## SIEMENS

## Data sheet

## 3RW5524-1HA04



SIRIUS soft starter 200-480 V 47 A, 24 V AC/DC Screw 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>	3RV2032-4JA10; Type of coordination 1, lq = 65 kA, CLASS 10
<ul> <li>of circuit breaker usable at 500 V</li> </ul>	3RV2032-4JA10: Type of coordination 1. lq = 10 kA. CLASS 10
<ul> <li>of circuit breaker usable at 400 V at inside-delta circuit</li> </ul>	3RV2032-4RA10: Type of coordination 1, Iq = 65 kA, CLASS 10
<ul> <li>of circuit breaker usable at 500 V at inside-delta circuit</li> </ul>	3RV2032-4RA10; Type of coordination 1, Iq = 10 kA, CLASS 10
<ul> <li>of the gG fuse usable up to 690 V</li> </ul>	3NA3824-6; Type of coordination 1, Iq = 65 kA
<ul> <li>of the gG fuse usable at inside-delta circuit up to 500 V</li> </ul>	<u>3NA3824-6; Type of coordination 1, Iq = 65 kA</u>
<ul> <li>of full range R fuse link for semiconductor protection usable up to 690 V</li> </ul>	<u>3NE1021-2; Type of coordination 2, Iq = 65 kA</u>
<ul> <li>of back-up R fuse link for semiconductor protection usable up to 690 V</li> </ul>	<u>3NE8024-1: Type of coordination 2. Iq = 65 kA</u>
eneral technical data	
starting voltage [%]	20 100 %
stopping voltage [%]	50 50 %
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

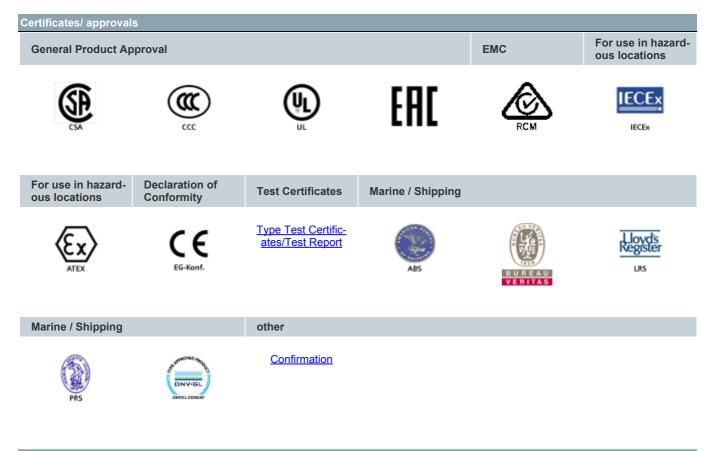
accuracy class acc. to IEC 61557-12	5 %
certificate of suitability	
CE marking	Yes
<ul> <li>UL approval</li> </ul>	Yes
CSA approval	Yes
product component	
HMI-High Feature	Yes
<ul> <li>is supported HMI-High Feature</li> </ul>	Yes
product feature integrated bypass contact system	Yes
number of controlled 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 %
recovery time after overload trip adjustable	60 1 800 s
buffering time in the event of power failure	
<ul> <li>for main current circuit</li> </ul>	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 safe isolation	
<ul> <li>between main and auxiliary circuit</li> </ul>	480 V; does not apply for thermistor connection
utilization category acc. to IEC 60947-4-2	AC 53a
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
reference code acc. to IEC 81346-2	Q
reference code acc. to IEC 81346-2 Substance Prohibitance (Date)	
reference code acc. to IEC 81346-2 Substance Prohibitance (Date) product function	Q 15.02.2018 00:00:00
reference code acc. to IEC 81346-2         Substance Prohibitance (Date)         product function         • ramp-up (soft starting)	Q
reference code acc. to IEC 81346-2         Substance Prohibitance (Date)         product function         • ramp-up (soft starting)         • ramp-down (soft stop)	Q 15.02.2018 00:00:00
reference code acc. to IEC 81346-2         Substance Prohibitance (Date)         product function         • ramp-up (soft starting)         • ramp-down (soft stop)         • breakaway pulse	Q 15.02.2018 00:00:00 Yes Yes
reference code acc. to IEC 81346-2         Substance Prohibitance (Date)         product function         • ramp-up (soft starting)         • ramp-down (soft stop)         • breakaway pulse         • adjustable current limitation	Q 15.02.2018 00:00:00 Yes Yes Yes
reference code acc. to IEC 81346-2         Substance Prohibitance (Date)         product function         • ramp-up (soft starting)         • ramp-down (soft stop)         • breakaway pulse         • adjustable current limitation         • creep speed in both directions of rotation	Q 15.02.2018 00:00:00 Yes Yes Yes Yes Yes
reference code acc. to IEC 81346-2         Substance Prohibitance (Date)         product function         • ramp-up (soft starting)         • ramp-down (soft stop)         • breakaway pulse         • adjustable current limitation         • creep speed in both directions of rotation         • pump ramp down	Q 15.02.2018 00:00:00 Yes Yes Yes Yes Yes Yes
reference code acc. to IEC 81346-2         Substance Prohibitance (Date)         product function         • ramp-up (soft starting)         • ramp-down (soft stop)         • breakaway pulse         • adjustable current limitation         • creep speed in both directions of rotation         • pump ramp down         • DC braking	Q 15.02.2018 00:00:00 Yes Yes Yes Yes Yes Yes Yes
reference code acc. to IEC 81346-2         Substance Prohibitance (Date)         product function         • ramp-up (soft starting)         • ramp-down (soft stop)         • breakaway pulse         • adjustable current limitation         • creep speed in both directions of rotation         • pump ramp down         • DC braking         • motor heating	Q 15.02.2018 00:00:00 Yes Yes Yes Yes Yes Yes Yes Yes
reference code acc. to IEC 81346-2         Substance Prohibitance (Date)         product function         • ramp-up (soft starting)         • ramp-down (soft stop)         • breakaway pulse         • adjustable current limitation         • creep speed in both directions of rotation         • pump ramp down         • DC braking         • motor heating         • slave pointer function	Q 15.02.2018 00:00:00 Yes Yes Yes Yes Yes Yes Yes Yes Yes
reference code acc. to IEC 81346-2         Substance Prohibitance (Date)         product function         • ramp-up (soft starting)         • ramp-down (soft stop)         • breakaway pulse         • adjustable current limitation         • creep speed in both directions of rotation         • pump ramp down         • DC braking         • motor heating         • slave pointer function         • trace function	Q 15.02.2018 00:00:00 Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes
reference code acc. to IEC 81346-2         Substance Prohibitance (Date)         product function         • ramp-up (soft starting)         • ramp-down (soft stop)         • breakaway pulse         • adjustable current limitation         • creep speed in both directions of rotation         • pump ramp down         • DC braking         • motor heating         • slave pointer function	Q 15.02.2018 00:00:00 Yes Yes Yes Yes Yes Yes Yes Yes Yes
reference code acc. to IEC 81346-2         Substance Prohibitance (Date)         product function         • ramp-up (soft starting)         • ramp-down (soft stop)         • breakaway pulse         • adjustable current limitation         • creep speed in both directions of rotation         • pump ramp down         • DC braking         • motor heating         • slave pointer function         • trace function	Q 15.02.2018 00:00:00 Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes
reference code acc. to IEC 81346-2         Substance Prohibitance (Date)         product function         • ramp-up (soft starting)         • ramp-down (soft stop)         • breakaway pulse         • adjustable current limitation         • creep speed in both directions of rotation         • pump ramp down         • DC braking         • motor heating         • slave pointer function         • trace function         • intrinsic device protection	Q 15.02.2018 00:00:00 Yes Yes Yes Yes Yes Yes Yes Yes
reference code acc. to IEC 81346-2         Substance Prohibitance (Date)         product function         • ramp-up (soft starting)         • ramp-down (soft stop)         • breakaway pulse         • adjustable current limitation         • creep speed in both directions of rotation         • pump ramp down         • DC braking         • motor heating         • slave pointer function         • trace function         • intrinsic device protection         • motor overload protection	Q 15.02.2018 00:00:00 Yes Yes Yes Yes Yes Yes Yes Yes
reference code acc. to IEC 81346-2         Substance Prohibitance (Date)         product function         • ramp-up (soft starting)         • ramp-down (soft stop)         • breakaway pulse         • adjustable current limitation         • creep speed in both directions of rotation         • pump ramp down         • DC braking         • motor heating         • slave pointer function         • trace function         • intrinsic device protection         • motor overload protection	Q 15.02.2018 00:00:00 Yes Yes Yes Yes Yes Yes Yes Yes
reference code acc. to IEC 81346-2         Substance Prohibitance (Date)         product function         • ramp-up (soft starting)         • ramp-down (soft stop)         • breakaway pulse         • adjustable current limitation         • creep speed in both directions of rotation         • pump ramp down         • DC braking         • motor heating         • slave pointer function         • trace function         • intrinsic device protection         • motor overload protection         • motor overload protection	Q 15.02.2018 00:00:00 Yes Yes Yes Yes Yes Yes Yes Yes
reference code acc. to IEC 81346-2         Substance Prohibitance (Date)         product function         • ramp-up (soft starting)         • ramp-down (soft stop)         • breakaway pulse         • adjustable current limitation         • creep speed in both directions of rotation         • pump ramp down         • DC braking         • motor heating         • slave pointer function         • trace function         • intrinsic device protection         • motor overload protection         • evaluation of thermistor motor protection         • inside-delta circuit         • auto-RESET	Q 15.02.2018 00:00:00 Yes Yes Yes Yes Yes Yes Yes Yes
reference code acc. to IEC 81346-2         Substance Prohibitance (Date)         product function         • ramp-up (soft starting)         • ramp-down (soft stop)         • breakaway pulse         • adjustable current limitation         • creep speed in both directions of rotation         • pump ramp down         • DC braking         • motor heating         • slave pointer function         • trace function         • intrinsic device protection         • motor overload protection         • motor overload protection         • inside-delta circuit         • auto-RESET         • manual RESET	Q 15.02.2018 00:00:00 Yes Yes Yes Yes Yes Yes Yes Yes
reference code acc. to IEC 81346-2         Substance Prohibitance (Date)         product function         • ramp-up (soft starting)         • ramp-down (soft stop)         • breakaway pulse         • adjustable current limitation         • creep speed in both directions of rotation         • pump ramp down         • DC braking         • motor heating         • slave pointer function         • trace function         • intrinsic device protection         • motor overload protection         • motor overload protection         • motor RESET         • manual RESET         • remote reset	Q 15.02.2018 00:00:00 Yes Yes Yes Yes Yes Yes Yes Yes
reference code acc. to IEC 81346-2         Substance Prohibitance (Date)         product function         • ramp-up (soft starting)         • ramp-down (soft stop)         • breakaway pulse         • adjustable current limitation         • creep speed in both directions of rotation         • pump ramp down         • DC braking         • motor heating         • slave pointer function         • trace function         • intrinsic device protection         • motor overload protection         • motor overload protection         • motor RESET         • manual RESET         • remote reset         • communication function	Q 15.02.2018 00:00:00 Yes Yes Yes Yes Yes Yes Yes Yes
reference code acc. to IEC 81346-2         Substance Prohibitance (Date)         product function         • ramp-up (soft starting)         • ramp-down (soft stop)         • breakaway pulse         • adjustable current limitation         • creep speed in both directions of rotation         • pump ramp down         • DC braking         • motor heating         • slave pointer function         • trace function         • intrinsic device protection         • motor overload protection         • motor overload protection         • motor RESET         • remote reset         • communication function	Q 15.02.2018 00:00:00 Yes Yes Yes Yes Yes Yes Yes Yes
reference code acc. to IEC 81346-2         Substance Prohibitance (Date)         product function         • ramp-up (soft starting)         • ramp-down (soft stop)         • breakaway pulse         • adjustable current limitation         • creep speed in both directions of rotation         • pump ramp down         • DC braking         • motor heating         • slave pointer function         • trace function         • intrinsic device protection         • motor overload protection         • motor overload protection         • motor eletta circuit         • auto-RESET         • remote reset         • communication function         • operating measured value display         • event list	Q 15.02.2018 00:00:00 Yes Yes Yes Yes Yes Yes Yes Yes
reference code acc. to IEC 81346-2         Substance Prohibitance (Date)         product function         • ramp-up (soft starting)         • ramp-down (soft stop)         • breakaway pulse         • adjustable current limitation         • creep speed in both directions of rotation         • pump ramp down         • DC braking         • motor heating         • slave pointer function         • trace function         • intrinsic device protection         • motor overload protection         • motor overload protection         • auto-RESET         • manual RESET         • remote reset         • communication function         • operating measured value display         • event list         • error logbook	Q 15.02.2018 00:00:00 Yes Yes Yes Yes Yes Yes Yes Yes
reference code acc. to IEC 81346-2         Substance Prohibitance (Date)         product function <ul> <li>ramp-up (soft starting)</li> <li>ramp-down (soft stop)</li> <li>breakaway pulse</li> <li>adjustable current limitation</li> <li>creep speed in both directions of rotation</li> <li>pump ramp down</li> <li>DC braking</li> <li>motor heating</li> <li>slave pointer function</li> <li>trace function</li> <li>intrinsic device protection</li> <li>motor overload protection</li> </ul> <li>evaluation of thermistor motor protection</li> <li>inside-delta circuit</li> <li>auto-RESET</li> <li>remote reset</li> <li>communication function</li> <li>operating measured value display</li> <li>event list</li> <li>error logbook</li> <li>via software parameterizable</li>	Q 15.02.2018 00:00:00 Yes Yes Yes Yes Yes Yes Yes Yes

<ul> <li>spring-type terminal</li> </ul>	No
PROFlenergy	Yes; in connection with the PROFINET Standard and PROFINET High-
	Feature communication modules
<ul> <li>firmware update</li> </ul>	Yes
<ul> <li>removable terminal for control circuit</li> </ul>	Yes
<ul> <li>voltage ramp</li> </ul>	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
application wizards	Yes
alternative run-down	Yes
<ul> <li>emergency operation mode</li> </ul>	Yes
reversing operation	Yes
<ul> <li>soft starting at heavy starting conditions</li> </ul>	Yes
Power Electronics	
operational current	47.0
• at 40 °C rated value	47 A
<ul> <li>at 40 °C rated value minimum</li> </ul>	10 A
<ul> <li>at 50 °C rated value</li> </ul>	41.6 A
• at 60 °C rated value	36.2 A
operational current at inside-delta circuit	
<ul> <li>at 40 °C rated value</li> </ul>	81.4 A
• at 50 °C rated value	72 A
• at 60 °C rated value	62.7 A
operating voltage	
<ul> <li>rated value</li> </ul>	200 480 V
<ul> <li>at inside-delta circuit rated value</li> </ul>	200 480 V
relative negative tolerance of the operating voltage	-15 %
relative positive tolerance of the operating voltage	10 %
relative negative tolerance of the operating voltage at	-15 %
inside-delta circuit	-
relative positive tolerance of the operating voltage at inside-delta circuit	10 %
operating power for 3-phase motors	
<ul> <li>at 230 V at 40 °C rated value</li> </ul>	11 kW
<ul> <li>at 230 V at inside-delta circuit at 40 °C rated value</li> </ul>	22 kW
<ul> <li>at 400 V at 40 °C rated value</li> </ul>	22 kW
<ul> <li>at 400 V at inside-delta circuit at 40 °C rated value</li> </ul>	45 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	14 W
● at 50 °C after startup	12 W
• at 60 °C after startup	11 W
power loss [W] at AC at current limitation 350 %	
• at 40 °C during startup	588 W
• at 50 °C during startup	504 W
at 60 °C during startup	420 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	
	24 \/
• 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	
<ul> <li>at DC rated value</li> </ul>	24 V
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	870 mA
locked-rotor current at close of bypass contact maximum	6.3 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	20 ms
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 breaker (Icu= 600 A), C6 miniature circuit breaker (Icu= 300 A); Is not part of scope of supply
Inputs/ Outputs	
Inputs/ Outputs number of digital inputs	4
	4 4
number of digital inputs	
• parameterizable	4
number of digital inputs <ul> <li>parameterizable</li> </ul> number of inputs for thermistor connection	4 1; Type A PTC or Klixon / Thermoclick
number of digital inputs <ul> <li>parameterizable</li> </ul> <li>number of inputs for thermistor connection <ul> <li>number of digital outputs</li> </ul> </li>	4 1; Type A PTC or Klixon / Thermoclick 4
number of digital inputs         • parameterizable         number of inputs for thermistor connection         • number of digital outputs         • number of digital outputs parameterizable	4 1; Type A PTC or Klixon / Thermoclick 4 3
number of digital inputs         • parameterizable         number of inputs for thermistor connection         • number of digital outputs         • number of digital outputs         • number of digital outputs parameterizable         • number of digital outputs not parameterizable	4 1; Type A PTC or Klixon / Thermoclick 4 3 1
number of digital inputs         • parameterizable         number of inputs for thermistor connection         • number of digital outputs         • number of digital outputs         • number of digital outputs parameterizable         • number of digital outputs not parameterizable         • number of digital outputs not parameterizable	4 1; Type A PTC or Klixon / Thermoclick 4 3 1 3 normally-open contacts (NO) / 1 changeover contact (CO)
number of digital inputs         • parameterizable         number of inputs for thermistor connection         • number of digital outputs         • number of digital outputs parameterizable         • number of digital outputs not parameterizable         • number of digital outputs not parameterizable         digital output version         number of analog outputs         switching capacity current of the relay outputs         • at AC-15 at 250 V rated value	4 1; Type A PTC or Klixon / Thermoclick 4 3 1 3 normally-open contacts (NO) / 1 changeover contact (CO) 1 3 A
number of digital inputs         • parameterizable         number of inputs for thermistor connection         • number of digital outputs         • number of digital outputs parameterizable         • number of digital outputs not parameterizable         • number of digital outputs not parameterizable         digital output version         number of analog outputs         switching capacity current of the relay outputs         • at AC-15 at 250 V rated value         • at DC-13 at 24 V rated value	4 1; Type A PTC or Klixon / Thermoclick 4 3 1 3 normally-open contacts (NO) / 1 changeover contact (CO) 1
number of digital inputs         • parameterizable         number of inputs for thermistor connection         • number of digital outputs         • number of digital outputs parameterizable         • number of digital outputs not parameterizable         • number of digital outputs not parameterizable         digital output version         number of analog outputs         switching capacity current of the relay outputs         • at AC-15 at 250 V rated value	4 1; Type A PTC or Klixon / Thermoclick 4 3 1 3 normally-open contacts (NO) / 1 changeover contact (CO) 1 3 A
number of digital inputs         • parameterizable         number of inputs for thermistor connection         • number of digital outputs         • number of digital outputs parameterizable         • number of digital outputs not parameterizable         • number of digital outputs not parameterizable         digital output version         number of analog outputs         switching capacity current of the relay outputs         • at AC-15 at 250 V rated value         • at DC-13 at 24 V rated value         Installation/ mounting/ dimensions         mounting position	4 1; Type A PTC or Klixon / Thermoclick 4 3 1 3 normally-open contacts (NO) / 1 changeover contact (CO) 1 3 A 1 A Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)
number of digital inputs         • parameterizable         number of inputs for thermistor connection         • number of digital outputs         • number of digital outputs parameterizable         • number of digital outputs not parameterizable         • number of digital outputs not parameterizable         digital output version         number of analog outputs         switching capacity current of the relay outputs         • at AC-15 at 250 V rated value         • at DC-13 at 24 V rated value         Installation/ mounting/ dimensions         mounting position         fastening method	4 1; Type A PTC or Klixon / Thermoclick 4 3 1 3 normally-open contacts (NO) / 1 changeover contact (CO) 1 3 A 1 A Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°) screw fixing
number of digital inputs         • parameterizable         number of inputs for thermistor connection         • number of digital outputs         • number of digital outputs parameterizable         • number of digital outputs not parameterizable         • number of digital outputs not parameterizable         digital output version         number of analog outputs         switching capacity current of the relay outputs         • at AC-15 at 250 V rated value         • at DC-13 at 24 V rated value         Installation/ mounting/ dimensions         mounting position         fastening method         height	4 1; Type A PTC or Klixon / Thermoclick 4 3 1 3 normally-open contacts (NO) / 1 changeover contact (CO) 1 3 A 1 A Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°) screw fixing 306 mm
number of digital inputs         • parameterizable         number of inputs for thermistor connection         • number of digital outputs         • number of digital outputs parameterizable         • number of digital outputs not parameterizable         • number of digital outputs not parameterizable         digital output version         number of analog outputs         switching capacity current of the relay outputs         • at AC-15 at 250 V rated value         • at DC-13 at 24 V rated value         Installation/ mounting/ dimensions         mounting position         fastening method         height	4 1; Type A PTC or Klixon / Thermoclick 4 3 1 3 normally-open contacts (NO) / 1 changeover contact (CO) 1 3 A 1 A Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°) screw fixing 306 mm 185 mm
number of digital inputs         • parameterizable         number of inputs for thermistor connection         • number of digital outputs         • number of digital outputs parameterizable         • number of digital outputs not parameterizable         • number of digital outputs not parameterizable         digital output version         number of analog outputs         switching capacity current of the relay outputs         • at AC-15 at 250 V rated value         • at DC-13 at 24 V rated value         Installation/ mounting/ dimensions         mounting position         fastening method         height         width         depth	4 1; Type A PTC or Klixon / Thermoclick 4 3 1 3 normally-open contacts (NO) / 1 changeover contact (CO) 1 3 A 1 A Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°) screw fixing 306 mm
number of digital inputs         • parameterizable         number of inputs for thermistor connection         • number of digital outputs         • number of digital outputs parameterizable         • number of digital outputs not parameterizable         • number of digital outputs not parameterizable         digital output version         number of analog outputs         switching capacity current of the relay outputs         • at AC-15 at 250 V rated value         • at DC-13 at 24 V rated value         Installation/ mounting/ dimensions         mounting position         fastening method         height         width         depth         required spacing with side-by-side mounting	4 1; Type A PTC or Klixon / Thermoclick 4 3 1 3 normally-open contacts (NO) / 1 changeover contact (CO) 1 3 A 1 A Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°) screw fixing 306 mm 185 mm 203 mm
number of digital inputs         • parameterizable         number of inputs for thermistor connection         • number of digital outputs         • number of digital outputs parameterizable         • number of digital outputs not parameterizable         • number of digital outputs not parameterizable         digital output version         number of analog outputs         switching capacity current of the relay outputs         • at AC-15 at 250 V rated value         • at DC-13 at 24 V rated value         Installation/ mounting/ dimensions         mounting position         fastening method         height         width         depth         required spacing with side-by-side mounting         • forwards	4 1; Type A PTC or Klixon / Thermoclick 4 3 1 3 normally-open contacts (NO) / 1 changeover contact (CO) 1 3 A 1 A Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°) screw fixing 306 mm 185 mm 203 mm 10 mm
number of digital inputs         • parameterizable         number of inputs for thermistor connection         • number of digital outputs         • number of digital outputs parameterizable         • number of digital outputs not parameterizable         • number of digital outputs not parameterizable         digital output version         number of analog outputs         switching capacity current of the relay outputs         • at AC-15 at 250 V rated value         • at DC-13 at 24 V rated value         Installation/ mounting/ dimensions         mounting position         fastening method         height         width         depth         required spacing with side-by-side mounting         • forwards         • backwards	4 1; Type A PTC or Klixon / Thermoclick 4 3 1 3 normally-open contacts (NO) / 1 changeover contact (CO) 1 3 A 1 A Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°) screw fixing 306 mm 185 mm 203 mm 10 mm 0 mm
number of digital inputs         • parameterizable         number of inputs for thermistor connection         • number of digital outputs         • number of digital outputs parameterizable         • number of digital outputs not parameterizable         • number of digital outputs not parameterizable         digital output version         number of analog outputs         switching capacity current of the relay outputs         • at AC-15 at 250 V rated value         • at DC-13 at 24 V rated value         Installation/ mounting/ dimensions         mounting position         fastening method         height         width         depth         required spacing with side-by-side mounting         • forwards         • upwards	4 1; Type A PTC or Klixon / Thermoclick 4 3 1 3 normally-open contacts (NO) / 1 changeover contact (CO) 1 3 A 1 A Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°) screw fixing 306 mm 185 mm 203 mm 10 mm 0 mm 100 mm
number of digital inputs         • parameterizable         number of inputs for thermistor connection         • number of digital outputs         • number of digital outputs parameterizable         • number of digital outputs not parameterizable         • number of digital outputs not parameterizable         digital output version         number of analog outputs         switching capacity current of the relay outputs         • at AC-15 at 250 V rated value         • at DC-13 at 24 V rated value         Installation/ mounting/ dimensions         mounting position         fastening method         height         width         depth         required spacing with side-by-side mounting         • forwards         • backwards         • upwards         • downwards	4 1; Type A PTC or Klixon / Thermoclick 4 3 1 3 normally-open contacts (NO) / 1 changeover contact (CO) 1 3 A 1 A Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°) screw fixing 306 mm 185 mm 203 mm 10 mm 0 mm 100 mm 75 mm
number of digital inputs         • parameterizable         number of inputs for thermistor connection         • number of digital outputs         • number of digital outputs parameterizable         • number of digital outputs not parameterizable         • number of analog outputs not parameterizable         digital output version         number of analog outputs         switching capacity current of the relay outputs         • at AC-15 at 250 V rated value         • at DC-13 at 24 V rated value         Installation/ mounting/ dimensions         mounting position         fastening method         height         width         depth         required spacing with side-by-side mounting         oforwards         ownwards         odownwards         odownwards	4 1; Type A PTC or Klixon / Thermoclick 4 3 1 3 normally-open contacts (NO) / 1 changeover contact (CO) 1 3 A 1 A Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°) screw fixing 306 mm 185 mm 203 mm 10 mm 0 mm 100 mm 5 mm
number of digital inputs         • parameterizable         number of inputs for thermistor connection         • number of digital outputs         • number of digital outputs parameterizable         • number of digital outputs not parameterizable         digital output version         number of analog outputs         switching capacity current of the relay outputs         • at AC-15 at 250 V rated value         • at DC-13 at 24 V rated value         Installation/ mounting/ dimensions         mounting position         fastening method         height         width         depth         required spacing with side-by-side mounting         • forwards         • backwards         • upwards         • at the side         weight without packaging	4 1; Type A PTC or Klixon / Thermoclick 4 3 1 3 normally-open contacts (NO) / 1 changeover contact (CO) 1 3 A 1 A Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°) screw fixing 306 mm 185 mm 203 mm 10 mm 0 mm 100 mm 75 mm
number of digital inputs         • parameterizable         number of inputs for thermistor connection         • number of digital outputs         • number of digital outputs parameterizable         • number of digital outputs not parameterizable         digital output version         number of analog outputs         switching capacity current of the relay outputs         • at AC-15 at 250 V rated value         • at DC-13 at 24 V rated value         Installation/ mounting/ dimensions         mounting position         fastening method         height         width         depth         required spacing with side-by-side mounting         • forwards         • at the side         weight without packaging         Connections/ Terminals	4 1; Type A PTC or Klixon / Thermoclick 4 3 1 3 normally-open contacts (NO) / 1 changeover contact (CO) 1 3 A 1 A Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°) screw fixing 306 mm 185 mm 203 mm 10 mm 0 mm 100 mm 5 mm
number of digital inputs         • parameterizable         number of inputs for thermistor connection         • number of digital outputs         • number of digital outputs parameterizable         • number of digital outputs not parameterizable         digital output version         number of analog outputs         switching capacity current of the relay outputs         • at AC-15 at 250 V rated value         • at DC-13 at 24 V rated value         Installation/ mounting/ dimensions         mounting position         fastening method         height         width         depth         required spacing with side-by-side mounting         • forwards         • at the side         weight without packaging         Connections/ Terminals         type of electrical connection	4 1; Type A PTC or Klixon / Thermoclick 4 3 1 3 normally-open contacts (NO) / 1 changeover contact (CO) 1 3 A 1 A Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°) screw fixing 306 mm 185 mm 203 mm 10 mm 0 mm 100 mm 5 mm 5.5 kg
number of digital inputs         • parameterizable         number of inputs for thermistor connection         • number of digital outputs         • number of digital outputs parameterizable         • number of digital outputs not parameterizable         digital output version         number of analog outputs         switching capacity current of the relay outputs         • at AC-15 at 250 V rated value         • at DC-13 at 24 V rated value         Installation/ mounting/ dimensions         mounting position         fastening method         height         width         depth         required spacing with side-by-side mounting         • forwards         • at the side         weight without packaging         Connections/ Terminals	4 1; Type A PTC or Klixon / Thermoclick 4 3 1 3 normally-open contacts (NO) / 1 changeover contact (CO) 1 3 A 1 A Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°) screw fixing 306 mm 185 mm 203 mm 10 mm 0 mm 100 mm 5 mm

width of connection bar maximum	25 mm
wire length for thermistor connection	
<ul> <li>with conductor cross-section = 0.5 mm<sup>2</sup> maximum</li> </ul>	50 m
<ul> <li>with conductor cross-section = 1.5 mm<sup>2</sup> maximum</li> </ul>	150 m
<ul> <li>with conductor cross-section = 2.5 mm<sup>2</sup> maximum</li> </ul>	250 m
type of connectable conductor cross-sections	
<ul> <li>for main contacts for box terminal using the front clamping point solid</li> </ul>	1x (2.5 16 mm²)
• for main contacts for box terminal using the front clamping point finely stranded with core end processing	1x (2.5 50 mm²)
<ul> <li>for main contacts for box terminal using the front clamping point stranded</li> </ul>	1x (10 70 mm²)
<ul> <li>at AWG cables for main contacts for box terminal using the front clamping point</li> </ul>	1x (10 2/0)
<ul> <li>for main contacts for box terminal using the back clamping point solid</li> </ul>	1x (2.5 16 mm²)
<ul> <li>at AWG cables for main contacts for box terminal using the back clamping point</li> </ul>	1x (10 2/0)
• for main contacts for box terminal using both clamping points solid	2x (2.5 16 mm <sup>2</sup> )
<ul> <li>for main contacts for box terminal using both clamping points finely stranded with core end processing</li> </ul>	2x (2.5 35 mm²)
<ul> <li>for main contacts for box terminal using both clamping points stranded</li> </ul>	2x (6 16 mm²), 2x (10 50 mm²)
<ul> <li>for main contacts for box terminal using the back clamping point finely stranded with core end processing</li> </ul>	1x (2.5 50 mm²)
<ul> <li>for main contacts for box terminal using the back clamping point stranded</li> </ul>	1x (10 70 mm²)
type of connectable conductor cross-sections	
<ul> <li>for control circuit solid</li> </ul>	1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²)
<ul> <li>for control circuit finely stranded with core end processing</li> </ul>	1x (0.5 2.5 mm²), 2x (0.5 1.5 mm²)
<ul> <li>at AWG cables for control circuit solid</li> </ul>	1x (20 12), 2x (20 14)
wire length	
<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>	4.5 6 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]	
<ul> <li>for main contacts with screw-type terminals</li> </ul>	40 53 lbf in
<ul> <li>for auxiliary and control contacts with screw-type terminals</li> </ul>	7 10.3 lbf·in
mbient 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	
• during operation acc. 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 acc. to IEC 60721	1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4
during transport acc. to IEC 60721	2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)
EMC emitted interference	acc. to IEC 60947-4-2: Class A
ommunication/ Protocol	
communication module is supported	
<ul> <li>PROFINET standard</li> </ul>	Yes

PROFINET high-feature     Encivity P     Knows PROFINE     Yes     Modulus PTU     Yes     Modulus TOP     Yes     PROFINUS     Yes     VICCSA ratings     UICSA ratings		
Modbus RTU     Modbus IGP     Modbus IGP     PROFIBUS     Ves	<ul> <li>PROFINET high-feature</li> </ul>	Yes
Modula TCP     PROFIBUS      Wes	EtherNet/IP	Yes
PAPOFIBUS     Ves      UCISA ratings      Constructions and constructions     of circuit breaker      of circuit according to UL      or usable for Standard Faults at 460/480 V at inside-      deta circuit according to UL      or usable for Standard Faults at 575/600 V at     inside-bella circuit according to UL      or usable for Standard Faults at probe 0 V at     inside-bella circuit according to UL      or usable for Standard Faults at probe 0 V at     inside-bella circuit according to UL      or usable for Standard Faults at probe 0 V at     inside-bella circuit according to UL      or usable for Standard Faults at probe 0 V at     inside-bella circuit according to UL      or usable for Standard Faults at probe 0 V at     inside-bella circuit according to UL      or usable for Standard Faults at probe 0 V at     inside-bella circuit according to UL      or usable for Standard Faults at probe 0 V      according to UL      or usable for Standard Faults at probe 0 V at     inside-bella circuit according to UL      or usable for Standard Faults at probe 0 V	Modbus RTU	Yes
UUCSA rating:         manufacturer's aticle number         of circuit breaker         - usable for High Faults at 460/480 V according to UL         - usable for High Faults at 460/480 V at inside-della circuit according to UL         - usable for High Faults at 460/480 V at inside-della circuit according to UL         - usable for High Faults at 460/480 V at inside-della circuit according to UL         - usable for Standard Faults at 575/600 V at inside-della circuit according to UL         - usable for Standard Faults at 575/600 V at inside-della circuit according to UL         - usable for Standard Faults at 575/600 V at inside-della circuit according to UL         - usable for Standard Faults at po 575/600 V at cocording to UL         - usable for Standard Faults at inside-della circuit up to 575/600 V according to UL         - usable for Standard Faults at inside-della circuit up to 575/600 V according to UL         - usable for Standard Faults at inside-della circuit up to 575/600 V according to UL         - usable for Standard Faults at inside-della circuit up to 575/600 V according to UL         - usable for Standard Faults at inside-della circuit up to 575/600 V according to UL         - usable for Standard Faults at Inside-della circuit up to 575/600 V according to UL         - usable for Standard Faults at Inside-della circui	Modbus TCP	Yes
menufacturor's article number         • of circuit breaker	PROFIBUS	Yes
<ul> <li>of circuit breaker         <ul> <li>usable for Sindard Faults at 460/480 V</li> <li>according to UL</li> <li>usable for Filmfor Faults at 460/480 V at inside-delta circuit according to UL</li> <li>usable for Filmfor Faults at 460/480 V at inside-delta circuit according to UL</li> <li>usable for Filmfor Faults at 460/480 V at inside-delta circuit according to UL</li> <li>usable for Filmfor Faults at 750/600 V at inside-delta circuit according to UL</li> <li>usable for Filmfor Faults at 750/600 V at inside-delta circuit according to UL</li> <li>usable for Filmfor Faults at 750/600 V at inside-delta circuit according to UL</li> <li>usable for Filmfor Faults at 750/600 V at inside-delta circuit according to UL</li> <li>usable for Filmfor Faults at 750/600 V according to UL</li> <li>usable for Filmfor Faults at 750/600 V according to UL</li> <li>usable for Filmfor Faults at inside-delta circuit carcuit pto 575/600 V according to UL</li> <li>usable for Filmfor Faults at inside-delta circuit carcuit pto 575/600 V according to UL</li> <li>usable for Filmfor Faults at inside-delta circuit carcuit pto 575/600 V according to UL</li> <li>usable for Filmfor Faults at inside-delta circuit pto 575/600 V according to UL</li> <li>usable for Filmfor Faults at inside-delta circuit pto 575/600 V according to UL</li> <li>to 200200 V at inside-delta circuit at 50 °C rated value</li> <li>to 200200 V at inside-delta circuit at 50 °C rated value</li> <li>to 200200 V at inside-delta circuit at 50 °C rated value</li> <li>to 200200 V at inside-delta circuit at 50 °C rated value</li> <li>to 200200 V at inside-delta circuit at 50 °C rated value</li> <li>to 200200 V at inside-delta circuit at 50 °C rated value</li> <li>to 200 contact ratating of auxillary co</li></ul></li></ul>	UL/CSA ratings	
	manufacturer's article number	
according to UL usable for High Faults at 460/480 V according to UL usable for Standard Faults at 460/480 V at inside-detta circuit according to UL usable for Standard Faults at 460/480 V at according to UL usable for Standard Faults at 450/480 V at according to UL usable for Standard Faults at 457/600 V at according to UL usable for Standard Faults at 575/600 V at inside-detta circuit according to UL usable for Standard Faults at 575/600 V at according to UL usable for Standard Faults at 575/600 V at inside-detta circuit according to UL usable for Standard Faults at 575/600 V at according to UL usable for Standard Faults at 575/600 V according to UL usable for Standard Faults at 575/600 V according to UL usable for Standard Faults at inside-detta circuit up to 575/600 V according to UL usable for Standard Faults at inside-detta circuit up to 575/600 V according to UL usable for Standard Faults at inside-detta circuit up to 575/600 V according to UL usable for Standard Faults at inside-detta circuit up to 575/600 V according to UL usable for Standard Faults at inside-detta circuit up to 575/600 V according to UL usable for Standard Faults at inside-detta circuit up to 575/600 V according to UL usable for Standard Faults at 50 "C rated value to 700 pertude power (hp) for 3 phase motors at 220/208 V at 50 "C rated value to 10 hp to 14 660/480 V at inside-detta circuit at 50 "C rated value to 10 hp to 14 60/480 V at inside-detta circuit at 50 "C rated value to 16 hp to 16	of circuit breaker	
<ul> <li>b UL</li> <li>cusable for Standard Faults at 460/480 V at inside-delta circuit according to UL.</li> <li>cusable for Standard Faults at 675/600 V at inside-delta circuit according to UL.</li> <li>cusable for Standard Faults at 675/600 V at inside-delta circuit according to UL.</li> <li>cusable for Standard Faults at 675/600 V at inside-delta circuit according to UL.</li> <li>cusable for Standard Faults at 575/600 V at inside-delta circuit according to UL.</li> <li>cusable for Standard Faults at 575/600 V at inside-delta circuit according to UL.</li> <li>cusable for Standard Faults at 575/600 V at caccerding to UL.</li> <li>cusable for Standard Faults at inside-delta circuit according to UL.</li> <li>cusable for Standard Faults at inside-delta circuit up to 575/600 V according to UL.</li> <li>cusable for Standard Faults at inside-delta circuit up to 575/600 V according to UL.</li> <li>cusable for Standard Faults at inside-delta circuit up to 575/600 V according to UL.</li> <li>cusable for Standard Faults at inside-delta circuit up to 575/600 V according to UL.</li> <li>cusable for Standard Faults at inside-delta circuit up to 575/600 V according to UL.</li> <li>cusable for Standard Faults at inside-delta circuit up to 575/600 V according to UL.</li> <li>cusable for Standard Faults at inside-delta circuit up to 575/600 V according to UL.</li> <li>cusable for Standard Faults at 50 °C rated value</li> <li>at 200/208 V at 50 °C rated value</li> <li>at 200/208 V at 50 °C rated value</li> <li>at 200/208 V at inside-delta circuit at 50 °C rated value</li> <li>at 460/480 V at inside-delta circuit at 50 °C rated value</li> <li>at 460/480 V at inside-delta circuit at 50 °C rated value</li> <li>at 460/480 V at inside-delta circuit at 50 °C rated value</li> <li>at 460/480 V at inside-delta circuit at 50 °C rated value</li> <li>at 460/480 V at inside-delta circuit at 50 °C rated value</li> <li>at 460/480 V at inside-delta circuit at 50 °C rated value</li> <li>at 460/480 V at inside-delta circuit at 50 °C rated value</li></ul>		Siemens type: 3RV2742, max. 70 A or 3VA51, max. 90 A; Iq = 5 kA
<ul> <li>Inside-delta circuit according to UL</li> <li>— usable for High Faults at 450/480 V at inside- delta circuit according to UL.</li> <li>— usable for Standard Faults at 575/600 V at inside- delta circuit according to UL.</li> <li>— usable for Standard Faults at 575/600 V at inside- delta circuit according to UL.</li> <li>— usable for Standard Faults at 575/600 V at inside- delta circuit according to UL.</li> <li>— usable for Standard Faults at 575/600 V at inside- delta circuit according to UL.</li> <li>— usable for Standard Faults at 575/600 V at inside- delta circuit according to UL.</li> <li>— usable for Standard Faults at 575/600 V at inside- delta circuit according to UL.</li> <li>— usable for Standard Faults at 1575/600 V according to UL.</li> <li>— usable for Standard Faults at inside-delta circuit at 10 to 575/600 V according to UL.</li> <li>— usable for Standard Faults at inside-delta circuit up to 575/600 V according to UL.</li> <li>— usable for Standard Faults at inside-delta circuit up to 575/600 V according to UL.</li> <li>— usable for Standard Faults at inside-delta circuit up to 575/600 V according to UL.</li> <li>— usable for Standard Faults at inside-delta circuit up to 575/600 V according to UL.</li> <li>— usable for Standard Faults at 10 to Crated value</li> <li>at 200/230 V at 50 °C rated value</li> <li>at 460/480 V at inside-delta circuit at 50 °C rated value</li> <li>at 460/480 V at inside-delta circuit at 50 °C rated value</li> <li>at 460/480 V at inside-delta circuit at 50 °C rated value</li> <li>at 460/480 V at inside-delta circuit at 50 °C rated value</li> <li>at 460/480 V at inside-delta circuit at 50 °C rated value</li> <li>at 460/480 V at inside-delta circuit at 50 °C rated value</li> <li>at 460/480 V at inside-delta circuit at 50 °C rated value</li> <li>at 460/480 V at inside-delta circuit at 50 °C rated v</li></ul>	8 8	Siemens type: 3VA51, max. 60 A; lq max = 65 kA
delta circuit according to UL.		Siemens type: 3VA51, max. 90 A; lq = 5 kA
according to UL 		Siemens type: 3VA51, max. 60 A; lq max = 65 kA
delta circuit according to UL       Siemens type: 3VA51, max. 90 A; lq = 5 kA         • of the fuse       Type: Class RK5 / K5, max. 175 A; lq = 5 kA         - usable for High Faults up to 575/600 V       Type: Class RK5 / K5, max. 175 A; lq = 5 kA         - usable for High Faults up to 575/600 V       Type: Class RK5 / K5, max. 175 A; lq = 100 kA         - usable for High Faults at inside-delta       Type: Class RK5 / K5, max. 175 A; lq = 5 kA         - usable for High Faults at inside-delta       Type: Class RK5 / K5, max. 175 A; lq = 5 kA         - usable for Sindord Faults at inside-delta       Type: Class RK5 / K5, max. 175 A; lq = 100 kA         - usable for Sindord Faults at inside-delta       Type: Class J / L, max. 175 A; lq = 100 kA         • at 200/208 V at 50 °C rated value       10 hp         • at 200/208 V at 50 °C rated value       20 hp         • at 200/208 V at inside-delta circuit at 50 °C rated       20 hp         • at 200/208 V at inside-delta circuit at 50 °C rated       20 hp         • at 200/208 V at inside-delta circuit at 50 °C rated       50 hp         • at 200/208 V at inside-delta circuit at 50 °C rated       20 hp         • at 200/208 V at inside-delta circuit at 50 °C rated       50 hp         • at 200/208 V at inside-delta circuit at 50 °C rated       100; IP20 with cover         • at 200/208 V at inside-delta circuit at 50 °C rated       100; IP20 with cover <td< th=""><td></td><td>Siemens type: 3RV2742, max. 70 A or 3VA51, max. 90 A; lq = 5 kA</td></td<>		Siemens type: 3RV2742, max. 70 A or 3VA51, max. 90 A; lq = 5 kA
inside-delta circuit according to UL  of the fuse  - usable for Standard Faults up to 575/600 V according to UL  - usable for Standard Faults up to 575/600 V according to UL  - usable for Standard Faults at inside-delta circuit up to 575/600 V according to UL  - usable for Standard Faults at inside-delta circuit up to 575/600 V according to UL  - usable for High Faults at inside-delta circuit up to 575/600 V according to UL  - usable for Standard Faults at inside-delta circuit up to 575/600 V according to UL  - usable for Standard Faults at inside-delta circuit up to 575/600 V according to UL  - usable for Standard Faults at inside-delta circuit up to 575/600 V according to UL  - usable for Table Action Table Action  - usable for Standard Faults at inside-delta circuit up to 575/600 V according to UL  - usable for Standard Faults at inside-delta circuit up to 575/600 V according to UL  - usable for Standard Faults at inside-delta circuit up to 575/600 V according to UL  operating power [hp] for 3-phase motors  • at 200/208 V at 50 °C rated value 10 hp  • at 2200/208 V at 50 °C rated value 20 hp  • at 200/208 V at inside-delta circuit at 50 °C rated value • at 460/480 V at inside-delta circuit at 50 °C rated value • at 460/480 V at inside-delta circuit at 50 °C rated value • at 460/480 V at inside-delta circuit at 50 °C rated value • at 4200/280 V at inside-delta circuit at 50 °C rated value • at 4200/480 V at inside-delta circuit at 50 °C rated value • at 4200/480 V at inside-delta circuit at 50 °C rated value • at 4200/480 V at inside-delta circuit at 50 °C rated value • at 4200/480 V at inside-delta circuit at 50 °C rated value • at 4200/480 V at inside-delta circuit at 50 °C rated value • at 4200/480 V at inside-delta circuit at 50 °C rated value • at 220 po va	delta circuit according to UL	Siemens type: 3VA51, max. 60 A; lq max = 65 kA
	inside-delta circuit according to UL	Siemens type: 3VA51, max. 90 A; lq = 5 kA
according to UL       Type: Class J / L, max. 175 A; Iq = 100 kA		
according to UL <sup>*</sup> 	according to UL	
circuit up to 575/600 V according to UL — usable for High Faults at inside-delta circuit up to 575/600 V according to UL operating power [hp] for 3-phase motors • at 200/208 V at 50 °C rated value • at 200/208 V at 50 °C rated value • at 200/208 V at inside-delta circuit at 50 °C rated value • at 220/230 V at inside-delta circuit at 50 °C rated value • at 220/230 V at inside-delta circuit at 50 °C rated value • at 220/230 V at inside-delta circuit at 50 °C rated value • at 220/230 V at inside-delta circuit at 50 °C rated value • at 220/230 V at inside-delta circuit at 50 °C rated value • at 220/230 V at inside-delta circuit at 50 °C rated value • at 460/480 V at inside-delta circuit at 50 °C rated value • at 460/480 V at inside-delta circuit at 50 °C rated value • at 460/480 V at inside-delta circuit at 50 °C rated value • at 460/480 V at inside-delta circuit at 50 °C rated value • at 460/480 V at inside-delta circuit at 50 °C rated value • at 460/480 V at inside-delta circuit at 50 °C rated value • at 460/480 V at inside-delta circuit at 50 °C rated value • at 460/480 V at inside-delta circuit at 50 °C rated value • at 460/480 V at inside-delta circuit at 50 °C rated value • at 460/480 V at inside-delta circuit at 50 °C rated value • at 460/480 V at inside-delta circuit at 50 °C rated value • at 460/480 V at inside-delta circuit at 50 °C rated value • at 460/480 V at inside-delta circuit at 50 °C rated value • at 460/480 V at inside-delta circuit at 50 °C rated value • at 50 hp VPO iprotection on the front acc. to IEC 60529 • IPO at EX • according to ATEX • according to ATEX • PFDavg with low demand rate acc. to IEC 61508 relating to • ATEX • PFDavg with low demand rate acc. to IEC 61508 relating to ATEX • FHD with high demand rate acc. to IEC 61508 relating to ATEX • T value for proof test interval or service life acc. to • a y	according to UL	
to 575/600 V according to UL       Image: Constraint of the product of	circuit up to 575/600 V according to UL	
• at 200/208 V at 50 °C rated value       10 hp         • at 220/230 V at 50 °C rated value       10 hp         • at 200/208 V at 50 °C rated value       30 hp         • at 200/208 V at inside-delta circuit at 50 °C rated value       30 hp         • at 220/230 V at inside-delta circuit at 50 °C rated value       20 hp         • at 220/230 V at inside-delta circuit at 50 °C rated value       25 hp         • at 460/480 V at inside-delta circuit at 50 °C rated value       26 hp         • at 460/480 V at inside-delta circuit at 50 °C rated value       8300-B300         Safety related data       Protection class IP on the front acc. to IEC 60529       IP00; IP20 with cover         fuctor protection on the front acc. to IEC 60529       IP00; IP20 with cover         electromagnetic compatibility       acc. to IEC 60947-4-2         ATEX       Yes         • IECEx       Yes         • according to ATEX directive 2014/34/EU       IV (2)G [Ex eb Gb] [Ex pxb Gb], II (2)D [Ex tb Db] [Ex pxb Db], I (2)D [Ex tb Db] [Ex pxb Db], I (2)G [Ex db Mb]         hardware fault lolerance acc. to IEC 61508 relating to ATEX       0.008         relating to ATEX       0.008         PFDavg with low demand rate acc. to EN 62061 relating to ATEX       0.0000005 1/h         to ATEX       0.0000005 1/h         PFHD with high demand rate acc. to EIC 61508 relating to ATEX       0.0	to 575/600 V according to UL	I ype: Class J / L, max. 175 A; Iq = 100 kA
<ul> <li>e at 220/230 V at 50 °C rated value</li> <li>at 460/480 V at 50 °C rated value</li> <li>at 220/230 V at inside-delta circuit at 50 °C rated value</li> <li>at 220/230 V at inside-delta circuit at 50 °C rated value</li> <li>at 220/230 V at inside-delta circuit at 50 °C rated value</li> <li>at 220/230 V at inside-delta circuit at 50 °C rated value</li> <li>at 460/480 V at inside-delta circuit at 50 °C rated value</li> <li>at 460/480 V at inside-delta circuit at 50 °C rated value</li> <li>at 460/480 V at inside-delta circuit at 50 °C rated value</li> <li>contact rating of auxiliary contacts according to UL</li> <li>R300-B300</li> <li>Safety related data</li> <li>protection class IP on the front acc. to IEC 60529</li> <li>iP00; IP20 with cover</li> <li>touch protection on the front acc. to IEC 60529</li> <li>iP00; IP20 with cover</li> <li>detate of suitability</li> <li>ATEX</li> <li>Ves</li> <li>iECEx</li> <li>according to ATEX directive 2014/34/EU</li> <li>PVS 18 ATEX F 003 X</li> <li>type of protection according to ATEX directive 2014/34/EU</li> <li>hardware fault tolerance acc. to IEC 61508 relating to ATEX</li> <li>PFDavg with low demand rate acc. to IEC 61508 relating to ATEX</li> <li>Safety Integrity Level (SIL) acc. to IEC 61508 relating to ATEX</li> <li>T1 value for proof test interval or service life acc. to</li> <li>3 y</li> </ul>		40 hz
<ul> <li>e at 460/480 V at 50 °C rated value</li> <li>at 220/208 V at inside-delta circuit at 50 °C rated value</li> <li>at 220/230 V at inside-delta circuit at 50 °C rated value</li> <li>at 420/208 V at inside-delta circuit at 50 °C rated value</li> <li>at 420/480 V at inside-delta circuit at 50 °C rated value</li> <li>at 460/480 V at inside-delta circuit at 50 °C rated value</li> <li>at 460/480 V at inside-delta circuit at 50 °C rated value</li> <li>at 460/480 V at inside-delta circuit at 50 °C rated value</li> <li>at 460/480 V at inside-delta circuit at 50 °C rated value</li> <li>contact rating of auxiliary contacts according to UL</li> <li>R300-B300</li> <li>Safety related data</li> <li>protection on the front acc. to IEC 60529</li> <li>IP00; IP20 with cover</li> <li>finger-safe, for vertical contact from the front with cover</li> <li>electromagnetic compatibility</li> <li>acc. to IEC 60529</li> <li>IP00; IP20 with cover</li> <li>to LEC &amp; 5029</li> <li>IP00; IP20 with cover</li> <li>to ATEX</li> <li>Protection according to ATEX directive 2014/34/EU</li> <li>IVPe of protection according to ATEX directive 2014/34/EU</li> <li>IVPe of protection according to ATEX directive 2014/34/EU</li> <li>IVP20 From the form acc. to IEC 61508 relating to ATEX</li> <li>PFDavg with low demand rate acc. to IEC 61508 relating to ATEX</li> <li>Safety Integrity Level (SIL) acc. to IEC 61508 relating to ATEX</li> <li>Safety Integrity Level (SIL) acc. to IEC 61508 relating to ATEX</li> <li>T1 value for proof test interval or service life acc. to</li> <li>3 y</li> </ul>		
<ul> <li>e at 200/208 V at inside-delta circuit at 50 °C rated value</li> <li>e at 220/230 V at inside-delta circuit at 50 °C rated value</li> <li>e at 460/480 V at inside-delta circuit at 50 °C rated value</li> <li>e at 460/480 V at inside-delta circuit at 50 °C rated value</li> <li>e at 460/480 V at inside-delta circuit at 50 °C rated value</li> <li>e at 460/480 V at inside-delta circuit at 50 °C rated value</li> <li>e at 460/480 V at inside-delta circuit at 50 °C rated value</li> <li>e at 460/480 V at inside-delta circuit at 50 °C rated value</li> <li>e at 460/480 V at inside-delta circuit at 50 °C rated value</li> <li>R300-B300</li> <li>Safety related data</li> <li>protection class IP on the front acc. to IEC 60529</li> <li>i I (2) I P20 with cover</li> <li>i I (2) I Ex to D3 X</li> <li>i I (2) I Ex to D4 I I (2) I Ex to D5 I Ex pxb D5 I, II (2) I Ex to D5 I Ex pxb D5 I, II (2) I Ex to D5 I Ex pxb D5 I, II (2) I Ex to D5 I Ex pxb D5 I, II (2) I Ex to D5 I Ex pxb D5 I, II (2) I Ex to D5 I Ex pxb D5 I, II (2) I Ex to D5 I Ex pxb D5 I, II (2) I Ex to D5 I Ex pxb D5 I, II (2) I Ex to D5 I Ex pxb D5 I, II (2) I Ex to D5 I Ex pxb D5 I, II (2) I Ex to D5 I Ex pxb D5 I, II (2) I Ex to D5 I Ex pxb D5 I, II (2) I Ex to D5 I Ex pxb D5 I, II (2) I Ex to D5 I Ex pxb D5 I, II (2) I Ex to D5 I Ex pxb D5 I, II (2) I Ex to D5 I Ex pxb D5 I, II (2) I Ex to D5 I Ex pxb D5 I, II (2) I Ex to D5 I Ex pxb D5 I, II (2) I Ex to D5 I Ex pxb D5 I, II (2) I Ex to D5 I Ex pxb D5 I E</li></ul>		•
value       e at 220/230 V at inside-delta circuit at 50 °C rated value       25 hp         e at 460/480 V at inside-delta circuit at 50 °C rated value       50 hp         contact rating of auxiliary contacts according to UL       R300-B300         Safety related data       protection class IP on the front acc. to IEC 60529       IP00; IP20 with cover         touch protection on the front acc. to IEC 60529       ipon; IP20 with cover       acc. to IEC 60947-4-2         ATEX       Yes       eaccording to ATEX directive 2014/34/EU       Yes         • ATEX       Yes       Yes         • according to ATEX directive 2014/34/EU       BVS 18 ATEX F 003 X       It (2)D [Ex tb Db] [Ex pxb Db], II (2)D [Ex tb Db], II (2)D [Ex t		
value       • at 460/480 V at inside-delta circuit at 50 °C rated value       50 hp         contact rating of auxiliary contacts according to UL       R300-B300         Safety related data       protection class IP on the front acc. to IEC 60529       IP00; IP20 with cover         touch protection on the front acc. to IEC 60529       finger-safe, for vertical contact from the front with cover         electromagnetic compatibility       acc. to IEC 60947-4-2         ATEX       Yes         • 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]         hardware fault tolerance acc. to IEC 61508 relating to ATEX       0.0008         PFDavg with low demand rate acc. to IEC 61508 relating to ATEX       0.0000005 1/h         Safety Integrity Level (SIL) acc. to IEC 61508 relating to ATEX       SIL1         Safety Integrity Level (SIL) acc. to IEC 61508 relating to ATEX       SIL1         T1 value for proof test interval or service life acc. to       3 y	value	
value       R300-B300         Safety related data       R300-B300         protection class IP on the front acc. to IEC 60529       IP00; IP20 with cover         touch protection on the front acc. to IEC 60529       finger-safe, for vertical contact from the front with cover         electromagnetic compatibility       acc. to IEC 60947-4-2         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]         hardware fault tolerance acc. to IEC 61508 relating to ATEX       0         PFDavg with how demand rate acc. to EN 62061 relating to ATEX       0.0008         PFHD with high demand rate acc. to IEC 61508 relating to ATEX       Safety Integrity Level (SIL) acc. to IEC 61508 relating to ATEX         T1 value for proof test interval or service life acc. to       3 y	value	
Safety related data         protection class IP on the front acc. to IEC 60529       IP00; IP20 with cover         touch protection on the front acc. to IEC 60529       finger-safe, for vertical contact from the front with cover         electromagnetic compatibility       acc. to IEC 60947-4-2         ATEX       Yes         • 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], 1 (W2) [Ex db Mb]         hardware fault tolerance acc. to IEC 61508 relating to ATEX       0         PFDavg with low demand rate acc. to IEC 61508       0.008         relating to ATEX       0.0000005 1/h         PFDavg with high demand rate acc. to IEC 61508 relating to ATEX       0.0000005 1/h         Safety Integrity Level (SIL) acc. to IEC 61508 relating to ATEX       SIL1         T1 value for proof test interval or service life acc. to       3 y	value	
protection class IP on the front acc. to IEC 60529       IP00; IP20 with cover         touch protection on the front acc. to IEC 60529       finger-safe, for vertical contact from the front with cover         electromagnetic compatibility       acc. to IEC 60947-4-2         ATEX       Yes         • 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]         hardware fault tolerance acc. to IEC 61508 relating to ATEX       0         PFDavg with low demand rate acc. to IEC 61508       0.008         relating to ATEX       0.0000005 1/h         PFHD with high demand rate acc. to IEC 61508 relating to ATEX       0.0000005 1/h         Safety Integrity Level (SIL) acc. to IEC 61508 relating to ATEX       SIL1         T1 value for proof test interval or service life acc. to       3 y		R300-B300
touch protection on the front acc. 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       Yes         • 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 pxb Gb], II (2)D [Ex tb Db] [Ex pxb Db], II (M2) [Ex db Mb]         hardware fault tolerance acc. to IEC 61508 relating to ATEX       0         PFDavg with low demand rate acc. to IEC 61508       0.008         relating to ATEX       0.0000005 1/h         PFHD with high demand rate acc. to IEC 61508 relating to ATEX       SIL1         Safety Integrity Level (SIL) acc. to IEC 61508 relating to ATEX       SIL1         T1 value for proof test interval or service life acc. to       3 y		
electromagnetic compatibility       acc. to IEC 60947-4-2         ATEX       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       Il (2)G [Ex eb Gb] [Ex db Gb] [Ex pxb Gb], II (2)D [Ex tb Db] [Ex pxb Db], I (M2) [Ex db Mb]         hardware fault tolerance acc. to IEC 61508 relating to ATEX       0         PFDavg with low demand rate acc. to IEC 61508       0.008         relating to ATEX       0.0000005 1/h         PFHD with high demand rate acc. to IEC 61508 relating to ATEX       0.0000005 1/h         Safety Integrity Level (SIL) acc. to IEC 61508 relating to ATEX       SIL1         T1 value for proof test interval or service life acc. to       3 y	•	
ATEX         certificate of suitability         • ATEX         • IECEx         • IECEx         • 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]         hardware fault tolerance acc. to IEC 61508 relating to ATEX         PFDavg with low demand rate acc. to IEC 61508 relating to ATEX         PFHD with high demand rate acc. to EN 62061 relating to ATEX         Safety Integrity Level (SIL) acc. to IEC 61508 relating to ATEX         T1 value for proof test interval or service life acc. to		
certificate of suitability <ul> <li>ATEX</li> <li>IECEx</li> <li>according to ATEX directive 2014/34/EU</li> <li>BVS 18 ATEX F 003 X</li> </ul> type of protection 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]         hardware fault tolerance acc. to IEC 61508 relating to ATEX       0         PFDavg with low demand rate acc. to IEC 61508       0.008         relating to ATEX       0.0000005 1/h         PFHD with high demand rate acc. to IEC 61508 relating to ATEX       0.0000005 1/h         Safety Integrity Level (SIL) acc. to IEC 61508 relating to ATEX       SIL1         T1 value for proof test interval or service life acc. to       3 y		acc. to IEC 60947-4-2
<ul> <li>ATEX</li> <li>IECEX</li> <li>according to ATEX directive 2014/34/EU</li> <li>BVS 18 ATEX F 003 X</li> <li>type of protection according to ATEX directive 2014/34/EU</li> <li>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]</li> <li>hardware fault tolerance acc. to IEC 61508 relating to ATEX</li> <li>PFDavg with low demand rate acc. to IEC 61508</li> <li>relating to ATEX</li> <li>PFHD with high demand rate acc. to EN 62061 relating to ATEX</li> <li>Safety Integrity Level (SIL) acc. to IEC 61508 relating to ATEX</li> <li>T1 value for proof test interval or service life acc. to 3 y</li> </ul>		
<ul> <li>IECEx</li> <li>according to ATEX directive 2014/34/EU</li> <li>BVS 18 ATEX F 003 X</li> <li>type of protection according to ATEX directive 2014/34/EU</li> <li>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]</li> <li>hardware fault tolerance acc. to IEC 61508 relating to ATEX</li> <li>PFDavg with low demand rate acc. to IEC 61508</li> <li>PFHD with high demand rate acc. to EN 62061 relating to ATEX</li> <li>PFHD with high demand rate acc. to IEC 61508 relating to ATEX</li> <li>Safety Integrity Level (SIL) acc. to IEC 61508 relating to ATEX</li> <li>Safety Integrity Level (SIL) acc. to IEC 61508 relating to ATEX</li> <li>T1 value for proof test interval or service life acc. to 3 y</li> </ul>	-	
• according to ATEX directive 2014/34/EUBVS 18 ATEX F 003 Xtype of protection according to ATEX directive 2014/34/EUII (2)G [Ex eb Gb] [Ex db Gb] [Ex pxb Gb], II (2)D [Ex tb Db] [Ex pxb Db], I (M2) [Ex db Mb]hardware fault tolerance acc. to IEC 61508 relating to ATEX0PFDavg with low demand rate acc. to IEC 61508 relating to ATEX0.008PFHD with high demand rate acc. to EN 62061 relating to ATEX0.0000005 1/hSafety Integrity Level (SIL) acc. to IEC 61508 relating to ATEXSIL1T1 value for proof test interval or service life acc. to3 y		
Jtype of protection according to ATEX directive 2014/34/EUII (2)G [Ex eb Gb] [Ex db Gb] [Ex pxb Gb], II (2)D [Ex tb Db] [Ex pxb Db], I (M2) [Ex db Mb]hardware fault tolerance acc. to IEC 61508 relating to ATEX0PFDavg with low demand rate acc. to IEC 61508 relating to ATEX0.0008PFHD with high demand rate acc. to EN 62061 relating to ATEX0.0000005 1/hSafety Integrity Level (SIL) acc. to IEC 61508 relating to ATEXSIL1T1 value for proof test interval or service life acc. to3 y		
2014/34/EU       I (M2) [Ex db Mb]         hardware fault tolerance acc. to IEC 61508 relating to ATEX       0         PFDavg with low demand rate acc. to IEC 61508 relating to ATEX       0.008         PFHD with high demand rate acc. to EN 62061 relating to ATEX       0.0000005 1/h         Safety Integrity Level (SIL) acc. to IEC 61508 relating to ATEX       SIL1         T1 value for proof test interval or service life acc. to       3 y		
ATEX       0.008         PFDavg with low demand rate acc. to IEC 61508 relating to ATEX       0.008         PFHD with high demand rate acc. to EN 62061 relating to ATEX       0.0000005 1/h         Safety Integrity Level (SIL) acc. to IEC 61508 relating to ATEX       SIL1         T1 value for proof test interval or service life acc. to       3 y	2014/34/EU	I (M2) [Ex db Mb]
relating to ATEX       0.0000005 1/h         PFHD with high demand rate acc. to EN 62061 relating to ATEX       0.0000005 1/h         Safety Integrity Level (SIL) acc. to IEC 61508 relating to ATEX       SIL1         T1 value for proof test interval or service life acc. to       3 y	ATEX	
to ATEX         Safety Integrity Level (SIL) acc. to IEC 61508 relating to ATEX         SIL1         T1 value for proof test interval or service life acc. to         3 y	relating to ATEX	
to ATEX T1 value for proof test interval or service life acc. to 3 y	to ATEX	
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## Further information

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=3RW5524-1HA04 Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5524-1HA04

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

https://support.industry.siemens.com/cs/ww/en/ps/3RW5524-1HA04

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

http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RW5524-1HA04&lang=en

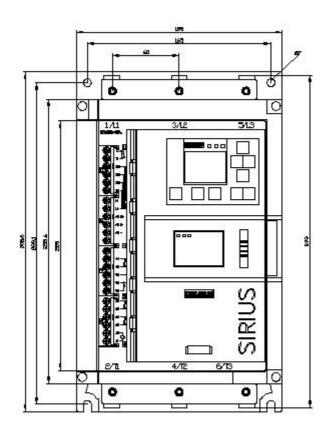
Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

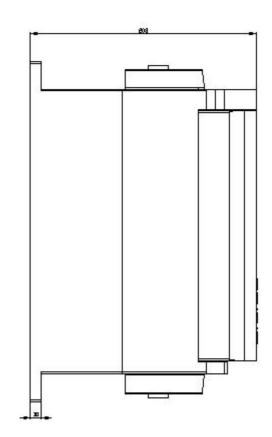
https://support.industry.siemens.com/cs/ww/en/ps/3RW5524-1HA04/char

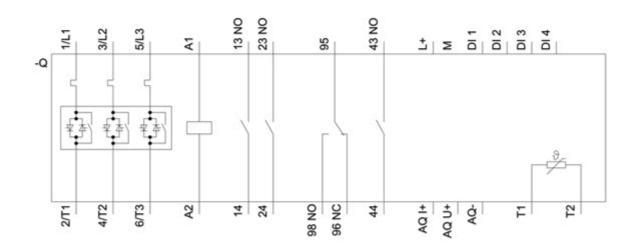
Characteristic: Installation altitude

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5524-1HA04&objecttype=14&gridview=view1 Simulation Tool for Soft Starters (STS)

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







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