputs not parameterizable digital output version 2 normally-open contacts (NO) / 1 normally-closed contact (NC) / 1 changeover contact (CO) number of analog outputs 1 at AC-15 at 250 V rated value at AC-15 at 250 V rated value 1 A Response times OFF-delay time with safety-related request when switched off via control inputs maximum Installation' mounting / dimensions mounting position Vertical (can be rotated */- 90* and tilted forward or backward */- 22.5*) fastening method screw fixing width 210 mm depth 203 mm required spacing with side-by-side mounting forwards backwards 0 mm 0 mm 100 mm 6 backwards 100 mm 6 backwards 100 mm 6 backwards 100 mm 6 backwards 100 mm 9 backwards 100 mm	design of short-circuit protection for control circuit	breaker (Icu= 600 A), C6 miniature circuit breaker (Icu= 300 A); Is not part of
with fail-safe parameterizable number of digital outputs Number of digital outputs with fail-safe number of digital outputs parameterizable number of digital outputs parameterizable number of digital outputs not parameterizable in unmber of digital outputs not parameterizable digital output version contact (CO) 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 A at DC-13 at 24 V rated value A at DC-13 at 24 V rated value Seponse times OFF- delay time with safety-related request when switched off via control inputs maximum Installation/ mounting/ dimensions mounting position fastening method serew fixing height 203 mm required spacing with side-by-side mounting ionwards ion	Inputs/ Outputs	
with fail-safe parameterizable number of digital outputs Number of digital outputs with fail-safe number of digital outputs parameterizable number of digital outputs parameterizable number of digital outputs not parameterizable in unmber of digital outputs not parameterizable digital output version contact (CO) 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 A at DC-13 at 24 V rated value A at DC-13 at 24 V rated value Seponse times OFF- delay time with safety-related request when switched off via control inputs maximum Installation/ mounting/ dimensions mounting position fastening method serew fixing height 203 mm required spacing with side-by-side mounting ionwards ion	number of digital inputs	4
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• number of digital outputs • Number of digital outputs with fail-safe • number of digital outputs parameterizable • number of digital outputs parameterizable • number of digital outputs not parameterizable • number of digital outputs not parameterizable • number of digital outputs not parameterizable • all output version		
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switching capacity current of the relay outputs • at AC-15 at 250 V rated value • at DC-13 at 24 V rated value OFF-delay time with safety-related request when switched off via control inputs maximum Installation/ mounting/ dimensions mounting position fastening method beight vidth 210 mm depth required spacing with side-by-side mounting • forwards • upwards • uthe side vidth side odownwards • at the side weight without packaging Connections/ Terminals type of electrical connection • for control circuit • for control circuit • for control open and tilted forward or backward +/- 22.5°) and tilted forward or backward +/- 22.5°) 100 ms 3 A 100 ms 100 ms 100 ms 3 A 100 ms 100 ms 100 mm 10	digital output version	
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Response times 100 ms 10	 at AC-15 at 250 V rated value 	3 A
OFF-delay time with safety-related request when switched off via control inputs maximum 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 210 mm depth 203 mm required spacing with side-by-side mounting • forwards • backwards • upwards • upwards • downwards • at the side weight without packaging connections/ Terminals type of electrical connection • for main current circuit • for control circuit width of connection bar maximum 100 ms 100 ms 100 mm	 at DC-13 at 24 V rated value 	1 A
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fastening method screw fixing height 393 mm width 210 mm depth 203 mm required spacing with side-by-side mounting • forwards • backwards • upwards • downwards • downwards • at the side weight without packaging Connections/ Terminals type of electrical connection • for main current circuit • for control circuit • for connection bar maximum width of connection bar maximum	Installation/ mounting/ dimensions	
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 • for main current circuit • for control circuit width of connection bar maximum 939 mm 10 mm 10 mm 10 mm 75 mm 10.2 kg Connections/ Terminals type of electrical connection • for control circuit spring-loaded terminals width of connection bar maximum 45 mm	mounting position	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 • forwards • backwards • upwards • downwards • at the side weight without packaging Connections/ Terminals type of electrical connection • for main current circuit • for control circuit width of connection bar maximum 939 mm 10 mm 10 mm 10 mm 75 mm 10.2 kg Connections/ Terminals type of electrical connection • for control circuit spring-loaded terminals width of connection bar maximum 45 mm	fastening method	screw fixing
width 210 mm depth 203 mm required spacing with side-by-side mounting 10 mm • forwards 0 mm • backwards 0 mm • upwards 100 mm • downwards 75 mm • at the side 5 mm weight without packaging 10.2 kg Connections/ Terminals type of electrical connection busbar connection • for main current circuit busbar connection • for control circuit spring-loaded terminals width of connection bar maximum 45 mm	height	393 mm
depth 203 mm required spacing with side-by-side mounting 10 mm • forwards 0 mm • backwards 100 mm • upwards 100 mm • downwards 75 mm • at the side 5 mm weight without packaging 10.2 kg Connections/ Terminals type of electrical connection busbar connection • for main current circuit busbar connection • for control circuit spring-loaded terminals width of connection bar maximum 45 mm		210 mm
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 width of connection bar maximum 45 mm	depth	203 mm
 forwards backwards upwards downwards at the side 5 mm weight without packaging 10.2 kg Connections/ Terminals type of electrical connection for main current circuit for control circuit spring-loaded terminals width of connection bar maximum 45 mm 	·	
backwards upwards upwards downwards at the side 5 mm weight without packaging Connections/ Terminals type of electrical connection for main current circuit for control circuit for connection bar maximum width of connection bar maximum 0 mm 100 mm 75 mm 10.2 kg Connections/ Terminals type of electrical connection spring-loaded terminals width of connection bar maximum 45 mm		10 mm
 upwards downwards at the side 5 mm weight without packaging 10.2 kg Connections/ Terminals type of electrical connection for main current circuit for control circuit spring-loaded terminals width of connection bar maximum 45 mm 		
 downwards at the side 5 mm weight without packaging 10.2 kg Connections/ Terminals type of electrical connection for main current circuit for control circuit spring-loaded terminals width of connection bar maximum 45 mm 		
 ◆ at the side b mm weight without packaging Connections/ Terminals type of electrical connection ◆ for main current circuit b usbar connection • for control circuit spring-loaded terminals width of connection bar maximum 45 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 45 mm		
type of electrical connection • for main current circuit busbar connection • for control circuit spring-loaded terminals width of connection bar maximum 45 mm		
type of electrical connection • for main current circuit busbar connection • for control circuit spring-loaded terminals width of connection bar maximum 45 mm		10.2 kg
 for main current circuit for control circuit width of connection bar maximum busbar connection spring-loaded terminals 45 mm 		
● for control circuit spring-loaded terminals width of connection bar maximum 45 mm	•	
width of connection bar maximum 45 mm	for main current circuit	
	for control circuit	spring-loaded terminals
wire length for thermistor connection	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
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)
 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)
 for AWG cables for control circuit finely stranded with core end processing 	2x (24 16)
wire length	
 between soft starter and motor maximum 	800 m
at the digital inputs at DC maximum	1 000 m
tightening torque	
 for main contacts with screw-type terminals 	14 24 N·m
 for auxiliary and control contacts with screw-type 	0.8 1.2 N·m
terminals	
tightening torque [lbf·in]	
 for main contacts with screw-type terminals 	124 210 lbf·in
for auxiliary and control contacts with screw-type terminals.	7 10.3 lbf·in
terminals Ambient conditions	
Ambient conditions	0.000 Daration of 4000
installation altitude at height above sea level maximum	2 000 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
during storage and transport	-40 +80 °C
environmental category	
 during operation according to IEC 60721 	3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6
during storage according to IEC 60721	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)
during transport according to IEC 60721	, , , , , , , , , , , , , , , , , , , ,
during transport according to IEC 60721 Environmental footprint	
	833 kg
Environmental footprint	
Environmental footprint Global Warming Potential [CO2 eq] total	833 kg
Environmental footprint Global Warming Potential [CO2 eq] total Global Warming Potential [CO2 eq] during manufacturing global warming potential [CO2 eq] during sales Global Warming Potential [CO2 eq] during operation	833 kg 95.3 kg
Environmental footprint Global Warming Potential [CO2 eq] total Global Warming Potential [CO2 eq] during manufacturing global warming potential [CO2 eq] during sales	833 kg 95.3 kg 2.8 kg
Environmental footprint Global Warming Potential [CO2 eq] total Global Warming Potential [CO2 eq] during manufacturing global warming potential [CO2 eq] during sales Global Warming Potential [CO2 eq] during operation	833 kg 95.3 kg 2.8 kg 756 kg
Environmental footprint Global Warming Potential [CO2 eq] total Global Warming Potential [CO2 eq] during manufacturing global warming potential [CO2 eq] during sales Global Warming Potential [CO2 eq] during operation Global Warming Potential [CO2 eq] after end of life	833 kg 95.3 kg 2.8 kg 756 kg -21 kg
Environmental footprint Global Warming Potential [CO2 eq] total Global Warming Potential [CO2 eq] during manufacturing global warming potential [CO2 eq] during sales Global Warming Potential [CO2 eq] during operation Global Warming Potential [CO2 eq] after end of life Siemens Eco Profile (SEP)	833 kg 95.3 kg 2.8 kg 756 kg -21 kg
Environmental footprint Global Warming Potential [CO2 eq] total Global Warming Potential [CO2 eq] during manufacturing global warming potential [CO2 eq] during sales Global Warming Potential [CO2 eq] during operation Global Warming Potential [CO2 eq] after end of life Siemens Eco Profile (SEP) Electromagnetic compatibility	833 kg 95.3 kg 2.8 kg 756 kg -21 kg Siemens EcoTech
Environmental footprint Global Warming Potential [CO2 eq] total Global Warming Potential [CO2 eq] during manufacturing global warming potential [CO2 eq] during sales Global Warming Potential [CO2 eq] during operation Global Warming Potential [CO2 eq] after end of life Siemens Eco Profile (SEP) Electromagnetic compatibility EMC emitted interference	833 kg 95.3 kg 2.8 kg 756 kg -21 kg Siemens EcoTech
Environmental footprint Global Warming Potential [CO2 eq] total Global Warming Potential [CO2 eq] during manufacturing global warming potential [CO2 eq] during sales Global Warming Potential [CO2 eq] during operation Global Warming Potential [CO2 eq] after end of life Siemens Eco Profile (SEP) Electromagnetic compatibility EMC emitted interference Communication/ Protocol	833 kg 95.3 kg 2.8 kg 756 kg -21 kg Siemens EcoTech
Environmental footprint Global Warming Potential [CO2 eq] total Global Warming Potential [CO2 eq] during manufacturing global warming potential [CO2 eq] during sales Global Warming Potential [CO2 eq] during operation Global Warming Potential [CO2 eq] after end of life Siemens Eco Profile (SEP) Electromagnetic compatibility EMC emitted interference Communication/ Protocol communication module is supported • PROFINET standard	833 kg 95.3 kg 2.8 kg 756 kg -21 kg Siemens EcoTech acc. to IEC 60947-4-2: Class A
Environmental footprint Global Warming Potential [CO2 eq] total Global Warming Potential [CO2 eq] during manufacturing global warming potential [CO2 eq] during sales Global Warming Potential [CO2 eq] during operation Global Warming Potential [CO2 eq] after end of life Siemens Eco Profile (SEP) Electromagnetic compatibility EMC emitted interference Communication/ Protocol communication module is supported • PROFINET standard • PROFINET high-feature	833 kg 95.3 kg 2.8 kg 756 kg -21 kg Siemens EcoTech acc. to IEC 60947-4-2: Class A Yes Yes
Environmental footprint Global Warming Potential [CO2 eq] total Global Warming Potential [CO2 eq] during manufacturing global warming potential [CO2 eq] during sales Global Warming Potential [CO2 eq] during operation Global Warming Potential [CO2 eq] after end of life Siemens Eco Profile (SEP) Electromagnetic compatibility EMC emitted interference Communication/ Protocol communication module is supported PROFINET standard PROFINET high-feature EtherNet/IP	833 kg 95.3 kg 2.8 kg 756 kg -21 kg Siemens EcoTech acc. to IEC 60947-4-2: Class A Yes Yes
Environmental footprint Global Warming Potential [CO2 eq] total Global Warming Potential [CO2 eq] during manufacturing global warming potential [CO2 eq] during sales Global Warming Potential [CO2 eq] during operation Global Warming Potential [CO2 eq] after end of life Siemens Eco Profile (SEP) Electromagnetic compatibility EMC emitted interference Communication/ Protocol communication module is supported PROFINET standard PROFINET high-feature EtherNet/IP Modbus RTU	833 kg 95.3 kg 2.8 kg 756 kg -21 kg Siemens EcoTech acc. to IEC 60947-4-2: Class A Yes Yes Yes Yes
Environmental footprint Global Warming Potential [CO2 eq] total Global Warming Potential [CO2 eq] during manufacturing global warming potential [CO2 eq] during sales Global Warming Potential [CO2 eq] during operation Global Warming Potential [CO2 eq] after end of life Siemens Eco Profile (SEP) Electromagnetic compatibility EMC emitted interference Communication/ Protocol communication module is supported • PROFINET standard • PROFINET high-feature • EtherNet/IP • Modbus RTU • Modbus TCP	833 kg 95.3 kg 2.8 kg 756 kg -21 kg Siemens EcoTech acc. to IEC 60947-4-2: Class A Yes Yes Yes Yes Yes
Environmental footprint Global Warming Potential [CO2 eq] total Global Warming Potential [CO2 eq] during manufacturing global warming potential [CO2 eq] during sales Global Warming Potential [CO2 eq] during operation Global Warming Potential [CO2 eq] after end of life Siemens Eco Profile (SEP) Electromagnetic compatibility EMC emitted interference Communication/ Protocol communication module is supported • PROFINET standard • PROFINET high-feature • EtherNet/IP • Modbus RTU • Modbus TCP • PROFIBUS	833 kg 95.3 kg 2.8 kg 756 kg -21 kg Siemens EcoTech acc. to IEC 60947-4-2: Class A Yes Yes Yes Yes
Environmental footprint Global Warming Potential [CO2 eq] total Global Warming Potential [CO2 eq] during manufacturing global warming potential [CO2 eq] during sales Global Warming Potential [CO2 eq] during operation Global Warming Potential [CO2 eq] after end of life Siemens Eco Profile (SEP) Electromagnetic compatibility EMC emitted interference Communication/ Protocol communication module is supported PROFINET standard PROFINET high-feature EtherNet/IP Modbus RTU Modbus TCP PROFIBUS UL/CSA ratings	833 kg 95.3 kg 2.8 kg 756 kg -21 kg Siemens EcoTech acc. to IEC 60947-4-2: Class A Yes Yes Yes Yes Yes
Environmental footprint Global Warming Potential [CO2 eq] total Global Warming Potential [CO2 eq] during manufacturing global warming potential [CO2 eq] during sales Global Warming Potential [CO2 eq] during operation Global Warming Potential [CO2 eq] after end of life Siemens Eco Profile (SEP) Electromagnetic compatibility EMC emitted interference Communication/ Protocol communication module is supported PROFINET standard PROFINET high-feature EtherNet/IP Modbus RTU Modbus TCP PROFIBUS UL/CSA ratings manufacturer's article number	833 kg 95.3 kg 2.8 kg 756 kg -21 kg Siemens EcoTech acc. to IEC 60947-4-2: Class A Yes Yes Yes Yes Yes
Environmental footprint Global Warming Potential [CO2 eq] total Global Warming Potential [CO2 eq] during manufacturing global warming potential [CO2 eq] during sales Global Warming Potential [CO2 eq] during operation Global Warming Potential [CO2 eq] after end of life Siemens Eco Profile (SEP) Electromagnetic compatibility EMC emitted interference Communication/ Protocol communication module is supported • PROFINET standard • PROFINET high-feature • EtherNet/IP • Modbus RTU • Modbus TCP • PROFIBUS UL/CSA ratings manufacturer's article number • of circuit breaker usable for Standard Faults	833 kg 95.3 kg 2.8 kg 756 kg -21 kg Siemens EcoTech acc. to IEC 60947-4-2: Class A Yes Yes Yes Yes Yes Yes Yes Yes
Environmental footprint Global Warming Potential [CO2 eq] total Global Warming Potential [CO2 eq] during manufacturing global warming potential [CO2 eq] during sales Global Warming Potential [CO2 eq] during operation Global Warming Potential [CO2 eq] after end of life Siemens Eco Profile (SEP) Electromagnetic compatibility EMC emitted interference Communication/ Protocol communication module is supported • PROFINET standard • PROFINET high-feature • EtherNet/IP • Modbus RTU • Modbus TCP • PROFIBUS UL/CSA ratings manufacturer's article number • of circuit breaker usable for Standard Faults — at 460/480 V according to UL	833 kg 95.3 kg 2.8 kg 756 kg -21 kg Siemens EcoTech acc. to IEC 60947-4-2: Class A Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Environmental footprint Global Warming Potential [CO2 eq] total Global Warming Potential [CO2 eq] during manufacturing global warming potential [CO2 eq] during sales Global Warming Potential [CO2 eq] during operation Global Warming Potential [CO2 eq] after end of life Siemens Eco Profile (SEP) Electromagnetic compatibility EMC emitted interference Communication/ Protocol communication module is supported • PROFINET standard • PROFINET high-feature • EtherNet/IP • Modbus RTU • Modbus RTU • Modbus TCP • PROFIBUS UL/CSA ratings manufacturer's article number • of circuit breaker usable for Standard Faults — at 460/480 V according to UL — 60/480 V according to UL	833 kg 95.3 kg 2.8 kg 756 kg -21 kg Siemens EcoTech acc. to IEC 60947-4-2: Class A Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Environmental footprint Global Warming Potential [CO2 eq] total Global Warming Potential [CO2 eq] during manufacturing global warming potential [CO2 eq] during sales Global Warming Potential [CO2 eq] during operation Global Warming Potential [CO2 eq] after end of life Siemens Eco Profile (SEP) Electromagnetic compatibility EMC emitted interference Communication/ Protocol communication module is supported • PROFINET standard • PROFINET high-feature • EtherNet/IP • Modbus RTU • Modbus TCP • PROFIBUS UL/CSA ratings manufacturer's article number • of circuit breaker usable for Standard Faults — at 460/480 V according to UL — at 460/480 V at inside-delta circuit according to UL	833 kg 95.3 kg 2.8 kg 756 kg -21 kg Siemens EcoTech acc. to IEC 60947-4-2: Class A Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Environmental footprint Global Warming Potential [CO2 eq] total Global Warming Potential [CO2 eq] during manufacturing global warming potential [CO2 eq] during sales Global Warming Potential [CO2 eq] during operation Global Warming Potential [CO2 eq] after end of life Siemens Eco Profile (SEP) Electromagnetic compatibility EMC emitted interference Communication/ Protocol communication module is supported • PROFINET standard • PROFINET high-feature • EtherNet/IP • Modbus RTU • Modbus RTU • Modbus TCP • PROFIBUS UL/CSA ratings manufacturer's article number • of circuit breaker usable for Standard Faults — at 460/480 V according to UL — 60/480 V at inside-delta circuit according to UL — 60/480 V at inside-delta circuit according to UL	833 kg 95.3 kg 2.8 kg 756 kg -21 kg Siemens EcoTech acc. to IEC 60947-4-2: Class A Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Environmental footprint Global Warming Potential [CO2 eq] total Global Warming Potential [CO2 eq] during manufacturing global warming potential [CO2 eq] during sales Global Warming Potential [CO2 eq] during operation Global Warming Potential [CO2 eq] after end of life Siemens Eco Profile (SEP) Electromagnetic compatibility EMC emitted interference Communication/ Protocol communication module is supported • PROFINET standard • PROFINET high-feature • EtherNet/IP • Modbus RTU • Modbus TCP • PROFIBUS UL/CSA ratings manufacturer's article number • of circuit breaker usable for Standard Faults — at 460/480 V according to UL — 60/480 V at inside-delta circuit according to UL — 60/480 V at inside-delta circuit according to UL — 60/480 V at inside-delta circuit according to UL — at 575/600 V according to UL	833 kg 95.3 kg 2.8 kg 756 kg -21 kg Siemens EcoTech acc. to IEC 60947-4-2: Class A Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Environmental footprint Global Warming Potential [CO2 eq] total Global Warming Potential [CO2 eq] during manufacturing global warming potential [CO2 eq] during sales Global Warming Potential [CO2 eq] during operation Global Warming Potential [CO2 eq] after end of life Siemens Eco Profile (SEP) Electromagnetic compatibility EMC emitted interference Communication/ Protocol communication module is supported • PROFINET standard • PROFINET high-feature • EtherNet/IP • Modbus RTU • Modbus RTU • Modbus TCP • PROFIBUS UL/CSA ratings manufacturer's article number • of circuit breaker usable for Standard Faults — at 460/480 V according to UL — 60/480 V at inside-delta circuit according to UL — 60/480 V at inside-delta circuit according to UL	833 kg 95.3 kg 2.8 kg 756 kg -21 kg Siemens EcoTech acc. to IEC 60947-4-2: Class A Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye
Environmental footprint Global Warming Potential [CO2 eq] total Global Warming Potential [CO2 eq] during manufacturing global warming potential [CO2 eq] during sales Global Warming Potential [CO2 eq] during operation Global Warming Potential [CO2 eq] after end of life Siemens Eco Profile (SEP) Electromagnetic compatibility EMC emitted interference Communication/ Protocol communication module is supported • PROFINET standard • PROFINET high-feature • EtherNet/IP • Modbus RTU • Modbus TCP • PROFIBUS UL/CSA ratings manufacturer's article number • of circuit breaker usable for Standard Faults — at 460/480 V according to UL — 60/480 V at inside-delta circuit according to UL — 60/480 V at inside-delta circuit according to UL — at 575/600 V according to UL	833 kg 95.3 kg 2.8 kg 756 kg -21 kg Siemens EcoTech acc. to IEC 60947-4-2: Class A Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye

 usable for Standard Faults up to 575/600 V according to UL 	Type: Class J / L, max. 700 A; Iq = 10 kA
— usable for High Faults up to 575/600 V according to UL	Type: Class J / L, max. 700 A; Iq = 100 kA
usable for Standard Faults at inside-delta circuit up to 575/600 V according to UL	Type: Class J / L, max. 700 A; lq = 10 kA
usable for High Faults at inside-delta circuit up to 575/600 V according to UL	Type: Class J / L, max. 700 A; Iq = 100 kA
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 	60 hp
 at 460/480 V at 50 °C rated value 	150 hp
 at 200/208 V at inside-delta circuit at 50 °C rated value 	100 hp
 at 220/230 V at inside-delta circuit at 50 °C rated value 	125 hp
at 460/480 V at inside-delta circuit at 50 °C rated value	250 hp
contact rating of auxiliary contacts according to UL	R300-B300
Safety related data	1000 2000
product function suitable for safety function	Yes
suitability for use	
safety-related switching on	No
	Yes
safety-related switching OFF	
safe state	Open load circuit
function test interval maximum	1 a
diagnostics test interval by internal test function maximum	1 000 s
stop category according to IEC 60204-1	0
B10d value	147 000
average diagnostic coverage level (DCavg)	90 %
MTTFd	39 a
IEC 62061	
Safety Integrity Level (SIL) according to IEC 62061	SIL 1
PFHD with high demand rate according to IEC 62061	1E-6 1/h
ISO 13849	
performance level (PL) according to ISO 13849-1	PL c
category according to ISO 13849-1	2
IEC 61508	
Safety Integrity Level (SIL)	
according to IEC 61508	SIL 1
safety device type according to IEC 61508-2	Type B
PFHD with high demand rate according to IEC 61508	1E-6 1/h
PFDavg with low demand rate according to IEC 61508	0.09
Safe failure fraction (SFF)	60 %
·	0
hardware fault tolerance according to IEC 61508 T1 value of service life according to IEC 61508	
	20 a
Electrical Safety	IDOO: IDOO with cover
protection class IP on the front according to IEC 60529	IP00; IP20 with cover
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front with cover
ATEX Safety Integrity Level (SIL) according to IEC 61508 relating	SIL1
to ATEX PFHD with high demand rate according to IEC 61508	5E-7 1/h
relating to ATEX	0.008
PFDavg with low demand rate according to IEC 61508 relating to ATEX	
hardware fault tolerance according to IEC 61508 relating to ATEX	0
T1 value for proof test interval or service life according to IEC 61508 relating to ATEX	3 a
certificate of suitability	
• ATEX	Yes
• IECEx	Yes
 according to ATEX directive 2014/34/EU 	BVS 18 ATEX F 003 X
type of protection according to ATEX directive 2014/34/EU	II (2)G [Ex eb Gb] [Ex db Gb] [Ex pxb Gb], II (2)D [Ex tb Db] [Ex pxb Db], I (M2) [Ex db Mb]

Approvals Certificates

General Product Approval







Confirmation





EMV

For use in hazardous locations

Functional Saftey

Test Certificates



<u>KC</u>





Type Examination Certificate

Type Test Certificates/Test Report

Marine / Shipping









Confirmation

other



Environment

Environment



Environmental Con-

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=3RW5543-2HF14

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5543-2HF14

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

https://support.industry.siemens.com/cs/ww/en/ps/3RW5543-2HF14

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5543-2HF14&lang=en

Characteristic: Tripping characteristics, I²t, Let-through current

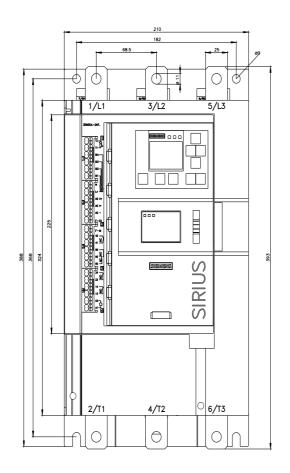
https://support.industry.siemens.com/cs/ww/en/ps/3RW5543-2HF14/char

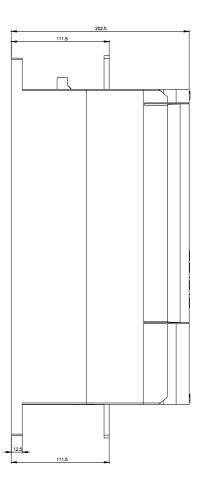
Characteristic: Installation altitude

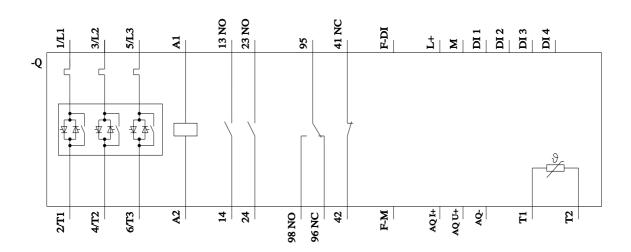
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5543-2HF14&objecttype=14&gridview=view1

Simulation Tool for Soft Starters (STS)

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







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