# SIEMENS

### Data sheet

### 3RW5545-2HA04



SIRIUS soft starter 200-480 V 315 A, 24 V AC/DC spring-type terminals

product brand name	SIRIUS
product category	Hybrid switching devices
product designation	Soft starter
product type designation	3RW55
manufacturer's article number	
<ul> <li>of high feature HMI module usable</li> </ul>	<u>3RW5980-0HF00</u>
<ul> <li>of communication module PROFINET standard usable</li> </ul>	<u>3RW5980-0CS00</u>
<ul> <li>of communication module PROFINET high-feature usable</li> </ul>	<u>3RW5950-0CH00</u>
<ul> <li>of communication module PROFIBUS usable</li> </ul>	<u>3RW5980-0CP00</u>
<ul> <li>of communication module Modbus TCP usable</li> </ul>	<u>3RW5980-0CT00</u>
<ul> <li>of communication module Modbus RTU usable</li> </ul>	<u>3RW5980-0CR00</u>
<ul> <li>of communication module Ethernet/IP</li> </ul>	<u>3RW5980-0CE00</u>
<ul> <li>of circuit breaker usable at 400 V</li> </ul>	3VA2440-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10
<ul> <li>of circuit breaker usable at 500 V</li> </ul>	3VA2440-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10
<ul> <li>of circuit breaker usable at 400 V at inside-delta circuit</li> </ul>	3VA2580-6HN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10
<ul> <li>of circuit breaker usable at 500 V at inside-delta circuit</li> </ul>	3VA2580-6HN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10
<ul> <li>of the gG fuse usable up to 690 V</li> </ul>	2x3NA3365-6; Type of coordination 1, Iq = 65 kA
<ul> <li>of the gG fuse usable at inside-delta circuit up to 500 V</li> </ul>	2x3NA3365-6; Type of coordination 1, Iq = 65 kA
<ul> <li>of full range R fuse link for semiconductor protection usable up to 690 V</li> </ul>	<u>3NE1334-2; Type of coordination 2, Iq = 65 kA</u>
of back-up R fuse link for semiconductor protection	3NE3336: Type of coordination 2. In = 65 kA

 $\bullet$  of back-up R fuse link for semiconductor protection usable up to 690 V

3NE3336; Type of coordination 2, Iq = 65 kA

#### General technical data

seneral 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

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

<ul> <li>automatic parameterisation</li> </ul>	Yes
<ul> <li>application wizards</li> </ul>	Yes
<ul> <li>alternative run-down</li> </ul>	Yes
<ul> <li>emergency operation mode</li> </ul>	Yes
<ul> <li>reversing operation</li> </ul>	Yes
<ul> <li>soft starting at heavy starting conditions</li> </ul>	Yes
Power Electronics	
operational current	
<ul> <li>at 40 °C rated value</li> </ul>	315 A
<ul> <li>at 40 °C rated value minimum</li> </ul>	63 A
• at 50 °C rated value	279 A
• at 60 °C rated value	255 A
operational current at inside-delta circuit	
• at 40 °C rated value	546 A
• at 50 °C rated value	483 A
• at 60 °C rated value	442 A
operating voltage	
<ul> <li>rated value</li> </ul>	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	
<ul> <li>at 230 V at 40 °C rated value</li> </ul>	90 kW
• at 230 V at inside-delta circuit at 40 °C rated value	160 kW
• at 400 V at 40 °C rated value	160 kW
• at 400 V at inside-delta circuit at 40 °C rated value	315 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	95 W
• at 50 °C after startup	84 W
at 60 °C after startup	77 W
power loss [W] at AC at current limitation 350 %	
• at 40 °C during startup	4 966 W
• at 50 °C during startup	4 153 W
at 60 °C during startup	3 646 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 %
control supply voltage	

relative negative tolerance of the control supply voltage at DC       -20 %         relative positive tolerance of the control supply voltage at DC       20 %         control supply current in standby mode rated value       440 mA         holding current in bypass operation rated value       720 mA         inrush current by closing the bypass contacts maximum       6.7 A         inrush current peak at application of control supply voltage maximum       7.5 A         duration of inrush current peak at application of control supply voltage       7.5 A         design of the overvoltage protection       Varistor         design of short-circuit protection for control circuit       4 A gG fuse (Icu=1 kA), 6 A quick-acting fuse (Icu=1 kA), C1 miniature circuit	at DC rated value	24 V
bc         Interversion         20 %           control supply current in standby mode rated value         40 mA           holding current in bypass operation rated value         72 mA           much current joesk it application of control supply values         73 A           much current peak at application of control supply values         75 A           design of the overvoltage protection         Variator           design of the overvoltage protection         Variator           design of the overvoltage protection         Variator           mumber of digital loguts         4           • parameterizable         4           • number of digital loguts         4           • number of digital loguts         3           • number of digital loguts         4           • number of digital loguts         4           • number of digital loguts         3           • number of digital loguts         4           • number of digital loguts         3           • number of digital loguts         3           • number of digital loguts         1           • number of digital loguts         3           • number of digital loguts         3           • number of digital loguts         1           • number of digital loguts         3 <td></td> <td></td>		
pc         Add mA           indefinition in bypass oparation rated value         40 mA           invalue current in bypass contacts maximum         67.A           invalue current joek at application of control supply voltage         75.A           invalue current joek at application of control supply voltage         20 ms           design of the overvoltage protection         Variator           design of the overvoltage protection of control circuit         4.A (Circuit (A), CB miniture circuit breaker (Iou= 300 A), Is not part to scope of supply           inputs of digital outputs         4           • parameterizable         4           • number of digital outputs         4           • number of digital outputs         4           • number of digital output protection         3 normally-open contacts (NO) / 1 changeover contact (CO)           mumber of adjatal output on parameterizable         1           • andber of adjata output on parameterizable         1           • andber of adjata output on parameterizable         1           • ad Ch Ta S 20 V rated value         3 A           • ad Ch Ta S 20 V rated value         3 A           • ad Ch Ta S 20 V rated value         3 A           • ad Ch Ta S 20 V rated value         3 A           • ad Ch Ta S 20 V rated value         3 A           • ad Ch Ta S	DC	
holding corrent in bypass operation rated value         720 mA           innush current peak at application of control supply voltage         7.5 A           design of he overvoltage protection         Varistor           design of he overvoltage protection         Varistor           design of he overvoltage protection         Varistor           number of digital inputs         4           exampter of digital inputs         4           exampter of digital outputs sequences         3           exampter of digital outputs not parameterizable         3           exitch(s capace) current of the relay outputs         3           exitch(s capace) current of the relay outputs         1           exitch(s capace) current of the relay outputs         3           exitch(s capace)         3		20 %
Invash current pek at spelication of control supply volage maximum         0.7 Å           Invash current pek at spelication of control supply volagie         7.5 Å           design of the overvolage protection         Variator           design of the overvolage protection for control circuit breaker (loce 100 Å). C6 miniature circui breaker (loce 300 Å), is not part to breaker (loce 100 Å). C6 miniature circui breaker (loce 300 Å), is not part to breaker (loce 100 Å). C6 miniature circui breaker (loce 300 Å), is not part to breaker (loce 300 Å). C6 miniature circui breaker (loce 300 Å), is not part of digital outputs parameterizable           • number of digital outputs parameterizable         4           • number of digital outputs parameterizable         1           • auther of digital outputs parameterizable         1           • auther of digital outputs parameterizable         1           • auther of digital outputs at parameterizable         3           • auther of digital outputs at parameterizable         1           • auther of digital outputs at parameterizable         3           • auther of digital outputs at parameterizable         1           • auther of digital outputs at parameterizable         1           • auther of digital outputs	control supply current in standby mode rated value	
maximum         7.5 Å           maximum         Construction         7.5 Å           duration of insub-current peak at application of control supply         20 ms           design of the overvoltage protection         Variator           design of the overvoltage protection for control circuit         4.0 S Auclestating frame (incur 1A). C1 miniture circuit breaker (incur 300 A), is not part of the overvoltage of supply           number of digital outputs         4           • number of digital outputs parameterizable         4           • number of digital outputs parameterizable         3           • auther of digital outputs parameterizable         3           • auther of digital outputs parameterizable         1           • auther of digital outputs parameterizable         3           • auther of digital outputs parameterizable         1           • auther of analog outputs         1           • auther of analog outputs         1           • auther of analog outputs         1           • auther of all 24 V rated value         3 A           • auther of all 24 V rated value         3 A           • auther of all 24 V rated value         3 A           • auther of all 24 V rated value         3 A           • auther of all 24 V rated value         3 A           • auther side         3 rm	holding current in bypass operation rated value	720 mA
maximum         Mathematical and a set of the	inrush current by closing the bypass contacts maximum	6.7 A
voltage         Variator           design of the overoitage protection         Variator           design of abort-circuit protection for control circuit         Variator           number of digital inputs         4           • parameterizable         4           • number of digital outputs parameterizable         4           • number of digital outputs parameterizable         3           • number of digital outputs parameterizable         1           • number of digital outputs parameterizable         1           • number of digital outputs parameterizable         1           • number of digital outputs not parameterizable         1           • number of digital outputs value         3 A           • at AC-15 at 250 V rated value         3 A           • at AC-15 at 250 V rated value         3 A           • at AC-15 at 250 V rated value         3 A           • at AC-15 at 250 V rated value         3 A           • at AC-15 at 26 V rated value         3 A           • at BC-16 at 250 V rated value         3 A           • at BC-16 at 250 V rated value         3 A           • at BC-16 at 250 V rated value         3 A           • at BC-16 at 250 V rated value         3 A           • at BC-16 at 250 V rated value         3 A           • at BC		7.5 A
design of short-circuit protection for control circuit         4. Ag G kase (ker-1 AA) 6.4 quick-acting fuse (kur-1 AA) 6.4 quick-acting fuse (kur-1 AA) 6.4 quick-acting fuse (kur-3 00 A); is not part of scope of supply.           Impute/ Outputs         4           • parameterizable         4           • number of digital outputs parameterizable         4           • number of digital outputs parameterizable         3           • number of digital outputs no parameterizable         3           • number of digital outputs is not parameterizable         1           extiching capacity current of the relay outputs         3 A           • at AC-15 at 250 V trade value         3 A           • at AC-15 at 250 V trade value         1 A           Instational method         23 am           required spacing with side-by-side mounting         9 am           • outputs         3 a A           • at BC-15 at 250 V trade value         1 A           Instational method         24 V rated value           10 mm         203 nm           required spacing with side-by-side mounting         10 mm           • backwards         0 nm           • upwards         100 mm           • downwards         75 mm           • didownwards         50 m           • digital outputs or connection		20 ms
breaker (cue = 600 A), C6 miniature circuit breaker (cue = 300 A); Is not part of some of supply           number of digital inputs         4           • parameterizable         4           • number of digital outputs parameterizable         3           • number of digital outputs parameterizable         1           • digital outputs version         3 normally-open contacts (NO) / 1 changeover contact (CO)           number of analog outputs         1           • extiching capacity current of the relay outputs         3           • at AC-15 at 250 V rated value         3 A           • at C-15 at 250 V rated value         3 A           • at DC-13 at 24 V rated value         1A           Installation Moniting dimensions         20 mm           required spacing with side by-side mounting         ecreation           • forwards         0 mm           • oparametic         10 mm           • packwards         0 mm           • oparametic         5 mm </td <td>design of the overvoltage protection</td> <td>Varistor</td>	design of the overvoltage protection	Varistor
number of digital inputs         4           • parameterizable         4           • number of digital outputs parameterizable         3           • number of digital outputs not parameterizable         3           • number of digital outputs not parameterizable         1           • number of digital outputs not parameterizable         1           • number of analog outputs         1           • at AC-15 at 250 V rated value         3 A           • at AC-15 at 250 V rated value         1 A           Installation/ mounting/dimensions         Vertical (can be rotated +/- 90° and titled forward or backward +/- 22.5°)           fastening method         screw fixing           height         203 nm           vidth         210 nm           depth         203 nm           • owards         10 mm           • backwards         10 mm           • owards         10 mm           • downwards         5 mm           • of oreating         50 m           • of oreating         50 m           • of oreating         250 m           • of oreating         50 m           • of oreating         250 nm           • of or monetion         50 m           • of orunot circuit         sping-	design of short-circuit protection for control circuit	4 A gG fuse (Icu=1 kA), 6 A quick-acting fuse (Icu=1 kA), C1 miniature circuit breaker (Icu= 600 A), C6 miniature circuit breaker (Icu= 300 A); Is not part of scope of supply
• parameterizable         4           • number of digital outputs         4           • number of digital outputs parameterizable         3           • number of digital outputs         3 normally-open contacts (NO) / 1 changeover contact (CO)           number of analog outputs         3 normally-open contacts (NO) / 1 changeover contact (CO)           switching capacity current of the relay outputs         3 A           • at AC-15 at 28 V rated value         3 A           • at AC-15 at 24 V rated value         3 A           • at AC-15 at 24 V rated value         3 A           • at AC-15 at 24 V rated value         3 A           • at AC-15 at 24 V rated value         3 A           • at DC-13 at 24 V rated value         3 A           • at DC-13 at 24 V rated value         3 A           • at DC-13 at 24 V rated value         3 A           • at DC-13 at 24 V rated value         3 A           • at DC-13 at 24 V rated value         3 A           • at DC-13 at 24 V rated value         3 A           • at DC-13 at 24 V rated value         3 A           • at DC-13 at 24 V rated value         20 nm           • at AC         20 nm           • at AC         20 nm           • at AC         10 nm           • at AC         10 nm     <	Inputs/ Outputs	
	number of digital inputs	4
• number of digital outputs parameterizable3• number of digital outputs not parameterizable1figital output version3 normally-open contacts (NO) / 1 changeover contact (CO)number of analog outputs1switching capacity current of the relay outputs3 A• at AC-15 at 250 V rated value3 A• at AC-15 at 250 V rated value3 Amoutting positionVertical (can be rotated +/- 90" and tilted forward or backward +/- 22.5")fastening methodscrew fixingheight393 mnwidth210 mmdepth203 mmrequired spacing with side-by-side mounting0 mm• backwards10 mm• backwards0 mm• downwards5 mm• downwards5 mm• downwards5 mm• downwards5 mm• downwards50 m• of romain current circuitbubbar connection• for onain current circuit50 m• with conductor cross-section = 0.5 mm* maximum150 m• with conductor cross-section = 1.5 mm* maximum150 m• with conductor cross-section = 1.5 mm* maximum150 m• for DIN cable lug for main contact sined with core end processing2x (02.51.5 mm*)• for ONC clocuit finely stranded with core end processing2x (02.51.5 mm*)• for AWG cables for control circuit sid2x (02.51.5 mm*)• for AWG cables for control circuit sid2x (02.51.5 mm*)• for AWG cables for control circuit sid2x (02.51.5 mm*)• for Control circuit	parameterizable	4
• number of digital outputs parameterizable         3           • number of digital outputs not parameterizable         1           figital output version         3 normally-open contacts (NO) / 1 changeover contact (CO)           number of analog outputs         1           • at AC-15 at 250 / rated value         3 A           • at AC-15 at 250 / rated value         3 A           • at AC-15 at 250 / rated value         3 A           • at AC-15 at 250 / rated value         3 A           • at AC-15 at 250 / rated value         3 A           • at AC-15 at 250 / rated value         3 A           • at AC-15 at 250 / rated value         3 A           • at AC-16 at 24 / rated value         1 A           Instantion/ mounting dimensions         version           mounting position         Vertical (can be rotated +/- 90' and lited forward or backward +/- 22.5')           fastening method         393 mn           weight         203 mm           recurs spacing with side-by-side mounting         0 mm           • forwards         0 mm           • upwards         10 mm           • upwards         10 mm           • downwards         5 mm           • at the side         5 mm           • for main current cincuit         bubac connection		
• number of digital outputs not parameterizable         1           digital output version         3 normally-open contacts (NO) / 1 changeover contact (CO)           number of analog outputs         1           • at AC-15 at 250 V rated value         3 A           • at BC-15 at 250 V rated value         1 A           • at BC-15 at 250 V rated value         3 A           • at BC-15 at 250 V rated value         1 A           Installation/ mounting/ dimensions         Vertical (can be rotated +/ s0' and tilted forward or backward +/ 22.5')           fistering method         screw fixing           height         393 mm           width         210 mm           depth         203 mm           • forwards         0 mm           • backwards         0 mm           • downwards         5 mm           • downwards         5 mm           • downwards         5 mm           • of main current circuit         busbar connection           • for ontol circuit         spin polectical connection           • for ontol circuit         spin polectical connection           • with conductor cross-section = 1.5 mm <sup>*</sup> maximum         150 m           • with conductor cross-section = 2.5 mm <sup>*</sup> maximum         250 m               with conductor cross-section = 2.5 mm	<ul> <li>number of digital outputs</li> </ul>	4
digital output version         3 normally-open contacts (NO) / 1 changeover contact (CO)           number of analog outputs         1           switching capacity current of the relay outputs         3 A           - at DC-15 at 250 V rated value         3 A           - at DC-15 at 250 V rated value         3 A           - at DC-15 at 24 V rated value         1 A           Insaliation/ mounting/ dimensions         Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)           fastening method         server fixing           height         393 mm           width         210 nm           depth         230 mm           required spacing with side-by-side mounting         10 mm           - forwards         10 mm           - backwards         0 mm           - upwards         10 0 mm           - downwards         10 2 kg           - for main current circuit         busbar connection           - for main current circuit         spring-loaded terminals           width of connection reas-section = 1.5 mm <sup>2</sup> maximum         150 m           - with conductor cross-section = 2.5 mm <sup>3</sup> maximum         150 m	<ul> <li>number of digital outputs parameterizable</li> </ul>	3
number of analog outputs         1           switching capacity current of the relay outputs         3 A           at AC-15 at 250 V rated value         1 A           instaliation/ mounting/ dimensions         1 A           instaliation/ mounting/ dimensions         screw fixing           fastening method         screw fixing           height         393 mm           vidth         203 mm           depth         203 mm           required spacing with side-by-side mounting         -           forwards         0 mm           obackwards         5 mm           obackwards         50 m           obackw	<ul> <li>number of digital outputs not parameterizable</li> </ul>	1
switching capacity current of the relay outputs     at AC-15 at 250 V rated value     3 A       • at AC-15 at 250 V rated value     1 A       Installation/mounting/ dimensions     Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)       fastening method     screw fixing       height     393 mm       width     210 mm       depth     203 mm       required spacing with side-by-side mounting     •       • 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     50 m       view diff of connection     spring-foaded terminals       • for main current circuit     spring-foaded terminals       with conductor cross-section = 0.5 mm <sup>2</sup> maximum     50 m       • with conductor cross-sections     50 m       • for DIN cable lug for main contacts finely stranded     2x (50 240 mm <sup>3</sup> )       • for control circuit finely stranded with core end processing     2x (0.25 1.5 mm <sup>3</sup> )       • for AWG cables for control circuit finely stranded with core end processing     2x (0.25 1.5 mm <sup>3</sup> )       • for Control circuit finely stranded with core end processing     2x (0.25 1.5 mm <sup>3</sup> )       • for control circuit finely stranded wi	digital output version	3 normally-open contacts (NO) / 1 changeover contact (CO)
• at AC-15 at 240 V rated value     3 A       • at DC-13 at 24 V rated value     1 A       Installation/ mounting/ dimensions     • vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)       fastening method     screw fixing       height     393 mm       width     210 mm       depth     203 mm       required spacing with side-by-side mounting     0 mm       • forwards     0 mm       • backwards     0 mm       • downwards     75 mm       • downwards     75 mm       • at the side     5 mm       weight without packaging     10.2 kg       Connections/ Torminals     5 mm       width of connection har maximum     45 mm       with conductor cross-section = 0.5 mm³ maximum     50 m       • with conductor cross-section = 1.5 mm³ maximum     50 m       • with conductor cross-section = 2.5 mm³ maximum     50 m       • with conductor cross-sections     2x (50 240 mm³)       • for onsin current circuit     2x (0 240 mm²)       • with conductor cross-sections     2x (0 240 mm²)       • for DIN cable lug for main contacts finely stranded     2x (0 240 m²)       • for DIN cable lug for main contacts finely stranded     2x (0 240 m²)       • for Control circuit finely stranded with core end processing     2x (0 15 mm²)   <	number of analog outputs	
• at DC-13 at 24 V rated value         1 A           Instaliator/ mounting/ dimensions         Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)           fastening method         screw fixing           height         393 mm           width         210 mm           depth         203 mm           required spacing with side-by-side mounting         -           • forwards         0 mm           • backwards         0 mm           • upwards         75 mm           • at the side         5	switching capacity current of the relay outputs	
Installation/ mounting/ dimensions         Vertical (can be rotated +/- 90° and tilled 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         10 mm           • backwards         0 mm           • upwards         100 mm           • downwards         75 mm           • at the side         5 mm           • at the side         5 mm           • torwards         100 mm           • downwards         75 mm           • at the side         5 mm           • at the side         5 mm           • for ranin current circuit         spring-loaded terminals           width of connection         45 mm           • with conductor cross-section = 0.5 mm <sup>2</sup> maximum         250 m           • with conductor cross-section = 2.5 mm <sup>2</sup> maximum         250 m           • tor DNI cable lug for main contacts franded         2x (50 240 mm <sup>2</sup> )           • for control circuit finely stranded with core end processing         2x (02.5 1.5 mm <sup>3</sup> )           • for Control circuit finely stranded with core end processing         2x (02 1.5 mm <sup>3</sup> ) <td>at AC-15 at 250 V rated value</td> <td>3 A</td>	at AC-15 at 250 V rated value	3 A
mounting position         Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)           fastening method         screw fixing           height         393 mm           width         210 mm           depth         203 mm           required spacing with side-by-side mounting         0 mm           • backwards         0 mm           • backwards         0 mm           • upwards         100 mm           • downwards         75 mm           • at the side         5 mm           weight without packaging         10.2 kg           Connections/ Terminals         50 m           type of electrical connection         50 m           • for control circuit         spring-loaded terminals           width of connection bar maximum         45 mm           • with conductor cross-section = 0.5 mm <sup>a</sup> maximum         50 m           • with conductor cross-section = 1.5 mm <sup>a</sup> maximum         50 m           • with conductor cross-section = 2.5 mm <sup>a</sup> maximum         250 m           • for DIN cable lug for main contacts finely stranded         2x (70 240 mm <sup>a</sup> )           • for control circuit finely stranded with core end processing         2x (0.25 1.5 mm <sup>a</sup> )           • for control circuit finely stranded with core end processing         2x (24 16) <td>• at DC-13 at 24 V rated value</td> <td>1 A</td>	• at DC-13 at 24 V rated value	1 A
mounting position         Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)           fastening method         screw fixing           height         393 mm           width         210 mm           depth         203 mm           required spacing with side-by-side mounting         0 mm           • backwards         0 mm           • backwards         0 mm           • upwards         100 mm           • downwards         75 mm           • at the side         5 mm           weight without packaging         10.2 kg           Connections/ Terminals         50 m           type of electrical connection         50 m           • for control circuit         spring-loaded terminals           width of connection bar maximum         45 mm           • with conductor cross-section = 0.5 mm <sup>a</sup> maximum         50 m           • with conductor cross-section = 1.5 mm <sup>a</sup> maximum         50 m           • with conductor cross-section = 2.5 mm <sup>a</sup> maximum         250 m           • for DIN cable lug for main contacts finely stranded         2x (70 240 mm <sup>a</sup> )           • for control circuit finely stranded with core end processing         2x (0.25 1.5 mm <sup>a</sup> )           • for control circuit finely stranded with core end processing         2x (24 16) <td>Installation/ mounting/ dimensions</td> <td></td>	Installation/ mounting/ dimensions	
fastening method     screw fixing       height     393 mm       width     210 mm       depth     203 mm       required spacing with side-by-side mounting     10 mm       • forwards     10 mm       • backwards     0 mm       • upwards     0 mm       • upwards     100 mm       • downwards     5 mm       • at the side     5 mm       • at the side     5 mm       • of connections/ Terminals     5 mm       Variet of connection     5 mm       • for control circuit     spring-loaded terminals       width of connection ar maximum     45 mm       • with conductor cross-section = 0.5 mm <sup>2</sup> maximum     50 m       • with conductor cross-section = 1.5 mm <sup>2</sup> maximum     50 m       • with conductor cross-section = 2.5 mm <sup>2</sup> maximum     50 m       • with conductor cross-section = 2.5 mm <sup>2</sup> maximum     50 m       • with conductor cross-section = 2.5 mm <sup>2</sup> maximum     50 m       • for DIN cable lug for main contacts stranded     2x (50 240 mm <sup>2</sup> )       • for control circuit fiely stranded with core end processing     2x (0.25 1.5 mm <sup>2</sup> )       • for control circuit fiely stranded with core end processing     2x (0.25 1.5 mm <sup>2</sup> )       • for AVVC cables for control circuit solid     2x (24 16)       • for AVVC cables for control circuit sol		Vertical (can be rotated $\pm$ /- 90° and tilted forward or backward $\pm$ /- 22 5°)
height         393 mm           width         210 mm           depth         203 mm           required spacing with side-by-side mounting         -           • forwards         10 mm           • backwards         0 mm           • upwards         100 mm           • downwards         0 mm           • downwards         100 mm           • downwards         5 mm           • downwards         5 mm           • downwards         5 mm           • dom main current circuit         busbar connection           • for main current circuit         spring-loaded terminals           with of connection bar maximum         45 mm           • with conductor cross-section = 0.5 mm <sup>2</sup> maximum         50 m           • with conductor cross-section = 0.5 mm <sup>2</sup> maximum         50 m           • with conductor cross-section = 0.5 mm <sup>2</sup> maximum         50 m           • with conductor cross-section = 2.5 mm <sup>2</sup> maximum         50 m           • with conductor cross-sections         -           • for DIN cable lug for main contacts finely stranded         2x (70 240 mm <sup>2</sup> )           • for control circuit finely stranded with core end processing         2x (0.25 1.5 mm <sup>3</sup> )           • for control circuit finely stranded with core end processing <td< td=""><td></td><td></td></td<>		
width     210 mm       depth     203 mm       required spacing with side-by-side mounting     0 mm       • forwards     10 mm       • backwards     0 mm       • upwards     100 mm       • downwards     75 mm       • at the side     5 mm       weight without packaging     10.2 kg       Connections/ Terminals     50 mm       vite length for thermistor connection     45 mm       • for control circuit     spring-loaded terminals       with conductor cross-section = 1.5 mm <sup>2</sup> maximum     50 m       • with conductor cross-section = 2.5 mm <sup>2</sup> maximum     50 m       • for DIN cable lug for main contacts stranded     2x (50 240 mm <sup>2</sup> )       • for control circuit solid     2x (025 1.5 mm <sup>2</sup> )       • for control circuit solid     2x (025 1.5 mm <sup>2</sup> )       • for control circuit solid     2x (025 1.5 mm <sup>2</sup> )       • for control circuit finely stranded with core end processing     2x (025 1.5 mm <sup>2</sup> )       • for control circuit finely stranded with core end processing     2x (24 16)       • for AWG cables for control circuit finely stranded with core end processing     2x (24 16)       • for WG cables for control circuit finely stranded with core end processing     2x (24 16)		
depth     203 mm       required spacing with side-by-side mounting        • forwards     10 mm       • backwards     0 mm       • upwards     100 mm       • upwards     100 mm       • downwards     75 mm       • at the side     5 mm       weight without packaging     10.2 kg       Connection/I forminals     5 mm       type of electrical connection     • for main current circuit       • for ontrol circuit     spring-loaded terminals       width of connection bar maximum     45 mm       wire length for thermistor connection     50 m       • with conductor cross-section = 0.5 mm <sup>2</sup> maximum     50 m       • with conductor cross-section = 1.5 mm <sup>2</sup> maximum     50 m       • with conductor cross-section = 2.5 mm <sup>2</sup> maximum     50 m       • with conductor cross-section = 2.5 mm <sup>2</sup> maximum     50 m       • for DIN cable lug for main contacts finely stranded     2x (70 240 mm <sup>2</sup> )       • for DIN cable lug for main contacts finely stranded     2x (0.25 1.5 mm <sup>2</sup> )       • for control circuit finely stranded with core end processing     5x (0.25 1.5 mm <sup>2</sup> )       • for control circuit finely stranded with core end processing     2x (0.25 1.5 mm <sup>2</sup> )       • for control circuit finely stranded with core end processing     2x (0.25 1.5 mm <sup>2</sup> )       • for control circuit finely stranded wi		
required spacing with side-by-side mounting         • forwards       10 mm         • backwards       0 mm         • upwards       100 mm         • downwards       75 mm         • at the side       5 mm         weight without packaging       10.2 kg         Connections/ Terminals       50 m         weight without packaging       10.2 kg         Connections/ Terminals       50 m         type of electrical connection       • for control circuit         • for control circuit       spring-loaded terminals         width of connection bar maximum       45 mm         • with conductor cross-section = 0.5 mm <sup>2</sup> maximum       50 m         • with conductor cross-section = 2.5 mm <sup>2</sup> maximum       250 m         • with conductor cross-sections       2 x (50 240 mm <sup>2</sup> )         • for DIN cable lug for main contacts tranded       2 x (70 240 mm <sup>2</sup> )         • for control circuit solid       2 x (0.25 1.5 mm <sup>2</sup> )         • for control circuit finely stranded with core end processing       2 x (0.25 1.5 mm <sup>2</sup> )         • for control circuit finely stranded with core end processing       2 x (24 16)         • for control circuit finely stranded with core end processing       2 x (24 16)         • for AWG cables for control circuit finely stranded with core end processi		
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• at the side       5 mm         weight without packaging       10.2 kg         Connections/Terminals       type of electrical connection         • for main current circuit       busbar connection         • for control circuit       spring-loaded terminals         width of connection bar maximum       45 mm         wite length for thermistor connection       50 m         • with conductor cross-section = 0.5 mm <sup>2</sup> maximum       50 m         • with conductor cross-section = 1.5 mm <sup>2</sup> maximum       250 m         type of connectable conductor cross-sections       2x (50 240 mm <sup>2</sup> )         • for DIN cable lug for main contacts finely stranded       2x (70 240 mm <sup>2</sup> )         • for control circuit finely stranded with core end processing       2x (0.25 1.5 mm <sup>2</sup> )         • for AWG cables for control circuit finely stranded with core end processing       2x (24 16)         • for AWG cables for control circuit finely stranded with core end processing       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	•	
weight without packaging       10.2 kg         Connections/Terminals         type of electrical connection         • for main current circuit       busbar connection         • for control circuit       spring-loaded terminals         width of connection bar maximum       45 mm         wire length for thermistor connection       50 m         • with conductor cross-section = 0.5 mm² maximum       50 m         • with conductor cross-section = 1.5 mm² maximum       250 m         type of connectable conductor cross-sections       2x (50 240 mm²)         • for DIN cable lug for main contacts stranded       2x (70 240 mm²)         • for control circuit finely stranded with core end processing       2x (0.25 1.5 mm²)         • for AWG cables for control circuit finely stranded with core end processing       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		
Connections/Terminals         type of electrical connection         • for main current circuit       busbar connection         • for control circuit       spring-loaded terminals         width of connection bar maximum       45 mm         wire length for thermistor connection       •         • with conductor cross-section = 0.5 mm² maximum       50 m         • with conductor cross-section = 1.5 mm² maximum       150 m         • with conductor cross-section = 2.5 mm² maximum       250 m         type of connectable conductor cross-sections       2x (50 240 mm²)         • for DIN cable lug for main contacts finely stranded       2x (70 240 mm²)         • for control circuit finely stranded with core end processing       2x (0.25 1.5 mm²)         • for control circuit finely stranded with core end processing       2x (0.25 1.5 mm²)         • for AWG cables for control circuit solid       2x (24 16)         • for AWG cables for control circuit finely stranded with core end processing       2x (24 16)         • for AWG cables for control circuit finely stranded with core end processing       2x (24 16)         • for AWG cables for control circuit finely stranded with core end processing       2x (24 16)         • between soft starter and motor maximum       800 m		
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type of connectable conductor cross-sections       2x (0.25 1.5 mm²)         • 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	<ul> <li>for DIN cable lug for main contacts stranded</li> </ul>	2x (50 240 mm²)
• for control circuit solid       2x (0.25 1.5 mm²)         • 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)         • for AWG cables for control circuit finely stranded with core end processing       2x (24 16)         • wire length       • between soft starter and motor maximum	<ul> <li>for DIN cable lug for main contacts finely stranded</li> </ul>	2x (70 240 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       800 m	type of connectable conductor cross-sections	
<ul> <li>for AWG cables for control circuit solid</li> <li>for 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>800 m</li> </ul>	<ul> <li>for control circuit solid</li> </ul>	2x (0.25 1.5 mm²)
for AWG cables for control circuit finely stranded with core end processing     2x (24 16)     2x (24 16)     800 m	<ul> <li>for control circuit finely stranded with core end processing</li> </ul>	2x (0.25 1.5 mm²)
core end processing     initial content of the second of the	<ul> <li>for AWG cables for control circuit solid</li> </ul>	2x (24 16)
between soft starter and motor maximum     800 m	· · · · · ·	2x (24 16)
	wire length	
at the digital inputs at DC maximum     1 000 m	<ul> <li>between soft starter and motor maximum</li> </ul>	800 m
	<ul> <li>at the digital inputs at DC maximum</li> </ul>	1 000 m
tightening torque	•	

· · · · · · · · · ·	
<ul> <li>for main contacts with screw-type terminals</li> </ul>	14 24 N·m
<ul> <li>for auxiliary and control contacts with screw-type terminals</li> </ul>	0.8 1.2 N·m
tightening torque [lbf·in]	
	124 210 lbf·in
<ul> <li>for main contacts with screw-type terminals</li> <li>for auxiliary and control contacts with screw type</li> </ul>	7 10.3 lbf-in
<ul> <li>for auxiliary and control contacts with screw-type terminals</li> </ul>	
Ambient conditions	
installation altitude at height above sea level maximum	5 000 m; Derating as of 1000 m, see catalog
ambient temperature	
<ul> <li>during operation</li> </ul>	-25 +60 °C; Please observe derating at temperatures of 40 °C or above
<ul> <li>during storage and transport</li> </ul>	-40 +80 °C
environmental category	
<ul> <li>during operation according to IEC 60721</li> </ul>	3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2
	(sand must not get into the devices), 3M6
<ul> <li>during storage according to IEC 60721</li> </ul>	1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4
<ul> <li>during transport according to IEC 60721</li> </ul>	2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)
EMC emitted interference	acc. to IEC 60947-4-2: Class A
Communication/ Protocol	
<ul> <li>communication module is supported</li> <li>PROFINET standard</li> </ul>	Yes
PROFINET standard     PROFINET high-feature	Yes
EtherNet/IP	Yes
Modbus RTU	Yes
Modbus TCP	Yes
PROFIBUS	Yes
UL/CSA ratings	
manufacturer's article number	
of circuit breaker	
usable for Standard Faults at 460/480 V according	Siemens type: 3VA53, max. 400 A or 3VA54, max. 600 A; Iq = 18 kA
to UL	Siemens type. 37733, max. 400 A of 37734, max. 000 A, iq = 10 kA
<ul> <li>— usable for High Faults at 460/480 V according to UL</li> </ul>	Siemens type: 3VA53, max. 400 A or 3VA54, max. 600 A; Iq max = 65 kA
- usable for Standard Faults at 460/480 V at inside-	Siemens type: 3VA54, max. 600 A; Iq = 18 kA
delta circuit according to UL	
<ul> <li>— usable for High Faults at 460/480 V at inside-delta circuit according to UL</li> </ul>	Siemens type: 3VA54, max. 600 A; lq max = 65 kA
— usable for Standard Faults at 575/600 V according	Siemens type: 3VA53, max. 400 A or 3VA54, max. 600 A; lq = 18 kA
to UL	
— usable for High Faults at 575/600 V at inside-delta	Siemens type: 3VA54, max. 600 A; lq max = 65 kA
circuit according to UL	Sigmans type: $21/454$ may 600 4: $1a = 18 k$
<ul> <li>— usable for Standard Faults at 575/600 V at inside- delta circuit according to UL</li> </ul>	Siemens type: 3VA54, max. 600 A; lq = 18 kA
• of the fuse	
— usable for Standard Faults up to 575/600 V	Type: Class J / L, max. 1000 A; lq = 18 kA
according to UL	
<ul> <li>usable for High Faults up to 575/600 V according to</li> </ul>	Type: Class J / L, max. 1000 A; lq = 100 kA
UL	Type: Class $1/1$ may 1000 A: $h = 10 kA$
<ul> <li>— usable for Standard Faults at inside-delta circuit up to 575/600 V according to UL</li> </ul>	Type: Class J / L, max. 1000 A; lq = 18 kA
usable for High Faults at inside-delta circuit up to	Type: Class J / L, max. 1000 A; lq = 100 kA
575/600 V according to UL	
operating power [hp] for 3-phase motors	
• at 200/208 V at 50 °C rated value	75 hp
• at 220/230 V at 50 °C rated value	100 hp
• at 460/480 V at 50 °C rated value	200 hp
• at 200/208 V at inside-delta circuit at 50 °C rated value	150 hp
• at 220/230 V at inside-delta circuit at 50 °C rated value	200 hp
• at 460/480 V at inside-delta circuit at 50 °C rated value	400 hp
contact rating of auxiliary contacts according to UL	R300-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</li> </ul>	directive 2014/34/EU		BVS 18 A	TEX F 003 X		
type of protection accor	ding to ATEX direct	ive 2014/34/EU	II (2)G [Ex [Ex db Mb		[Ex pxb Gb], II (2)D [Ex tb	Db] [Ex pxb Db], I (M2
hardware fault tolerance ATEX	according to IEC 6	1508 relating to	0			
PFDavg with low deman relating to ATEX	d rate according to	IEC 61508	0.008			
PFHD with high demand to ATEX	rate according to E	N 62061 relating	5E-7 1/h			
Safety Integrity Level (S to ATEX	IL) according to IEC	61508 relating	SIL1			
T1 value for proof test in IEC 61508 relating to AT		e according to	3 a			
ertificates/ approvals						
General Product Approv	/al					EMC
SP:		<u>Confirmatio</u>	n	(Ս	EHC	Ø
Eor use in bazardous lo	cations	Declaration of	Con	UL UL	<b>ERIC</b>	RCM
For use in hazardous lo	ccc		Con	UL UL	<b>EFFFC</b> Marine / Shipping	RCM
For use in hazardous lo	cations ECEx	Declaration of	Con- Té	est Certificates	Efficiency Marine / Shipping	
For use in hazardous lo	IECEx	Declaration of formity	Con- Té	<u> Type Test Certific-</u>	Efficiency Marine / Shipping	RCM
KEx ATEX	IECEx	Declaration of formity CEE EG-Konf.	Con- Te	<u> Type Test Certific-</u>	Effic Marine / Shipping Official Shipping	RCM RCM READ READ VERITAS

Siemens has decided to exit the Russian market (see here). https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business

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

Information on the packaging

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

Information- and Downloadcenter (Catalogs, Brochures,...)

https://www.siemens.com/ic10 Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RW5545-2HA04

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5545-2HA04

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

https://support.industry.siemens.com/cs/ww/en/ps/3RW5545-2HA04

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

http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RW5545-2HA04&lang=en

Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

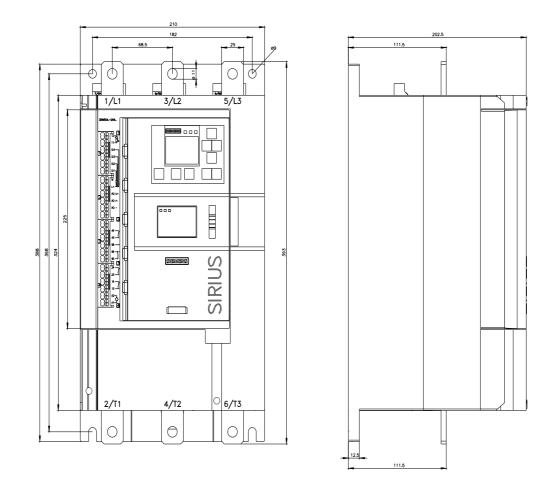
https://support.industry.siemens.com/cs/ww/en/ps/3RW5545-2HA04/char

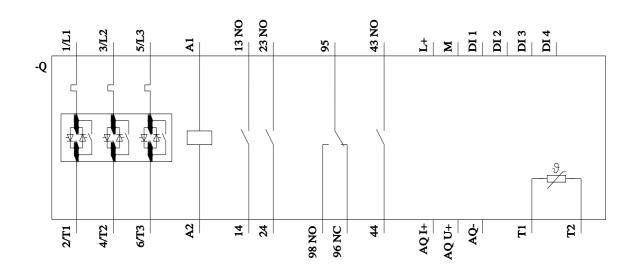
Characteristic: Installation altitude

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5545-2HA04&objecttype=14&gridview=view1

Simulation Tool for Soft Starters (STS)

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





5/1/2023 🖸

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