SIEMENS

Data sheet

3RW5525-1HA14



SIRIUS soft starter 200-480 V 63 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 	3VA2163-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10
 of circuit breaker usable at 500 V 	3VA2163-7MN32-0AA0; Type of coordination 1. lq = 20 kA, CLASS 10
 of circuit breaker usable at 400 V at inside-delta circuit 	3VA2110-7MN32-0AA0: Type of coordination 1, Iq = 65 kA, CLASS 10
 of circuit breaker usable at 500 V at inside-delta circuit 	<u>3VA2110-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10</u>
 of the gG fuse usable up to 690 V 	<u>3NA3830-6; Type of coordination 1, Iq = 65 kA</u>
 of the gG fuse usable at inside-delta circuit up to 500 V 	<u>3NA3830-6; Type of coordination 1, Iq = 65 kA</u>
 of full range R fuse link for semiconductor protection usable up to 690 V 	<u>3NE1022-0; 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. lq = 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	

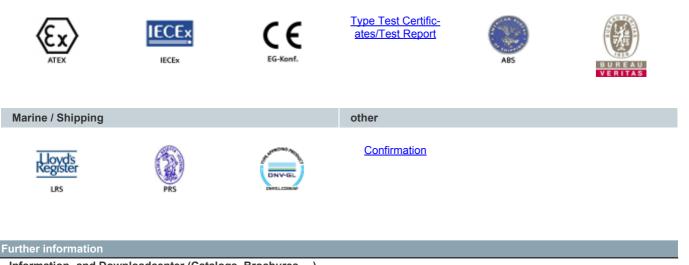
CE marking	Yes
UL approval	Yes
CSA approval	Yes
product component	
 HMI-High Feature 	Yes
 is supported HMI-High Feature 	Yes
product feature integrated bypass contact system	Yes
number of controlled phases	3
trip class	CLASS 10A / 10E (default) / 20E / 30E; acc. to IEC 60947-4-2
current unbalance limiting value [%]	10 60 %
ground-fault monitoring limiting value [%]	10 95 %
buffering time in the event of power failure	
• for main current circuit	100 ms
 for control circuit 	100 ms
idle time adjustable	0 255 s
insulation voltage rated value	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	
between main and auxiliary circuit	480 V; does not apply for thermistor connection
shock resistance	15 g / 11 ms, from 6 g / 11 ms with potential contact lifting
vibration resistance	15 mm up to 6 Hz; 2 g up to 500 Hz
recovery time after overload trip adjustable	60 1 800 s
utilization category according to IEC 60947-4-2	AC 53a
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	02/15/2018
product function	
 ramp-up (soft starting) 	Yes
 ramp-down (soft stop) 	Yes
 breakaway pulse 	Yes
 adjustable current limitation 	Yes
 creep speed in both directions of rotation 	Yes
 pump ramp down 	Yes
DC braking	Yes
 motor heating 	Yes
 slave pointer function 	Yes
trace function	Yes
intrinsic device protection	Yes
 motor overload protection 	Yes; Full motor protection (thermistor motor protection and electronic motor overload protection) / When using the motor overload protection according to ATEX, an upstream contactor is required in inside-delta
	circuit.
evaluation of thermistor motor protection	Yes; Type A PTC or Klixon / Thermoclick
inside-delta circuit	Yes
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	Yes
spring-loaded terminal	No
PROFlenergy	Yes; in connection with the PROFINET Standard and PROFINET High- Feature communication modules
firmware update	Yes

 removable terminal for control circuit 	Yes
	Yes
 voltage ramp torque control 	Yes
combined braking	Yes
-	
analog output programmable control inpute/outpute	Yes; 4 20 mA (default) / 0 10 V Yes
programmable control inputs/outputs	Yes
condition monitoring	Yes
automatic parameterisation	Yes
 application wizards alternative run-down	Yes
emergency operation mode	Yes
5 5 1	Yes
reversing operation	Yes
soft starting at heavy starting conditions	tes
Power Electronics	
operational current	CO A
• at 40 °C rated value	63 A
at 40 °C rated value minimum	13 A
 at 50 °C rated value at 60 °C rated value 	56 A
operational current at inside-delta circuit	51 A
erational current at inside-deita circuit e at 40 °C rated value	109 A
at 40 °C rated value at 50 °C rated value	96 A
 at 50 °C rated value at 60 °C rated value 	96 A 87.5 A
• at 60 °C rated value operating voltage	01.5 A
rated value	200 480 V
at inside-delta circuit rated value	200 480 V 200 480 V
relative negative tolerance of the operating voltage	-15 %
relative negative 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	
 at 230 V at 40 °C rated value 	18.5 kW
 at 230 V at inside-delta circuit at 40 °C rated value 	30 kW
 at 400 V at 40 °C rated value 	30 kW
• at 400 V at inside-delta circuit at 40 °C rated value	55 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	19 W
• at 50 °C after startup	17 W
• at 60 °C after startup	15 W
power loss [W] at AC at current limitation 350 %	4.050 M
at 40 °C during startup	1 056 W
• at 50 °C during startup	732 W
at 60 °C during startup	647 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	110 250 \/
• 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	10 %
voltage at AC at 50 Hz	
relative negative tolerance of the control supply	-15 %

voltage at AC at 60 Hz	
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	-10 %
voltage frequency relative positive tolerance of the control supply	10 %
voltage frequency	400 mA
control supply current in standby mode rated value	100 mA 180 mA
holding current in bypass operation rated value	
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°)
mounting position fastening method	Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°) screw fixing
fastening method	screw fixing
fastening method height	screw fixing 306 mm
fastening method height width	screw fixing 306 mm 185 mm
fastening method height width depth	screw fixing 306 mm 185 mm
fastening method height width depth required spacing with side-by-side mounting	screw fixing 306 mm 185 mm 203 mm
fastening method height width depth required spacing with side-by-side mounting • forwards	screw fixing 306 mm 185 mm 203 mm 10 mm
fastening method height width depth required spacing with side-by-side mounting • forwards • backwards	screw fixing 306 mm 185 mm 203 mm 10 mm 0 mm
fastening method height width depth required spacing with side-by-side mounting • forwards • backwards • upwards	screw fixing 306 mm 185 mm 203 mm 10 mm 0 mm 100 mm
fastening method height width depth required spacing with side-by-side mounting • forwards • backwards • upwards • downwards	screw fixing 306 mm 185 mm 203 mm 10 mm 0 mm 100 mm 75 mm
fastening method height width depth required spacing with side-by-side mounting • forwards • backwards • upwards • downwards • at the side	screw fixing 306 mm 185 mm 203 mm 10 mm 0 mm 100 mm 75 mm 5 mm
fastening method height width depth required spacing with side-by-side mounting • forwards • backwards • upwards • downwards • at the side weight without packaging	screw fixing 306 mm 185 mm 203 mm 10 mm 0 mm 100 mm 75 mm 5 mm
fastening method height width depth required spacing with side-by-side mounting • forwards • backwards • upwards • downwards • at the side weight without packaging Connections/ Terminals	screw fixing 306 mm 185 mm 203 mm 10 mm 0 mm 100 mm 75 mm 5 mm
fastening method height width depth required spacing with side-by-side mounting • forwards • backwards • upwards • downwards • at the side weight without packaging Connections/ Terminals type of electrical connection • for main current circuit • for control circuit	screw fixing 306 mm 185 mm 203 mm 10 mm 0 mm 100 mm 75 mm 5 mm 5.9 kg
fastening method height width depth required spacing with side-by-side mounting • forwards • backwards • upwards • downwards • at the side weight without packaging Connections/ Terminals type of electrical connection • for main current circuit • for control circuit width of connection bar maximum	screw fixing 306 mm 185 mm 203 mm 10 mm 0 mm 100 mm 75 mm 5 mm 5.9 kg box terminal
fastening method height width depth required spacing with side-by-side mounting • forwards • backwards • upwards • downwards • at the side weight without packaging Connections/ Terminals type of electrical connection • for control circuit • for control circuit width of connection bar maximum wire length for thermistor connection	screw fixing 306 mm 185 mm 203 mm 10 mm 0 mm 100 mm 75 mm 5 mm 5.9 kg box terminal screw-type terminals 25 mm
fastening method height width depth required spacing with side-by-side mounting • forwards • backwards • upwards • downwards • at the side weight without packaging Connections/ Terminals type of electrical connection • for main current circuit • for control circuit width of connection bar maximum wire length for thermistor connection • with conductor cross-section = 0.5 mm² maximum	screw fixing 306 mm 185 mm 203 mm 10 mm 0 mm 100 mm 75 mm 5 mm 5.9 kg box terminal screw-type terminals 25 mm 50 m
fastening method height width depth required spacing with side-by-side mounting • forwards • backwards • upwards • downwards • at the side weight without packaging Connections/ Terminals type of electrical connection • for 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	screw fixing 306 mm 185 mm 203 mm 10 mm 0 mm 100 mm 100 mm 75 mm 5 mm 5.9 kg box terminal screw-type terminals 25 mm 50 m 150 m
fastening method height width depth required spacing with side-by-side mounting • forwards • backwards • upwards • downwards • at the side weight without packaging Connections/ Terminals type of electrical connection • for 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 = 2.5 mm² maximum	screw fixing 306 mm 185 mm 203 mm 10 mm 0 mm 100 mm 75 mm 5 mm 5.9 kg box terminal screw-type terminals 25 mm 50 m
fastening method height width depth required spacing with side-by-side mounting • forwards • backwards • upwards • downwards • at the side weight without packaging Connections/ Terminals type of electrical connection • for control circuit width of connection bar maximum wire length for thermistor connection • with conductor cross-section = 0.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum	screw fixing 306 mm 185 mm 203 mm 10 mm 0 mm 100 mm 75 mm 5 mm 5.9 kg box terminal screw-type terminals 25 mm 50 m 150 m 250 m
fastening method height width depth required spacing with side-by-side mounting • forwards • backwards • upwards • downwards • at the side weight without packaging Connections/ Terminals type of electrical connection • for control circuit • for control circuit width of connection bar maximum with conductor cross-section = 0.5 mm² maximum • with conductor cross-section = 1.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • for main contacts for box terminal using the front clamping point solid	screw fixing 306 mm 185 mm 203 mm 10 mm 0 mm 10 mm 100 mm 75 mm 5 mm 5.9 kg box terminal screw-type terminals 25 mm 50 m 150 m 150 m 1x (2.5 16 mm ²)
fastening method height width depth required spacing with side-by-side mounting • forwards • backwards • upwards • downwards • at the side weight without packaging Connections/ Terminals type of electrical connection • for main current circuit • for control circuit width of connection bar maximum wite 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 • main contacts for box terminal using the front	screw fixing 306 mm 185 mm 203 mm 10 mm 0 mm 100 mm 75 mm 5 mm 5.9 kg box terminal screw-type terminals 25 mm 50 m 150 m 250 m
fastening method height width depth required spacing with side-by-side mounting • forwards • backwards • upwards • downwards • at the side weight without packaging Connections/ Terminals type of electrical connection • for main current circuit • for control circuit width of connection bar maximum wite 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 • 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	screw fixing 306 mm 185 mm 203 mm 10 mm 0 mm 10 mm 100 mm 75 mm 5 mm 5.9 kg box terminal screw-type terminals 25 mm 50 m 150 m 150 m 1x (2.5 16 mm ²)

 for main contacts for box terminal using the back clamping point solid 	1x (2.5 16 mm²)
 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 mm ²), 2x (0.5 1.5 mm ²)
 at AWG cables for control circuit solid 	1x (20 12), 2x (20 14)
wire length	
between soft starter and motor maximum	800 m
	1 000 m
at the digital inputs at DC maximum	
tightening torque	
 for main contacts with screw-type terminals 	4.5 6 N·m
 for auxiliary and control contacts with screw-type 	0.8 1.2 N·m
terminals	
tightening torque [lbf·in]	
 for main contacts with screw-type terminals 	40 53 lbf·in
 for auxiliary and control contacts with screw-type 	7 10.3 lbf·in
terminals	
Ambient conditions	
installation altitude at height above sea level maximum	5 000 m; Derating as of 1000 m, see catalog
installation altitude at height above sea level maximum ambient temperature	5 000 m; Derating as of 1000 m, see catalog
	5 000 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 ouring operation	-25 +60 °C; Please observe derating at temperatures of 40 °C or above
ambient temperatureduring operationduring storage and transport	-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 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 	 -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 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	 -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 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 EMC emitted interference 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 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 	 -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 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 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 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 	 -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 EMC emitted interference Communication / Protocol communication module is supported • PROFINET standard • PROFINET high-feature • EtherNet/IP • Modbus RTU • Modbus RTU • Modbus TCP • PROFIBUS UL/CSA ratings manufacturer's article number • of circuit breaker — usable for Standard Faults at 460/480 V according to UL	 -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 Siemens type: 3RV2742, max. 70 A or 3VA51, max. 125 A; lq = 10 kA
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 according to UL — usable for High Faults at 460/480 V according to UL	-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 Siemens type: 3RV2742, max. 70 A or 3VA51, max. 125 A; lq = 10 kA Siemens type: 3VA51, max. 125 A; lq max = 65 kA
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 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 Siemens type: 3RV2742, max. 70 A or 3VA51, max. 125 A; lq = 10 kA

 — usable for Standard Faults at 575/600 V according to UL 	Siemens type: 3RV2742, max. 70 A or 3VA51, max. 125 A; lq = 10 kA
— usable for High Faults at 575/600 V at inside- delta circuit according to UL	Siemens type: 3VA51, max. 125 A; lq max = 65 kA
— usable for Standard Faults at 575/600 V at inside-delta circuit according to UL	Siemens type: 3VA51, max. 125 A; lq = 10 kA
• of the fuse	
 — usable for Standard Faults up to 575/600 V according to UL 	Type: Class RK5 / K5, max. 200 A; lq = 10 kA
 — usable for High Faults up to 575/600 V according to UL 	Type: Class J / L, max. 225 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. 200 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. 225 A; lq = 100 kA
operating power [hp] for 3-phase motors	
 at 200/208 V at 50 °C rated value 	15 hp
 at 220/230 V at 50 °C rated value 	20 hp
 at 460/480 V at 50 °C rated value 	40 hp
 at 200/208 V at inside-delta circuit at 50 °C rated 	30 hp
value at 220/230 V at inside-delta circuit at 50 °C rated 	30 hp
value at 460/480 V at inside-delta circuit at 50 °C rated 	75 hp
value	D200 D200
contact rating of auxiliary contacts according to UL	R300-B300
Safety related data	
protection class IP on the front according to IEC 60529	IP00; IP20 with cover
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front with cover
electromagnetic compatibility	acc. to IEC 60947-4-2
ATEX	
ATEX certificate of suitability	
	Yes
certificate of suitability	Yes Yes
certificate of suitability • ATEX	
certificate of suitability • ATEX • IECEx	Yes
certificate of suitability • ATEX • IECEx • according to ATEX directive 2014/34/EU type of protection according to ATEX directive	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],
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	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]
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	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
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	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
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	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
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 Safety Integrity Level (SIL) according to IEC 61508 relating to ATEX	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
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	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
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	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
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	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
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	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
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	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 0.008 5E-7 1/h SIL1 3 s



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http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5525-1HA14&objecttype=14&gridview=view1 Simulation Tool for Soft Starters (STS)

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

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