SIEMENS



Data sheet

3RW5527-1HA16



SIRIUS soft starter 200-690 V 93 A, 110-250 V AC Screw terminals

product brand name	SIRIUS
product category	Hybrid switching devices
product designation	Soft starter
product type designation	3RW55
manufacturer's article number	
 of high feature HMI module usable 	<u>3RW5980-0HF00</u>
 of communication module PROFINET standard usable 	<u>3RW5980-0CS00</u>
 of communication module PROFINET high-feature usable 	<u>3RW5950-0CH00</u>
 of communication module PROFIBUS usable 	<u>3RW5980-0CP00</u>
 of communication module Modbus TCP usable 	<u>3RW5980-0CT00</u>
 of communication module Modbus RTU usable 	<u>3RW5980-0CR00</u>
 of communication module Ethernet/IP 	<u>3RW5980-0CE00</u>
 of circuit breaker usable at 400 V 	3VA2216-7MN32-0AA0; Type of coordination 1, Iq = 15 kA, CLASS 10
 of circuit breaker usable at 500 V 	3VA2216-7MN32-0AA0: Type of coordination 1. Iq = 10 kA, CLASS 10
 of circuit breaker usable at 400 V at inside-delta circuit 	3VA2220-7MN32-0AA0: Type of coordination 1, Iq = 15 kA, CLASS 10
 of circuit breaker usable at 500 V at inside-delta circuit 	3VA2220-7MN32-0AA0; Type of coordination 1, Iq = 10 kA, CLASS 10
 of the gG fuse usable up to 690 V 	<u>3NA3136-6; Type of coordination 1, Iq = 65 kA</u>
 of the gG fuse usable at inside-delta circuit up to 500 V 	<u>3NA3136-6; Type of coordination 1, Iq = 65 kA</u>
 of full range R fuse link for semiconductor protection usable up to 690 V 	<u>3NE1224-0; Type of coordination 2, Iq = 65 kA</u>
 of back-up R fuse link for semiconductor protection usable up to 690 V 	<u>3NE3227: Type of coordination 2. Iq = 65 kA</u>
General technical data	
starting voltage [%]	20 100 %
stopping voltage [%]	50 %; non-adjustable
start-up ramp time of soft starter	0 360 s
ramp-down time of soft starter	0 360 s
start torque [%]	10 100 %
stopping torque [%]	10 100 %
torque limitation [%]	20 200 %
current limiting value [%] adjustable	125 800 %
breakaway voltage [%] adjustable	40 100 %
breakaway time adjustable	0 2 s
number of parameter sets	3
accuracy class according to IEC 61557-12	5 %
certificate of suitability	

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• CE marking	Yes
• CE marking	Yes Yes Yes
 UL approval CSA approval 	
product component	
HMI-High Feature	Yes
is supported HMI-High Feature	Yes
product feature integrated bypass contact system	Yes
number of controlled phases	3
trip class	CLASS 10A / 10E (default) / 20E / 30E; acc. to IEC 60947-4-2
current unbalance limiting value [%]	10 60 %
ground-fault monitoring limiting value [%]	10 95 %
buffering time in the event of power failure	
• for main current circuit	100 ms
for control circuit	100 ms
idle time adjustable	0 255 s
insulation voltage rated value	690 V
degree of pollution	3, acc. to IEC 60947-4-2
impulse voltage rated value	8 kV
blocking voltage of the thyristor maximum	1 800 V
service factor	1.15
surge voltage resistance rated value	8 kV
maximum permissible voltage for safe isolation	
between main and auxiliary circuit	690 V; does not apply for thermistor connection
shock resistance	15 g / 11 ms, from 6 g / 11 ms with potential contact lifting
vibration resistance	15 mm up to 6 Hz; 2 g up to 500 Hz
recovery time after overload trip adjustable	60 1 800 s
utilization category according to IEC 60947-4-2	AC 53a
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	02/15/2018
product function	
 ramp-up (soft starting) 	Yes
 ramp-down (soft stop) 	Yes
 breakaway pulse 	Yes
 adjustable current limitation 	Yes
 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)
evaluation of thermistor motor protection	Yes; Type A PTC or Klixon / Thermoclick
inside-delta circuit	Yes; Only up to 600 V operating voltage
auto-RESET	Yes
• manual RESET	Yes
remote reset	Yes
communication function	Yes
operating measured value display	Yes
• event list	Yes
error logbook	Yes
via software parameterizable	Yes
via software configurable	Yes
screw terminal spring loaded terminal	Yes No
 spring-loaded terminal PROFlenergy 	
	Yes; in connection with the PROFINET Standard and PROFINET High- Feature communication modules
• firmware update	Yes
removable terminal for control circuit	Yes
voltage ramp	Yes

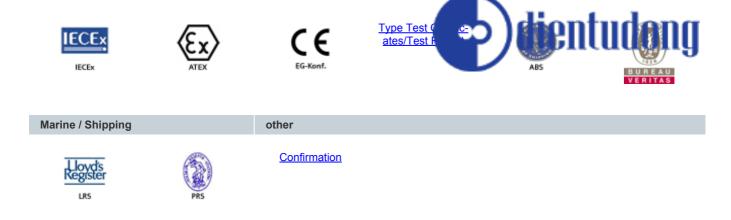
to an a start	
torque control	Yes Yes Yes; 4 20 mA (de P 10 V dientudong
combined braking	
analog output programmable control inputs/outputs	
programmable control inputs/outputs	Yes
condition monitoring	Yes
automatic parameterisation	Yes
 application wizards alternative run-down 	Yes
 emergency operation mode reversing operation 	Yes
 soft starting at heavy starting conditions 	Yes
Power Electronics	
operational current	
• at 40 °C rated value	93 A
• at 40 °C rated value minimum	19 A
• at 50 °C rated value	82.5 A
• at 60 °C rated value	75.5 A
operational current at inside-delta circuit	
• at 40 °C rated value	161 A
• at 50 °C rated value	143 A
• at 60 °C rated value	131 A
operating voltage	
rated value	200 690 V
at inside-delta circuit rated value	200 600 V
relative negative tolerance of the operating voltage	-15 %
relative positive tolerance of the operating voltage	10 %
relative negative tolerance of the operating voltage at inside-delta circuit	-15 %
relative positive tolerance of the operating voltage at inside-delta circuit	10 %
operating power for 3-phase motors	
 at 230 V at 40 °C rated value 	22 kW
 at 230 V at inside-delta circuit at 40 °C rated value 	45 kW
 at 400 V at 40 °C rated value 	45 kW
 at 400 V at inside-delta circuit at 40 °C rated value 	90 kW
• at 500 V at 40 °C rated value	55 kW
 at 500 V at inside-delta circuit at 40 °C rated value 	110 kW
at 690 V at 40 °C rated value	90 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 % 10 %; Relative to set le
minimum load [%] power loss [W] for rated value of the current at AC	
at 40 °C after startup	28 W
• at 50 °C after startup	25 W
• at 60 °C after startup	23 W
power loss [W] at AC at current limitation 350 %	
 at 40 °C during startup 	1 258 W
• at 50 °C during startup	1 065 W
 at 60 °C during startup 	948 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
control supply voltage at AC	
● at 50 Hz	110 250 V
• at 60 Hz	110 250 V
relative negative tolerance of the control supply voltage at AC at 50 Hz	-15 %
relative positive tolerance of the control supply voltage at AC at 50 Hz	10 %

relative negative tolerance of the control supply voltage at AC at 60 Hz	^{-15 %} (p)dientudong
relative positive tolerance of the control supply voltage at AC at 60 Hz	10 %
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 current in standby mode rated value	100 mA
holding current in bypass operation rated value	180 mA
locked-rotor current at close of bypass contact maximum	0.8 A
inrush current peak at application of control supply voltage maximum	43 A
duration of inrush current peak at application of control supply voltage	1.6 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	
number of digital inputs	4
parameterizable	4
 number of digital outputs 	4
number of digital outputs parameterizable	3
number of digital outputs not parameterizable	1
digital output version	3 normally-open contacts (NO) / 1 changeover contact (CO)
number of analog outputs	1
switching capacity current of the relay outputs	
• at AC-15 at 250 V rated value	3 A
 at DC-13 at 24 V rated value 	1 A
Installation/ mounting/ dimensions	
mounting position	Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)
fastening method	screw fixing
height	306 mm
width	185 mm
depth	203 mm
required spacing with side-by-side mounting	
• forwards	10 mm
• backwards	0 mm
• upwards	100 mm
 downwards 	75 mm
a at the aide	E mm
• at the side	5 mm
weight without packaging	5 mm 7.15 kg
weight without packaging Connections/ Terminals	
weight without packaging Connections/ Terminals type of electrical connection	7.15 kg
weight without packaging Connections/ Terminals type of electrical connection • for main current circuit	7.15 kg box terminal
weight without packaging Connections/ Terminals type of electrical connection • for main current circuit • for control circuit	7.15 kg box terminal screw-type terminals
weight without packaging Connections/ Terminals type of electrical connection • for main current circuit • for control circuit width of connection bar maximum	7.15 kg box terminal
weight without packaging Connections/ Terminals type of electrical connection • for main current circuit • for control circuit width of connection bar maximum wire length for thermistor connection	7.15 kg box terminal screw-type terminals 25 mm
weight without packaging Connections/ Terminals type of electrical connection • for main current circuit • for control circuit width of connection bar maximum	7.15 kg box terminal screw-type terminals
weight without packaging Connections/ Terminals type of electrical connection • for main current circuit • for control circuit width of connection bar maximum wire length for thermistor connection • with conductor cross-section = 0.5 mm² maximum	7.15 kg box terminal screw-type terminals 25 mm 50 m
weight without packaging Connections/ Terminals type of electrical connection • for main current circuit • for control circuit width of connection bar maximum wire length for thermistor connection • with conductor cross-section = 0.5 mm² maximum • with conductor cross-section = 1.5 mm² maximum	7.15 kg box terminal screw-type terminals 25 mm 50 m 150 m
weight without packaging Connections/ Terminals type of electrical connection • for main current circuit • for control circuit width of connection bar maximum wire length for thermistor connection • with conductor cross-section = 0.5 mm² maximum • with conductor cross-section = 1.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum	7.15 kg box terminal screw-type terminals 25 mm 50 m 150 m
weight without packaging Connections/ Terminals type of electrical connection • for main current circuit • for control circuit width of connection bar maximum wire length for thermistor connection • with conductor cross-section = 0.5 mm² maximum • with conductor cross-section = 1.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • main contacts for box terminal using the front	7.15 kg box terminal screw-type terminals 25 mm 50 m 150 m 250 m
weight without packaging Connections/ Terminals type of electrical connection • for main current circuit • for control circuit width of connection bar maximum wire length for thermistor connection • with conductor cross-section = 0.5 mm² maximum • with conductor cross-section = 1.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • for main contacts for box terminal using the front clamping point solid • for main contacts for box terminal using the front clamping point finely stranded with core end	7.15 kg box terminal screw-type terminals 25 mm 50 m 150 m 250 m 1x (2.5 16 mm ²)

using the front clamping point	
	diantudana
 for main contacts for box terminal using the back clamping point solid 	1x (2.5 16 mm ²) dientudong
 at AWG cables for main contacts for box terminal using the back clamping point 	1x (10 2/0)
 for main contacts for box terminal using both clamping points solid 	2x (2.5 16 mm²)
 for main contacts for box terminal using both clamping points finely stranded with core end processing 	2x (2.5 35 mm²)
 for main contacts for box terminal using both clamping points stranded 	2x (6 16 mm²), 2x (10 50 mm²)
 for main contacts for box terminal using the back clamping point finely stranded with core end processing 	1x (2.5 50 mm²)
 for main contacts for box terminal using the back clamping point stranded 	1x (10 70 mm²)
type of connectable conductor cross-sections	
 for control circuit solid 	1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²)
 for control circuit finely stranded with core end processing 	1x (0.5 2.5 mm²), 2x (0.5 1.5 mm²)
 at AWG cables for control circuit solid 	1x (20 12), 2x (20 14)
wire length	
 between soft starter and motor maximum 	800 m
at the digital inputs at DC maximum	1 000 m
tightening torque	
 for main contacts with screw-type terminals 	4.5 6 N·m
 for auxiliary and control contacts with screw-type terminals 	0.8 1.2 N·m
tightening torque [lbf·in]	
 for main contacts with screw-type terminals 	40 53 lbf·in
 for auxiliary and control contacts with screw-type terminals 	7 10.3 lbf·in
Ambient conditions	
	2 000 m; Derating as of 1000 m, asso estalog
installation altitude at height above sea level maximum	2 000 m, Derating as or 1000 m, see catalog
installation altitude at height above sea level maximum ambient temperature	2 000 m; Derating as of 1000 m, see catalog
	-25 +60 °C; Please observe derating at temperatures of 40 °C or above
ambient temperature	-25 +60 °C; Please observe derating at temperatures of 40 °C or
ambient temperature • during operation	-25 +60 °C; Please observe derating at temperatures of 40 °C or above
 ambient temperature during operation during storage and transport environmental category during operation according to IEC 60721 	 -25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6
ambient temperature • during operation • during storage and transport environmental category • during operation according to IEC 60721 • during storage according to IEC 60721	 -25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4
 ambient temperature during operation during storage and transport environmental category during operation according to IEC 60721 during storage according to IEC 60721 during transport according to IEC 60721 	 -25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4 2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)
ambient temperature • during operation • during storage and transport environmental category • during operation according to IEC 60721 • during storage according to IEC 60721 • during transport according to IEC 60721 EMC emitted interference	 -25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4
ambient temperature • during operation • during storage and transport environmental category • during operation according to IEC 60721 • during storage according to IEC 60721 • during transport according to IEC 60721 • Communication/ Protocol	 -25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4 2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)
ambient temperature • during operation • during storage and transport environmental category • during operation according to IEC 60721 • during storage according to IEC 60721 • during transport according to IEC 60721 EMC emitted interference Communication/ Protocol communication module is supported	 -25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4 2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m) acc. to IEC 60947-4-2: Class A, Class B on request
ambient temperature • during operation • during storage and transport environmental category • during operation according to IEC 60721 • during storage according to IEC 60721 • during transport according to IEC 60721 • during transport according to IEC 60721 EMC emitted interference Communication / Protocol communication module is supported • PROFINET standard	 -25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4 2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m) acc. to IEC 60947-4-2: Class A, Class B on request
ambient temperature • during operation • during storage and transport environmental category • during operation according to IEC 60721 • during storage according to IEC 60721 • during transport according to IEC 60721 • during transport according to IEC 60721 EMC emitted interference Communication/ Protocol communication module is supported • PROFINET standard • PROFINET high-feature	 -25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4 2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m) acc. to IEC 60947-4-2: Class A, Class B on request
ambient temperature • during operation • during storage and transport environmental category • during operation according to IEC 60721 • during storage according to IEC 60721 • during transport according to IEC 60721 • Communication / Protocol communication module is supported • PROFINET standard • PROFINET high-feature • EtherNet/IP	 -25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4 2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m) acc. to IEC 60947-4-2: Class A, Class B on request
ambient temperature • during operation • during storage and transport environmental category • during operation according to IEC 60721 • during storage according to IEC 60721 • during transport according to IEC 60721 EMC emitted interference Communication / Protocol communication module is supported • PROFINET standard • PROFINET high-feature • EtherNet/IP • Modbus RTU	 -25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4 2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m) acc. to IEC 60947-4-2: Class A, Class B on request Yes Yes Yes
ambient temperature • during operation • during storage and transport environmental category • during operation according to IEC 60721 • during storage according to IEC 60721 • during transport according to IEC 60721 • during transport according to IEC 60721 EMC emitted interference Communication / Protocol communication module is supported • PROFINET standard • PROFINET high-feature • EtherNet/IP • Modbus RTU • Modbus TCP	 -25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4 2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m) acc. to IEC 60947-4-2: Class A, Class B on request Yes Yes Yes Yes
ambient temperature • during operation • during storage and transport environmental category • during operation according to IEC 60721 • during storage according to IEC 60721 • during transport according to IEC 60721 • during transport according to IEC 60721 EMC emitted interference Communication/ Protocol communication module is supported • PROFINET standard • PROFINET high-feature • EtherNet/IP • Modbus RTU • Modbus TCP • PROFIBUS	 -25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4 2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m) acc. to IEC 60947-4-2: Class A, Class B on request Yes Yes Yes
ambient temperature • during operation • during storage and transport environmental category • during operation according to IEC 60721 • during storage according to IEC 60721 • during transport according to IEC 60721 • during transport according to IEC 60721 EMC emitted interference Communication / Protocol communication module is supported • PROFINET standard • PROFINET high-feature • EtherNet/IP • Modbus RTU • Modbus TCP • PROFIBUS UL/CSA ratings	 -25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4 2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m) acc. to IEC 60947-4-2: Class A, Class B on request Yes Yes Yes Yes
ambient temperature • during operation • during storage and transport environmental category • during operation according to IEC 60721 • during storage according to IEC 60721 • during transport according to IEC 60721 EMC emitted interference Communication Protocol communication module is supported • PROFINET standard • PROFINET high-feature • EtherNet/IP • Modbus RTU • Modbus TCP • PROFIBUS UL/CSA ratings manufacturer's article number	 -25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4 2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m) acc. to IEC 60947-4-2: Class A, Class B on request Yes Yes Yes Yes
ambient temperature • during operation • during storage and transport environmental category • during operation according to IEC 60721 • during storage according to IEC 60721 • during transport according to IEC 60721 EMC emitted interference Communication / Protocol communication module is supported • PROFINET standard • PROFINET standard • PROFINET high-feature • EtherNet/IP • Modbus RTU • Modbus TCP • PROFIBUS UL/CSA ratings manufacturer's article number • of circuit breaker — usable for Standard Faults at 460/480 V	 -25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4 2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m) acc. to IEC 60947-4-2: Class A, Class B on request Yes Yes Yes Yes
ambient temperature • during operation • during storage and transport environmental category • during operation according to IEC 60721 • during storage according to IEC 60721 • during transport according to IEC 60721 • during transport according to IEC 60721 EMC emitted interference Communication/ Protocol communication module is supported • PROFINET standard • PROFINET high-feature • EtherNet/IP • Modbus RTU • Modbus TCP • PROFIBUS UL/CSA ratings manufacturer's article number • of circuit breaker	 -25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4 2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m) acc. to IEC 60947-4-2: Class A, Class B on request Yes Yes Yes Yes Yes
ambient temperature • during operation • during storage and transport environmental category • during operation according to IEC 60721 • during storage according to IEC 60721 • during transport according to IEC 60721 • during transport according to IEC 60721 EMC emitted interference Communication/ Protocol communication module is supported • PROFINET standard • PROFINET high-feature • EtherNet/IP • Modbus RTU • Modbus TCP • PROFIBUS UL/CSA ratings manufacturer's article number • of circuit breaker — usable for Standard Faults at 460/480 V according to UL — usable for High Faults at 460/480 V according	 -25 +60 °C; Please observe derating at temperatures of 40 °C or above -40 +80 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4 2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m) acc. to IEC 60947-4-2: Class A, Class B on request Yes Yes Yes Yes Yes Yes Yes Siemens type: 3VA51, max. 125 A; Iq = 10 kA

delta circuit according to UL	dientudena
 — usable for Standard Faults at 575/600 V according to UL 	Siemens type: 3V/ nax. 125 / 1 = 0k1110000
 — usable for High Faults at 575/600 V at inside- delta circuit according to UL 	Siemens type: 3VA5
 — usable for Standard Faults at 575/600 V at inside-delta circuit according to UL 	Siemens type: 3VA51, max. 125 A; Iq = 10 kA
of the fuse	
— usable for Standard Faults up to 575/600 V according to UL	Type: Class RK5 / K5, max. 300 A; lq = 10 kA
 — usable for High Faults up to 575/600 V according to UL 	Type: Class J / L, max. 250 A; lq = 100 kA
 — usable for Standard Faults at inside-delta circuit up to 575/600 V according to UL 	Type: Class RK5 / K5, max. 300 A; lq = 10 kA
 usable for High Faults at inside-delta circuit up to 575/600 V according to UL 	Type: Class J / L, max. 250 A; lq = 100 kA
operating power [hp] for 3-phase motors	
 at 200/208 V at 50 °C rated value 	25 hp
 at 220/230 V at 50 °C rated value 	30 hp
 at 460/480 V at 50 °C rated value 	60 hp
• at 575/600 V at 50 °C rated value	75 hp
 at 200/208 V at inside-delta circuit at 50 °C rated value 	40 hp
• at 220/230 V at inside-delta circuit at 50 °C rated value	50 hp
 at 460/480 V at inside-delta circuit at 50 °C rated value 	100 hp
at 575/600 V at inside-delta circuit at 50 °C rated value	125 hp
contact rating of auxiliary contacts according to UL	R300-B300
Safety related data	
protection class IP on the front according to IEC	IP00; IP20 with cover
	,
60529 touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front with cover
60529	
60529 touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front with cover
60529 touch protection on the front according to IEC 60529 electromagnetic compatibility	finger-safe, for vertical contact from the front with cover
60529 touch protection on the front according to IEC 60529 electromagnetic compatibility ATEX	finger-safe, for vertical contact from the front with cover acc. to IEC 60947-4-2
60529 touch protection on the front according to IEC 60529 electromagnetic compatibility ATEX certificate of suitability	finger-safe, for vertical contact from the front with cover
60529 touch protection on the front according to IEC 60529 electromagnetic compatibility ATEX certificate of suitability • ATEX • IECEx	finger-safe, for vertical contact from the front with cover acc. to IEC 60947-4-2 Yes
60529 touch protection on the front according to IEC 60529 electromagnetic compatibility ATEX certificate of suitability • ATEX	finger-safe, for vertical contact from the front with cover acc. to IEC 60947-4-2 Yes Yes
60529 touch protection on the front according to IEC 60529 electromagnetic compatibility ATEX certificate of suitability • ATEX • IECEx • according to ATEX directive 2014/34/EU type of protection according to ATEX directive	finger-safe, for vertical contact from the front with cover acc. to IEC 60947-4-2 Yes Yes BVS 18 ATEX F 003 X II (2)G [Ex eb Gb] [Ex db Gb] [Ex pxb Gb], II (2)D [Ex tb Db] [Ex pxb Db],
60529 touch protection on the front according to IEC 60529 electromagnetic compatibility ATEX certificate of suitability • ATEX • IECEx • according to ATEX directive 2014/34/EU type of protection according to ATEX directive 2014/34/EU hardware fault tolerance according to IEC 61508	finger-safe, for vertical contact from the front with cover acc. to IEC 60947-4-2 Yes Yes BVS 18 ATEX F 003 X 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]
60529 touch protection on the front according to IEC 60529 electromagnetic compatibility ATEX certificate of suitability • ATEX • IECEx • according to ATEX directive 2014/34/EU type of protection according to ATEX directive 2014/34/EU hardware fault tolerance according to IEC 61508 relating to ATEX PFDavg with low demand rate according to IEC 61508	finger-safe, for vertical contact from the front with cover acc. to IEC 60947-4-2 Yes PVes BVS 18 ATEX F 003 X 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] 0
60529 touch protection on the front according to IEC 60529 electromagnetic compatibility ATEX certificate of suitability • ATEX • IECEx • according to ATEX directive 2014/34/EU type of protection according to ATEX directive 2014/34/EU hardware fault tolerance according to IEC 61508 relating to ATEX PFDavg with low demand rate according to IEC 61508 relating to ATEX PFHD with high demand rate according to EN 62061	finger-safe, for vertical contact from the front with cover acc. to IEC 60947-4-2 Yes BVS 18 ATEX F 003 X 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] 0 0.008
60529 touch protection on the front according to IEC 60529 electromagnetic compatibility ATEX certificate of suitability • ATEX • IECEx • according to ATEX directive 2014/34/EU type of protection according to ATEX directive 2014/34/EU hardware fault tolerance according to IEC 61508 relating to ATEX PFDavg with low demand rate according to IEC 61508 relating to ATEX PFHD with high demand rate according to EN 62061 relating to ATEX Safety Integrity Level (SIL) according to IEC 61508	finger-safe, for vertical contact from the front with cover acc. to IEC 60947-4-2 Yes BVS 18 ATEX F 003 X 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] 0 0.008 5E-7 1/h
60529 touch protection on the front according to IEC 60529 electromagnetic compatibility ATEX certificate of suitability • ATEX • IECEx • according to ATEX directive 2014/34/EU type of protection according to ATEX directive 2014/34/EU hardware fault tolerance according to IEC 61508 relating to ATEX PFDavg with low demand rate according to IEC 61508 relating to ATEX PFHD with high demand rate according to EN 62061 relating to ATEX Safety Integrity Level (SIL) according to IEC 61508 relating to ATEX T1 value for proof test interval or service life	finger-safe, for vertical contact from the front with cover acc. to IEC 60947-4-2 Yes BVS 18 ATEX F 003 X 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] 0 0.008 5E-7 1/h SIL1
60529 touch protection on the front according to IEC 60529 electromagnetic compatibility ATEX certificate of suitability • ATEX • IECEx • according to ATEX directive 2014/34/EU type of protection according to ATEX directive 2014/34/EU hardware fault tolerance according to IEC 61508 relating to ATEX PFDavg with low demand rate according to IEC 61508 relating to ATEX PFHD with high demand rate according to EN 62061 relating to ATEX Safety Integrity Level (SIL) according to IEC 61508 relating to ATEX T1 value for proof test interval or service life according to IEC 61508 relating to ATEX Certificates/ approvals	finger-safe, for vertical contact from the front with cover acc. to IEC 60947-4-2 Yes BVS 18 ATEX F 003 X 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] 0 0.008 5E-7 1/h SIL1 3 s
60529 touch protection on the front according to IEC 60529 electromagnetic compatibility ATEX certificate of suitability • ATEX • IECEx • according to ATEX directive 2014/34/EU type of protection according to ATEX directive 2014/34/EU hardware fault tolerance according to IEC 61508 relating to ATEX PFDavg with low demand rate according to IEC 61508 relating to ATEX PFHD with high demand rate according to EN 62061 relating to ATEX Safety Integrity Level (SIL) according to IEC 61508 relating to ATEX T1 value for proof test interval or service life according to IEC 61508 relating to ATEX	finger-safe, for vertical contact from the front with cover acc. to IEC 60947-4-2 Yes BVS 18 ATEX F 003 X 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] 0 0.008 5E-7 1/h SIL1
60529 touch protection on the front according to IEC 60529 electromagnetic compatibility ATEX certificate of suitability • ATEX • IECEx • according to ATEX directive 2014/34/EU type of protection according to ATEX directive 2014/34/EU hardware fault tolerance according to IEC 61508 relating to ATEX PFDavg with low demand rate according to IEC 61508 relating to ATEX PFHD with high demand rate according to EN 62061 relating to ATEX Safety Integrity Level (SIL) according to IEC 61508 relating to ATEX T1 value for proof test interval or service life according to IEC 61508 relating to ATEX Certificates/ approvals	finger-safe, for vertical contact from the front with cover acc. to IEC 60947-4-2 Yes BVS 18 ATEX F 003 X 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] 0 0.008 5E-7 1/h SIL1 3 s
60529 touch protection on the front according to IEC 60529 electromagnetic compatibility ATEX certificate of suitability • ATEX • IECEx • according to ATEX directive 2014/34/EU type of protection according to ATEX directive 2014/34/EU hardware fault tolerance according to IEC 61508 relating to ATEX PFDavg with low demand rate according to IEC 61508 relating to ATEX PFHD with high demand rate according to EN 62061 relating to ATEX Safety Integrity Level (SIL) according to IEC 61508 relating to ATEX T1 value for proof test interval or service life according to IEC 61508 relating to ATEX Certificates/ approvals General Product Approval	finger-safe, for vertical contact from the front with cover acc. to IEC 60947-4-2 Yes BVS 18 ATEX F 003 X 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] 0 0.008 5E-7 1/h SIL1 3 s
60529 touch protection on the front according to IEC 60529 electromagnetic compatibility ATEX certificate of suitability • ATEX • IECEx • according to ATEX directive 2014/34/EU type of protection according to ATEX directive 2014/34/EU hardware fault tolerance according to IEC 61508 relating to ATEX PFDavg with low demand rate according to IEC 61508 relating to ATEX PFHD with high demand rate according to IEC 61508 relating to ATEX Safety Integrity Level (SIL) according to IEC 61508 relating to ATEX T1 value for proof test interval or service life according to IEC 61508 relating to ATEX Certificates/ approvals General Product Approval Image: Confirmation Image: Confirmation Image: Confirmation Image: Confirmation Image: Confirmation	finger-safe, for vertical contact from the front with cover acc. to IEC 60947-4-2 Yes BVS 18 ATEX F 003 X 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] 0 0.008 5E-7 1/h SIL1 3 s EMC 20 EMC
60529 touch protection on the front according to IEC 60529 electromagnetic compatibility ATEX certificate of suitability • ATEX • IECEx • according to ATEX directive 2014/34/EU type of protection according to ATEX directive 2014/34/EU hardware fault tolerance according to IEC 61508 relating to ATEX PFDavg with low demand rate according to IEC 61508 relating to ATEX PFHD with high demand rate according to IEC 61508 relating to ATEX PFHD with high demand rate according to IEC 61508 relating to ATEX Safety Integrity Level (SIL) according to IEC 61508 relating to ATEX T1 value for proof test interval or service life according to IEC 61508 relating to ATEX Certificates/ approvals General Product Approval Image: Confirmation of the service interval or service life according to IEC 61508 relating to ATEX	finger-safe, for vertical contact from the front with cover acc. to IEC 60947-4-2 Yes BVS 18 ATEX F 003 X 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] 0 0.008 5E-7 1/h SIL1 3 s EMC M M M M M M M M M M M M M M M M M M

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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=3RW5527-1HA16

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5527-1HA16

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

https://support.industry.siemens.com/cs/ww/en/ps/3RW5527-1HA16

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5527-1HA16&lang=en

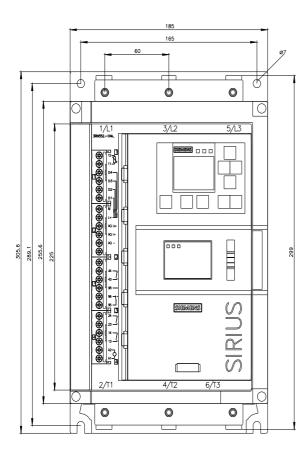
Characteristic: Tripping characteristics, I²t, Let-through current

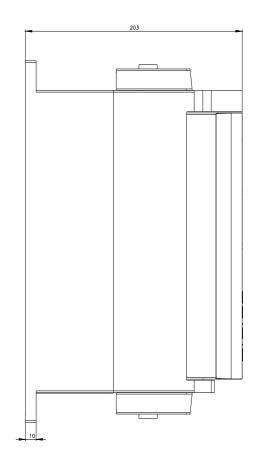
https://support.industry.siemens.com/cs/ww/en/ps/3RW5527-1HA16/char

Characteristic: Installation altitude

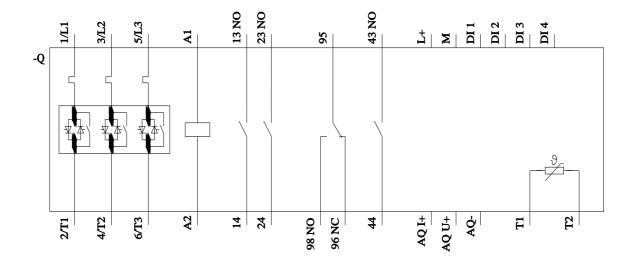
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5527-1HA16&objecttype=14&gridview=view1 Simulation Tool for Soft Starters (STS)

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









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