SIEMENS

Data sheet

3RW5056-2TB04



SIRIUS soft starter 200-480 V 171 A, 24 V AC/DC Spring-loaded terminals Thermistor input

product brand name	SIRIUS		
product category	Hybrid switching devices		
product designation	Soft starter		
product type designation	3RW50		
manufacturer's article number			
 of standard HMI module usable 	<u>3RW5980-0HS01</u>		
 of high feature HMI module usable 	<u>3RW5980-0HF00</u>		
 of communication module PROFINET standard usable 	<u>3RW5980-0CS00</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 	<u>3VA2220-7MN32-0AA0; Type of assignment 1, lq = 20 kA</u>		
 of circuit breaker usable at 500 V 	<u>3VA2220-7MN32-0AA0; Type of assignment 1, lq = 20 kA</u>		
 of the gG fuse usable up to 690 V 	3NA3244-6; Type of coordination 1, Iq = 65 kA		
 of full range R fuse link for semiconductor protection usable up to 690 V 	<u>3NE1 230-0; Type of coordination 2, Iq = 65 kA</u>		
 of back-up R fuse link for semiconductor protection usable up to 690 V 	<u>3NE3 335; Type of coordination 2, Iq = 65 kA</u>		
 of line contactor usable up to 480 V 	<u>3RT1056</u>		
 of line contactor usable up to 690 V 	<u>3RT1064</u>		
General technical data			
starting voltage [%]	30 100 %		
stopping voltage [%]	50 %; non-adjustable		
start-up ramp time of soft starter	0 20 s		
ramp-down time of soft starter	0 20 s		
current limiting value [%] adjustable	130 700 %		
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	No		
 is supported HMI-Standard 	Yes		
 is supported HMI-High Feature 	Yes		
product feature integrated bypass contact system	Yes		
number of controlled phases	2		
trip class	CLASS 10A / 10E (preset) / 20E; acc. to IEC 60947-4-2		

etc. 100 ms • for contral cacal 100 ms • for contral cacal 100 ms instation voltage rade value 800 V inputse voltage rade value 61 V service factor 1 surge voltage resistance rated value 61 V maximum permissible voltage of rade isolation 60 V • between main and axiliary circuit 71 ms with potential contact litting • ramp-up (soft stating) 15g / 11 ms. from 12g / 11 ms with potential contact litting • ramp-up (soft stating) Yes • stating (stating) Yes • ramp-up (soft stating) Yes • subtation of thermistor motor protection Yes • undor avertiad protecti	buffering time in the event of power failure	-			
• errontro circuit00 msinsulation voltage rated value000 vdegree of polation3, acr. to IEC 60047-4-2imputes voltage rated value6 kVblocking voltage rated value140 vservice factor1surge voltage rated value6 kVmaximup permissible voltage for safe location6 kVbetween main and auxilary circuit6 kVbetween main and auxilary circuit600 vshock resistance15 mto for 12 g/ 11 ms with potential contact liftingvibrator resistance15 mto for 12 g/ 11 ms with potential contact liftingvibrator resistance9 second for 12 g/ 11 ms with potential contact liftingvibrator resistance9 second for 12 g/ 11 ms with potential contact liftingvibrator resistance9 second for 12 g/ 11 ms with potential contact liftingvibrator resistance9 second for 12 g/ 11 ms with potential contact liftingvibrator resistance9 second for 12 g/ 11 ms with potential contact liftingvibrator resistance9 second for 12 g/ 11 ms with potential contact liftingvibrator resistance9 second for 12 g/ 11 ms with potential contact liftingvibrator resistance15 second for 12 g/ 11 ms with potential contact liftingvibrator resistanceYes Second for 12 g/ 11 ms with potential contact liftingvibrator resistanceYes Second for 12 g/ 12 g/ 12 g/ 11 ms with potential contact liftingvibrator resistanceYes Second for 12 g/ 1	-	100 ms			
insulation value 600 V degree of pollution 3, acc. 16 C6 0097.4-2 impuise value and value 6 N/ blocking value of the thyristor maximum 1400 V surge value or seistance and value 6 N/ maximum permissible values of seast fie solation 6 N/ wither the set field of the third of the the third of the third o					
degree of pollution 3, arc. to IEC 60947-4-2 Impulse voltage of the thyristor maximum 1 40 V service factor 1 service main and auxiliary circuit 600 V shoke resistance 15g / 11 ms, from 12g / 11 ms with potential contact lifting yibration resistance 15g / 11 ms, from 12g / 11 ms with potential contact lifting yibration resistance 900 V end of the display Yes end of the display Yes end of the display Yes end of thermistor motor protection Yes end of thermistor motor protection Yes end of thermistor motor protection Yes exclustor were ad protection Yes end of thermistor motor protection Yes en					
impute voltage reted value 6 kV bocking voltage of the thyrktor maximum 1 400 V service factor 6 kV service factor 6 kV e between main and auxilary circuit 600 V shock resistance rated value 600 V vibration resistance 15 (1 ms. from 12 g / 11 ms with potential contact lifting vibration resistance 15 (1 ms. from 12 g / 11 ms with potential contact lifting vibration resistance 15 (1 ms. from 12 g / 11 ms with potential contact lifting vibration resistance 15 (1 ms. from 12 g / 11 ms with potential contact lifting vibration resistance 16 (2 0 0 0 - 2 0					
blocking voltage of the thyristor maximum1400 Vservice factor1400 Vservice factor6 kVmaximum permissible voltage for safe boltion600 Vsetween main and auxiliar circuit600 Vshock resistance15g / 11 ms. from 12g / 11 ms. with potential contact liftingvibration resistance15g / 11 ms. from 12g / 11 ms. with potential contact liftingvibration resistance15g / 12 ms. from 12g / 11 ms. with potential contact liftingvibration resistance15g / 12 ms. from 12g / 11 ms. with potential contact liftingvibration resistance15g / 12 ms. from 12g / 11 ms. with potential contact liftingvibration resistance15g / 12 ms. from 12g / 11 ms. with potential contact liftingvibration resistance15g / 12 ms. from 12g / 11 ms. with potential contact liftingvibration resistance15g / 12 ms. from 12g / 11 ms. with potential contact liftingvibration resistance15g / 12 ms. from 12g / 11 ms. with potential contact liftingvibration resistanceYes• amp-down (soft stop)Yes• andro vertical protectionYes• autor vertical protectionYes• autor or protection rotor protectionYes• autor vertical protectionYes• autor vertica					
service factor 1 surge voltage resistance rated value 6 kV warkman permissible voltage for safe isolation 600 V witewan main and avuilary circuit 600 V stock resistance 15 mm to 8 Hz 2 gto 500 Hz vitration resistance 15 mm to 8 Hz 2 gto 500 Hz vitration resistance 0023/2019 prefores code according to IEC 60047-42 AC-S50a substance Prohibitance (Date) 09/23/2019 ordination (soft stop) Yes • amp-up (soft stating) Yes • ang-down (soft stop) Yes • adjustable aurent limitation Yes • adjustable parameterizable No <td></td> <td></td>					
surge voltage resistance rated value 6 kV maximum permissible voltage for safe isolation					
maximum permissible voltage for safe isolation 600 V • between main and auxiliary circuit 15 g/ 11 ms, from 12 g / 11 ms with potential contact lifting • botx resistance 15 g/ 11 ms, from 12 g / 11 ms with potential contact lifting • uibration resistance 000 V • uibration resistance 15 mm to 8 Hz; 2g to 500 Hz • uibration resistance 0 • uibration resistance Ves • adjustable current limitation Yes • uibration of thermistor motor protection Yes; Full motor protection (thermistor motor protection motor overload protection) • uibration of thermistor motor protection Yes; Full motor protection introl reprotection • uibration function Yes • uibration resistance parameterizable Yes • uibration resister parameterizable Yes; Ionly in conjunction with special accessories • uibration resi					
• eleveen main and auxilizy circuit 600 V shock resistance 15 g / 11 ms, from 12 / 11 m swith potential contact lifting vibration resistance 15 mm to 6 Hz; 2g to 500 Hz utilization category according to IEC 60497-4-2 AC-S3a order cancerding to IEC 60497 AC-S3a guarding according to IEC 60497 AC-S3a order function Ves • amp-dox (soft stor) Yes • adjustable current limitation Yes • adjustable current limitation Yes • adjustable current limitation Yes • andro overload protection Yes • andro overload protection Yes • andro overload protection Yes, Type A PIC or Kilxon / Thermodick • adjustable current limitation Yes • adjustable current limitation Yes • adjustable current limitation Yes, Type A PIC or Kilxon / Thermodick • adjustable current limitation Yes • adjustable current limitation					
shock resistance 15 g / 11 ms, from 12 g / 11 ms with potential contact lifting vibration resistance 16 mm to BHz; 2g to 500 Hz uitzlation category according to IEC 61345-2 Q Substance Prohibitance (Date) 06/23/2019 product function Yes • amp-up (soft starting) Yes • adjustable current limitation Yes • adjustable condition whot protection Yes • adjustable condition Yes • adjustable cond		600 V			
vibration resistance 15 mm to 6 Hz; 2g to 500 Hz utilization category according to IEC 609474-2 AC-53a Gaustance Prohibitance (Date) 00/23/2019 product function • • ramp-up (soft starting) Yes • digitable current limitation Yes • digitable current limitation Yes • digitable current limitation Yes • intros device protection Yes • motor overload protection Yes • motor overload protection Yes • adulation of thermistor motor protection Yes • availuation of thermistor motor protection Yes • arron valuation of thermist					
utilization category according to IEC 8097-4-2 AC-53a reference code according to IEC 81346-2 Q Substance Prchibitance (Data) 09/23/2019 product function Yes • ramp-down (soft string) Yes • adjustable current limitation Yes • infinitios (divice protection Yes: Full motor protection (thermistor motor protection emotor overload protection) • evaluation of thermistor motor protection Yes: Type APIC or Klixon / Thermoclick • emotor overload protection Yes: Type APIC or Klixon / Thermoclick • etailon RESET Yes: Only in conjunction with special accessories • error logbook Yes: Only in conjunction with special accessories • error logbook Yes: Only in conjunction with special accessories • vis software parameterizable No • vis asoftware parameterizable Yes • vis asoftware parameterizable No • orated value 171 A • at d0 °C rated value 171 A • at d0 °C					
reference code according to IEC 81346-2 Q Subtance Prohibitions (bats) 09/23/2019 evaluation and pup (soft starting) Yes • iamp-dup (soft starting) Yes • adjustable current limitation Yes • adjustable current limitation Yes • intrinsic device protection Yes • intrinsic device protection Yes • motor overload protection Yes • evaluation of thermistor motor protection Yes • evaluation function Yes • evaloatonetime No					
Substance Prohibitance (Date) 09/23/2019 product function Yes iamp-down (soft stop) Yes iamp-down (soft stop) <th< td=""><td></td><td></td></th<>					
product function iramp-up (soft starting) Yes iramp-up (soft starting) Yes iramp-up (soft starting) Yes isoft Torque Yes adjustable current limitation Yes initrinsic device protection Yes initrinsic device protection Yes indict device Yes operating mesured value display Yes ier or ligbook Yes via software parameterizable No via software parameterizable No iorque control No iorque control No					
• ramp-up (soft starting) Yes • ramp-down (soft stop) Yes • Soft Torque Yes • adjustable current limitation Yes • upm pramp down Yes • initrinsic device protection Yes • motor overload protection Yes; Type A PTC or Klixon / Thermoclick • undor RESET Yes • adjustable current limitation Yes; Type A PTC or Klixon / Thermoclick • auto-RESET Yes • monual RESET Yes • monual RESET Yes; Only in conjunction with special accessories • error logbook Yes; Only in conjunction with special accessories • error logbook Yes; Only in conjunction with special accessories • error logbook Yes; Only in conjunction with special accessories • via software parameterizable No • voltage ramp Yes • torque control No • analog output Yes Operating routput Yes orque state 151 A • at 60 °C rated value 151 A • at 60 °C rated value 153 A • at 60 °C rated value 154 M • at 60 °C rated value 10 % • at 60 °C rated value 50 HZ • at 60 °C rated value 10 %					
• ramp-down (soft stop)Yes• Soft TorqueYes• adjustable current limitationYes• pump ramp downYes• initinisic device protectionYes• initinisic device protectionYes, Full motor protection (thermistor motor protection and electronic motor overload protection)• evaluation of thermistor motor protectionYes, Type A PTC or Kilxon / Thermoclick• auto-RESETYes, Day and protection)• evaluation fibermistor motor protectionYes; Day and protection)• evaluation of thermistor motor protectionYes; Day and protection)• evaluation of thermistor motor protectionYes; Day in conjunction with special accessories• andor RESETYes; Only in conjunction with special accessories• operating measured value displayYes; Only in conjunction with special accessories• via software parameterizableNo• via software configurableYes• voltage rampYes• orque controlNo• analog outputNo• analog outputNo• analog output151 A• at 00 °C rated value151 A• at 00 °C rated value10%• at 00 °C rated value10%• at 00 °C rated value90 KW• at 00 °C rated value10 %• at 00 °C rated value10 %• at 00 °C rated value10 %• at 00 °C rated value60 Hz• at 00	•	Yes			
 Soft Torque Yes adjustable current limitation Yes adjustable current Yes adjustable current Yes adjustable current Yes adjustable current Yes adjustable Yes adjustable current Yes adjustable Yes adjustable co					
• adjustable current limitationYes• pump ramp downYes• initritistic device protectionYes• motor overload protectionYes; Full motor protection (thermistor motor protection and electronic motor overload protection)• evaluation of thermistor motor protectionYes; Tyel motor protection (thermistor motor protection and electronic motor overload protection)• evaluation of thermistor motor protectionYes; Tyel A PTC or Klixon / Thermoclick• auto-RESETYes• manual RESETYes• remote resetYes; Dy luring off the control supply voltage• communication functionYes; Only in conjunction with special accessories• via software parameterizableNo• via software configurableYes;• via software configurableYes• torque controlNo• analog outputNo• operating outputNo• avalue divalue171 A• at 50 °C rated value153 A• at 60 °C rated value153 A• at 60 °C rated value10 %• at 20 °C rated value10 %• at 20 °C rated value90 kW• operating frequency 1 rated value50 Hz• at 20 V at 40 °C rated value60 Hz• at 20 V at 40 °C rated value90 kW• at 20 V at 40 °C rated value10 %• at 20 V at 40 °C rated value90 kW• at 20 V at 40 °C rated value10 %• at 20 V at 40 °C rated value90 kW• at rotary coding switch on switch position 181 A• at rotary co					
• pump ramp downYes• intrinsic device protectionYes• motor overload protection (thermistor motor protection and electronic motor overload protection)• evaluation of thermistor motor protectionYes; Full motor protection (thermistor motor protection and electronic motor overload protection)• evaluation of thermistor motor protectionYes; Type A PTC or Klixon / Thermoclick• auto-RESETYes• manual RESETYes• remote resetYes; Dy turning off the control supply voltage• communication functionYes; Only in conjunction with special accessories• error logbookYes; Only in conjunction with special accessories• via software parameterizableNo• via software parameterizableNo• voltage rampYes• torque controlNo• analog outputNo• analog outputNo• analog outputNo• at 60 °C rated value153 A• at 60 °C rated value10 %• relative nogative tolerance of the operating voltage15 %• at 230 V at 40 °C rated value50 Hz• at 230 V at 40 °C rated value50 Hz• at 230 V at 40 °C rated value50 Hz• at 230 V at 40 °C rated value60 Hz• at rolary coding switch on switch position 181 A• at rolary coding switch on switch position 287 A• at rolary coding switch on switch position 383 A	•				
Initial device protectionYesendor overload protectionYes; Full motor protection (hermistor motor protection and electronic motor overload protection)evaluation of thermistor motor protectionYes; Type A PTC or Klixon / Thermoclick• auto-RESETYes• manual RESETYes• remote resetYes; By turning off the control supply voltage• communication functionYes; Only in conjunction with special accessories• operating measured value displayYes; Only in conjunction with special accessories• via software parameterizableNo• via software parameterizableNo• via software configurableYes• voltage rampYes• voltage rampYes• orque controlNo• analog outputNo• analog outputNo• analog output171 A• at 40 °C rated value153 A• at 60 °C rated value200 480 V• relative negative tolerance of the operating voltage90 kW• operating voltage90 kW• at 230 V at 40 °C rated value90 kW• at 230 V at 40 °C rated value90 kW• operating frequency 1 rated value90 kW• operating frequency 2 rated value90 kW• operating power for 3-phase motors90 kW• operating power for 3-phase motors90 kW• operating power for 3-phase motors	-	Yes			
• motor overload protectionYes; Full motor protection (thermistor motor protection) motor overload protection)• evaluation of thermistor motor protectionYes; Type A PTC or Klixon / Thermoclick• auto-RESETYes• manual RESETYes• remote resetYes; By turning off the control supply voltage• communication functionYes; Only in conjunction with special accessories• error logbookYes; Only in conjunction with special accessories• via software parameterizableNo• via software configurableYes; nonnection with the PROFINET Standard communication module• voltage rampYes; nonnection with the PROFINET Standard communication module• voltage rampYes• torque controlNo• analog outputNoPower Electronics200 480 V• reletive nogative tolerance of the operating voltage153 A• at 60 °C rated value154 A• at 200 V at 40 °C rated value10 %• at 200 V at 40 °C rated value50 Hz• at 200 V at 40 °C rated value50 Hz• at 200 V at 40 °C rated value50 Hz• at 200 V at 40 °C rated value50 Hz• at 200 V at 40 °C rated value50 Hz• at adou Y at 40 °C rated value50 Hz• at adou Y at 40 °C rated value10 %• at 200 V at 40 °C rated value50 Hz• at 200 V at 40 °C rated value50 Hz• at 200 V at 40 °C rated value50 Hz• at 200 V at 40 °C rated value50 Hz• at adou Y ad 0 °C rated value50					
• auto-RESETYes• manual RESETYes• remote resetYes; By turning off the control supply voltage• communication functionYes• operating measured value displayYes; Only in conjunction with special accessories• error logbookYes; Only in conjunction with special accessories• via software parameterizableNo• via software configurableYes; in connection with the PROFINET Standard communication module• voltage rampYes; in connection with the PROFINET Standard communication module• voltage rampYes; in connection with the PROFINET Standard communication module• analog outputNoPower ElectronicsYes• at 40 °C rated value171 A• at 60 °C rated value153 A• at 60 °C rated value200 480 V• at 60 °C rated value15%• at 230 V at 40 °C rated value90 KW• at 230 V at 40 °C rated value90 KW• at 230 V at 40 °C rated value90 KW• at 230 V at 40 °C rated value90 KW• at 230 V at 40 °C rated value90 KW• at 230 V at 40 °C rated value90 KW• at 230 V at 40 °C rated value90 KW• at 230 V at 40 °C rated value90 Hz• at 230 V at 40 °C rated value90 Hz• at 700 V at 40 °C rated value90 Hz• at 700 V at 40 °C rated value90 Hz• at 700 V at 40 °C rated value90 Hz• at 700 V at 40 °C rated value90 Hz• at 700 V at 40 °C rated value90 Hz•	 motor overload protection 				
• manual RESETYes• remote resetYes; By turning off the control supply voltage• communication functionYes;• operating measured value displayYes; Only in conjunction with special accessories• operating measured value displayYes; Only in conjunction with special accessories• via software parameterizableNo• via software parameterizableNo• via software configurableYes; in connection with the PROFINET Standard communication module• voltage rampYes; in connection with the PROFINET Standard communication module• voltage rampYes• torque controlNo• analog outputNoPower Electronics171 A• at 40 °C rated value153 A• at 60 °C rated value163 A• at 60 °C rated value165 %• rated value200 480 V• rated value10 %• at 200 V at 40 °C rated value90 kW• at 400 V at 40 °C rated value60 Hz• at 400 V at 40 °C rated value90 kW• at 400 V at 40 °C rated value60 Hz• at 400 V at 40 °C rated value60 Hz• at 400 V at 40 °C rated value50 Hz• at 400 V at 40 °C rated value60 Hz• at 700 V crated value60 Hz• at 700 voicing switch on switch position 181 A </td <td> evaluation of thermistor motor protection </td> <td>Yes; Type A PTC or Klixon / Thermoclick</td>	 evaluation of thermistor motor protection 	Yes; Type A PTC or Klixon / Thermoclick			
• remote reselYes; By turning off the control supply voltage• communication functionYes• operating measured value displayYes; Only in conjunction with special accessories• error logbookYes; Only in conjunction with special accessories• via software parameterizableNo• via software configurableYes• voltage rampYes; on in connection with the PROFINET Standard communication module• voltage rampYes• torque controlNo• analog outputNoPower ElectronicsYes• analog outputNo• at 60 °C rated value153 A• at 60 °C rated value153 A• at 60 °C rated value200 480 V• rated value200 480 V• rated value200 480 V• rated value10 %• at 230 V at 40 °C rated value45 kW• at 230 V at 40 °C rated value50 Hz• at 230 V at 40 °C rated value50 Hz• at 230 V at 40 °C rated value60 Hz• at 230 V at 40 °C rated value10 %• at 230 V at 40 °C rated value10 %• at 230 V at 40 °C rated value10 %• at 230 V at 40 °C rated value10 %• at at 00 V at 40 °C rated value10 %• at at 00 V at 40 °C rated value10 %• at at 00 V at 40 °C rated value10 %• at at 00 V at 40 °C rated value10 %• at at 00 V at 40 °C rated value10 %• at at 00 V at 0°C rated value10 %• at at 00 V at 0°C rated value<	auto-RESET	Yes			
• communication functionYes• operating measured value displayYes; Only in conjunction with special accessories• error logbookYes; Only in conjunction with special accessories• via software parameterizableNo• via software configurableYes;• PROFlenergyYes; in connection with the PROFINET Standard communication module• voltage rampYes• torque controlNo• analog outputNoPower Electronicsoperational current171 A• at 40 °C rated value171 A• at 60 °C rated value153 A• rated value200 480 Vrelative negative tolerance of the operating voltage15 %• at 400 °C rated value10 %operating frequency 1 rated value50 Hz• at 400 °C rated value60 Hz• at 400 °C rated value10 %operating frequency 1 rated value50 HzOperating frequency 1 rated value60 Hz• at rotary coding switch on switch position 181 A• at rotary coding switch on switch position 181 A• at rotary coding switch on switch position 393 A	manual RESET	Yes			
• operating measured value displayYes; Only in conjunction with special accessories• via software parameterizableNo• via software configurableYes;• PROFlenergyYes; in connection with the PROFINET Standard communication module• voltage rampYes; in connection with the PROFINET Standard communication module• voltage rampYes• torque controlNo• analog outputNoPower Electronics171 A• at 40 °C rated value171 A• at 60 °C rated value171 A• at 60 °C rated value153 A• at 60 °C rated value161 °C• rated value200 480 V• rated value15 %• at 20 V at 40 °C rated value0%• at 20 V at 40 °C rated value0%• at 40 °C rated value50 Hz• at 40 °C rated value50 Hz• at 20 V at 40 °C rated value60 Hz• at 400 V at 40 °C rated value50 Hz• at 400 V at 40 °C rated value60 Hz• at 700 °C rated value10 %• at 700 °C rated value60 Hz• at rotary coding switch on switch position 181 A• at rotary coding switch on switch position 287 A• at rotary coding switch on switch position 393 A	remote reset	Yes; By turning off the control supply voltage			
• error logbookYes; Only in conjunction with special accessories• via software parameterizableNo• via software configurableYes• PROFlenergyYes; in connection with the PROFINET Standard communication module• voltage rampYes• torque controlNo• analog outputNoPower Electronics171 A• at 40 °C rated value1771 A• at 60 °C rated value153 A• at 60 °C rated value200 480 V• rated value200 480 V• rated value10 %• at 230 V at 40 °C rated value90 kW• at 40 °C rated value00 k• rated value00 k• rated value00 k• at 230 V at 40 °C rated value90 kW• at 40 °C rated value50 Hz• at 40 °C rated value50 Hz• at 40 °C rated value50 Hz• at 230 V at 40 °C rated value50 Hz• at 400 V at 40 °C rated value50 Hz• at 400 V at 40 °C rated value50 Hz• at rotary coding switch on switch position 181 A• at rotary coding switch on switch position 181 A• at rotary coding switch on switch position 393 A	 communication function 	Yes			
• via software parameterizableNo• via software configurableYes• PROFlenergyYes in connection with the PROFINET Standard communication module• voltage rampYes• torque controlNo• analog outputNoPower ElectronicsNo• arata 40 °C rated value171 A• at 40 °C rated value153 A• at 60 °C rated value141 A• arate value200 480 V• relative negative tolerance of the operating voltage155 %• at 20 V at 40 °C rated value10 %• at 20 V at 40 °C rated value50 Hz• at 40 °C rated value00 w• at 40 °C rated value10 %• at 40 °C rated value00 w• at 40 °C rated value10 %• at 20 V at 40 °C rated value50 Hz• at 20 V at 40 °C rated value50 Hz• at 20 V at 40 °C rated value50 Hz• at 20 V at 40 °C rated value50 Hz• at 20 V at 40 °C rated value50 Hz• at 20 V at 40 °C rated value50 Hz• at 20 V at 40 °C rated value50 Hz• at 70 °C rated value10 %• at rotary coding switch on switch position 181 A• at rotary coding switch on switch position 287 A• at rotary coding switch on switch position 393 A	 operating measured value display 	Yes; Only in conjunction with special accessories			
• via software configurableYes• PROFlenergyYes; in connection with the PROFINET Standard communication module• voltage rampYes• torque controlNo• analog outputNoPower ElectronicsYes• aratod value171 A• at 40 °C rated value153 A• at 60 °C rated value153 A• at 60 °C rated value153 A• at 60 °C rated value150 °C• at 40 °C rated value150 °C• at 60 °C rated value150 °C• at 230 V at 40 °C rated value50 HZ• at 230 V at 40 °C rated value50 HZ• at 400 V at 40 °C rated value50 HZ• at 400 V at 40 °C rated value60 HZ• at 600 V rated value60 HZ• at 600 V rated value60 HZ• at 704 rotance of the operating frequency10 %• at 704 rotance of the operating frequency10 %• at 704 rotance of the operating frequency10 %• at rotany coding switch on switch position 181 A• at rotany coding switch on switch position 287 A• at rotany coding switch on switch position 393 A	error logbook	Yes; Only in conjunction with special accessories			
• PROFlenergyYes; in connection with the PROFINET Standard communication module• voltage rampYes• voltage rampYes• torque controlNo• analog outputNoPower Electronics171 A• at 40 °C rated value171 A• at 40 °C rated value153 A• at 60 °C rated value141 A• at 60 °C rated value200 480 V• rated value200 480 V• relative negative tolerance of the operating voltage • at 400 °C rated value15 %• at 400 °C rated value00 %• at 400 °C rated value00 %• at 400 °C rated value50 Hz• at 400 °C rated value60 Hz• at 400 °C rated value10 %• at 400 °C rated value10 %• at 700 °C rated value50 Hz• at 700 °C rated value10 %• at 700 °C rated value10 %• at rotary coding switch on switch position 181 A• at rotary coding switch on switch position 287 A• at rotary coding switch on switch position 393 A	 via software parameterizable 	No			
module• voltage rampModule• torque controlNo• analog outputNoPower ElectronicsImage: Second Sec	 via software configurable 	Yes			
• torque controlNo• analog outputNoPower Electronicsoperational current171 A• at 40 °C rated value171 A• at 50 °C rated value153 A• at 60 °C rated value141 Aoperating voltage200 480 V• rated value00 480 Vrelative negative tolerance of the operating voltage10 %operating power for 3-phase motors00 kW• at 230 V at 40 °C rated value90 kW• at 230 V at 40 °C rated value50 HzOperating frequency 1 rated value50 HzOperating requency 1 rated value10 %relative negative tolerance of the operating frequency10 %operating frequency 2 rated value50 Hzoperating frequency 1 rated value50 Hzoperating requency 2 rated value10 %adjustable motor current10 %• at rotary coding switch no switch position 181 A• at rotary coding switch no switch position 287 A• at rotary coding switch no switch position 393 A		module			
• analog outputNoPower Electronics• perational current171 A• at 40 °C rated value171 A• at 50 °C rated value153 A• at 60 °C rated value141 A• operating voltage200 480 V• rated value200 480 V• relative negative tolerance of the operating voltage-15 %• relative negative tolerance of the operating voltage10 %• operating power for 3-phase motors0 %• at 230 V at 40 °C rated value45 kW• at 230 V at 40 °C rated value90 kW• operating frequency 1 rated value50 Hz• perative negative tolerance of the operating frequency10 %• at rotary coding switch on switch position 181 A• at rotary coding switch on switch position 287 A• at rotary coding switch on switch position 393 A					
Power Electronics operational current • at 40 °C rated value • at 50 °C rated value • at 60 °C rated value • at 60 °C rated value • at 60 °C rated value • rated value 200 480 V relative negative tolerance of the operating voltage 10 % operating power for 3-phase motors • at 230 V at 40 °C rated value • at 230 V at 40 °C rated value 90 kW Operating frequency 1 rated value 90 kW Operating frequency 1 rated value 90 kW Operating frequency 1 rated value 50 Hz Operating frequency 1 rated value 60 Hz relative positive tolerance of the operating frequency -10 % relative positive tolerance of the operating frequency -10 % adjustable motor current • at rotary coding switch on switch position 1 81 A • at rotary coding switch on switch position 2	•				
operational current171 A• at 40 °C rated value171 A• at 50 °C rated value153 A• at 60 °C rated value141 Aoperating voltage141 A• rated value200 480 Vrelative negative tolerance of the operating voltage-15 %relative positive tolerance of the operating voltage10 %operating power for 3-phase motors10 %• at 230 V at 40 °C rated value45 kW• at 400 V at 40 °C rated value90 kWOperating frequency 1 rated value50 HzOperating frequency 2 rated value60 Hzrelative negative tolerance of the operating frequency10 %adjustable motor current-10 %• at rotary coding switch on switch position 181 A• at rotary coding switch on switch position 287 A• at rotary coding switch on switch position 393 A	5	No			
• at 40 °C rated value171 A• at 50 °C rated value153 A• at 60 °C rated value141 Aoperating voltage200 480 V• rated value200 480 Vrelative negative tolerance of the operating voltage15 %relative positive tolerance of the operating voltage10 %operating power for 3-phase motors50 Hz• at 230 V at 40 °C rated value90 kW• at 400 V at 40 °C rated value50 HzOperating frequency 1 rated value60 Hzrelative negative tolerance of the operating frequency10 %relative negative tolerance of the operating frequency50 Hzoperating switch on switch position 181 A• at rotary coding switch on switch position 287 A• at rotary coding switch on switch position 393 A					
• at 50 °C rated value153 A• at 60 °C rated value141 Aoperating voltage200 480 V• rated value200 480 Vrelative negative tolerance of the operating voltage-15 %relative positive tolerance of the operating voltage10 %operating power for 3-phase motors	•	171 Δ			
• at 60 °C rated value141 Aoperating voltage200 480 V• rated value200 480 Vrelative negative tolerance of the operating voltage-15 %operating power for 3-phase motors-0%• at 230 V at 40 °C rated value45 kW• at 400 V at 40 °C rated value90 kWOperating frequency 1 rated value60 Hzrelative negative tolerance of the operating frequency-10 %relative negative tolerance of the operating frequency-10 %operating frequency 2 rated value60 Hzrelative negative tolerance of the operating frequency-10 %adjustable motor current-10 %• at rotary coding switch on switch position 181 A• at rotary coding switch on switch position 287 A• at rotary coding switch on switch position 393 A					
operating voltage200 480 Vrelative negative tolerance of the operating voltage-15 %relative positive tolerance of the operating voltage10 %operating power for 3-phase motors10 %• at 230 V at 40 °C rated value45 kW• at 400 V at 40 °C rated value90 kWOperating frequency 1 rated value50 HzOperating frequency 2 rated value60 Hzrelative positive tolerance of the operating frequency-10 %relative negative tolerance of the operating frequency10 %adjustable motor current81 A• at rotary coding switch on switch position 287 A• at rotary coding switch on switch position 393 A					
• rated value200 480 Vrelative negative tolerance of the operating voltage-15 %relative positive tolerance of the operating voltage10 %operating power for 3-phase motors-• at 230 V at 40 °C rated value45 kW• at 400 V at 40 °C rated value90 kWOperating frequency 1 rated value50 HzOperating frequency 2 rated value60 Hzrelative negative tolerance of the operating frequency-10 %relative positive tolerance of the operating frequency10 %adjustable motor current81 A• at rotary coding switch on switch position 287 A• at rotary coding switch on switch position 393 A					
relative negative tolerance of the operating voltage-15 %relative positive tolerance of the operating voltage10 %operating power for 3-phase motors10 %• at 230 V at 40 °C rated value45 kW• at 400 V at 40 °C rated value90 kWOperating frequency 1 rated value50 HzOperating frequency 2 rated value60 Hzrelative negative tolerance of the operating frequency-10 %relative positive tolerance of the operating frequency10 %adjustable motor current10 %• at rotary coding switch on switch position 181 A• at rotary coding switch on switch position 287 A• at rotary coding switch on switch position 393 A		200 480 \/			
relative positive tolerance of the operating voltage10 %operating power for 3-phase motors-• at 230 V at 40 °C rated value45 kW• at 400 V at 40 °C rated value90 kWOperating frequency 1 rated value50 HzOperating frequency 2 rated value60 Hzrelative negative tolerance of the operating frequency-10 %relative positive tolerance of the operating frequency10 %adjustable motor current81 A• at rotary coding switch on switch position 181 A• at rotary coding switch on switch position 287 A• at rotary coding switch on switch position 393 A					
operating power for 3-phase motors• at 230 V at 40 °C rated value45 kW• at 400 V at 40 °C rated value90 kWOperating frequency 1 rated value50 HzOperating frequency 2 rated value60 Hzrelative negative tolerance of the operating frequency-10 %relative positive tolerance of the operating frequency10 %adjustable motor current81 A• at rotary coding switch on switch position 181 A• at rotary coding switch on switch position 287 A• at rotary coding switch on switch position 393 A					
• at 230 V at 40 °C rated value45 kW• at 400 V at 40 °C rated value90 kWOperating frequency 1 rated value50 HzOperating frequency 2 rated value60 Hzrelative negative tolerance of the operating frequency-10 %relative positive tolerance of the operating frequency10 %adjustable motor current81 A• at rotary coding switch on switch position 287 A• at rotary coding switch on switch position 393 A					
• at 400 V at 40 °C rated value90 kWOperating frequency 1 rated value50 HzOperating frequency 2 rated value60 Hzrelative negative tolerance of the operating frequency-10 %relative positive tolerance of the operating frequency10 %adjustable motor current81 A• at rotary coding switch on switch position 287 A• at rotary coding switch on switch position 393 A		45 kW			
Operating frequency 1 rated value50 HzOperating frequency 2 rated value60 Hzrelative negative tolerance of the operating frequency-10 %relative positive tolerance of the operating frequency10 %adjustable motor current81 A• at rotary coding switch on switch position 181 A• at rotary coding switch on switch position 287 A• at rotary coding switch on switch position 393 A					
Operating frequency 2 rated value 60 Hz relative negative tolerance of the operating frequency -10 % relative positive tolerance of the operating frequency 10 % adjustable motor current 10 % • at rotary coding switch on switch position 1 81 A • at rotary coding switch on switch position 2 87 A • at rotary coding switch on switch position 3 93 A					
relative negative tolerance of the operating frequency -10 % relative positive tolerance of the operating frequency 10 % adjustable motor current 10 % • at rotary coding switch on switch position 1 81 A • at rotary coding switch on switch position 2 87 A • at rotary coding switch on switch position 3 93 A		-			
relative positive tolerance of the operating frequency 10 % adjustable motor current at rotary coding switch on switch position 1 at rotary coding switch on switch position 2 at rotary coding switch on switch position 3 93 A 		-10 %			
adjustable motor current at rotary coding switch on switch position 1 at rotary coding switch on switch position 2 at rotary coding switch on switch position 3 93 A 		10 %			
 at rotary coding switch on switch position 2 at rotary coding switch on switch position 3 87 A 93 A 	adjustable motor current				
• at rotary coding switch on switch position 3 93 A	 at rotary coding switch on switch position 1 	81 A			
	 at rotary coding switch on switch position 2 	87 A			
at rotary coding switch on switch position 4 99 A	 at rotary coding switch on switch position 3 	93 A			
	 at rotary coding switch on switch position 4 	99 A			

 at rotary coding switch on switch position 5 	105 A
 at rotary coding switch on switch position 6 	111 A
 at rotary coding switch on switch position 7 	117 A
 at rotary coding switch on switch position 8 	123 A
 at rotary coding switch on switch position 9 	129 A
 at rotary coding switch on switch position 10 	135 A
 at rotary coding switch on switch position 11 	141 A
	147 A
 at rotary coding switch on switch position 12 	
at rotary coding switch on switch position 13	153 A
 at rotary coding switch on switch position 14 	159 A
 at rotary coding switch on switch position 15 	165 A
 at rotary coding switch on switch position 16 	171 A
• minimum	81 A
minimum load [%]	15 %; Relative to smallest settable le
power loss [W] for rated value of the current at AC	
 at 40 °C after startup 	29 W
 at 50 °C after startup 	23 W
• at 60 °C after startup	20 W
power loss [W] at AC at current limitation 350 %	
• at 40 °C during startup	1 751 W
• at 50 °C during startup	1 478 W
• at 60 °C during startup	1 308 W
type of the motor protection	
	Electronic, tripping in the event of thermal overload of the motor
Control circuit/ Control	
type of voltage of the control supply voltage	AC/DC
control supply voltage at AC	
 at 50 Hz rated value 	24 V
• at 60 Hz rated value	24 V
relative negative tolerance of the control supply voltage at AC at 50 Hz	-20 %
relative positive tolerance of the control supply voltage at AC at 50 Hz	20 %
relative negative tolerance of the control supply voltage at AC at 60 Hz	-20 %
relative positive tolerance of the control supply voltage at AC at 60 Hz	20 %
control supply voltage frequency	50 60 Hz
relative negative tolerance of the control supply voltage frequency	-10 %
relative positive tolerance of the control supply voltage frequency	10 %
control supply voltage	
at DC rated value	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	160 mA
holding current in bypass operation rated value	360 mA
locked-rotor current at close of bypass contact	7.6 A
maximum	
inrush current peak at application of control supply voltage maximum	3.3 A
duration of inrush current peak at application of control supply voltage	12.1 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	1
number of digital outputs	3
not parameterizable	2

digital output version	2 normally-open contacts (NO) / 1 changeover contact (CO)			
number of analog outputs				
switching capacity current of the relay outputs	0			
at AC-15 at 250 V rated value	2 A			
at DC-13 at 24 V rated value	3 A 1 A			
	IA			
Installation/ mounting/ dimensions				
mounting position	with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back			
fastening method	screw fixing			
height	198 mm			
width	120 mm			
depth	249 mm			
required spacing with side-by-side mounting				
 forwards 	10 mm			
 backwards 	0 mm			
• upwards	100 mm			
 downwards 	75 mm			
● at the side	5 mm			
weight without packaging	5.2 kg			
Connections/ Terminals				
type of electrical connection				
for main current circuit	busbar connection			
for control circuit	spring-loaded terminals			
width of connection bar maximum	25 mm			
wire length for thermistor connection				
• with conductor cross-section = 0.5 mm ² maximum	50 m			
• with conductor cross-section = 1.5 mm ² maximum	150 m			
• with conductor cross-section = 2.5 mm ² maximum	250 m			
type of connectable conductor cross-sections				
 for main contacts for box terminal using the front clamping point solid 	16 120 mm²			
 for main contacts for box terminal using the front clamping point finely stranded with core end processing 	16 120 mm²			
 for main contacts for box terminal using the front clamping point finely stranded without core end processing 	10 120 mm²			
 for main contacts for box terminal using the front clamping point stranded 	16 70 mm²			
 at AWG cables for main contacts for box terminal using the front clamping point 	6 250 kcmil			
 for main contacts for box terminal using the back clamping point solid 	16 120 mm²			
 at AWG cables for main contacts for box terminal using the back clamping point 	6 250 kcmil			
• for main contacts for box terminal using both clamping points solid	max. 1x 95 mm², 1x 120 mm²			
 for main contacts for box terminal using both clamping points finely stranded with core end processing 	max. 1x 95 mm², 1x 120 mm²			
 for main contacts for box terminal using both clamping points finely stranded without core end processing 	max. 1x 95 mm², 1x 120 mm²			
 for main contacts for box terminal using both clamping points stranded 	max. 2x 120 mm ²			
 for main contacts for box terminal using the back clamping point finely stranded with core end processing 	16 120 mm²			
 for main contacts for box terminal using the back clamping point finely stranded without core end processing 	10 120 mm²			
 for main contacts for box terminal using the back clamping point stranded 	16 120 mm²			
type of connectable conductor cross-sections • at AWG cables for main current circuit solid	4 250 kcmil			

 for DIN cable lug for main contacts stranded 	16 95 mm²
 for DIN cable lug for main contacts stranded for DIN cable lug for main contacts finely stranded 	25 120 mm ²
type of connectable conductor cross-sections	
for control circuit solid	2x (0.25 1.5 mm²)
 for control circuit finely stranded with core end 	2x (0.25 1.5 mm ²) 2x (0.25 1.5 mm ²)
processing	2. (0.25 1.5 mm)
 at AWG cables for control circuit solid 	2x (24 16)
 at AWG cables for control circuit finely stranded with 	2x (24 16)
core end processing	
wire length	
 between soft starter and motor maximum 	800 m
at the digital inputs at AC maximum	1 000 m
tightening torque	
 for main contacts with screw-type terminals 	10 14 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 	89 124 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 Manual
ambient temperature	
 during operation 	-25 +60 °C; Please observe derating at temperatures of 40 °C or
	above
during storage and transport	-40 +80 °C
environmental category	3K6 (no ice formation, only occasional condensation), 3C3 (no salt
 during operation according to IEC 60721 	mist), 3S2 (sand must not get into the devices), 3M6
 during storage according to IEC 60721 	1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must
	not get inside the devices), 1M4
 during transport according to IEC 60721 	2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)
EMC emitted interference	acc. to IEC 60947-4-2: Class A
Communication/ Protocol	
communication module is supported	
 PROFINET standard 	Yes
EtherNet/IP	Yes
Modbus RTU	Yes
Modbus TCP	Yes
PROFIBUS	Yes
UL/CSA ratings	
manufacturer's article number	
of circuit breaker	
 — usable for Standard Faults at 460/480 V according to UL 	Siemens type: 3VA5225, max. 250 A; Iq = 10 kA
— usable for High Faults at 460/480 V according	Siemens type: 3VA52, max. 250 A; Ig max = 65 kA
to UL	
of the fuse	
— usable for Standard Faults up to 575/600 V	Type: Class RK5 / K5, max. 400 A; lq = 10 kA
according to UL	
 — usable for High Faults up to 575/600 V according to UL 	Type: Class J, max. 350 A; Iq = 100 kA
operating power [hp] for 3-phase motors	
• at 200/208 V at 50 °C rated value	50 hp
• at 220/230 V at 50 °C rated value	50 hp
• at 460/480 V at 50 °C rated value	100 hp
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
ATEX	
certificate of suitability	
-	

• ATEX			Yes			
• IECEx			Yes			
hardware fault tolerance according to IEC 61508 relating to ATEX		0				
PFDavg with low demand rate according to IEC 61508 relating to ATEX		0.09	0.09			
PFHD with high den relating to ATEX	PFHD with high demand rate according to EN 62061 relating to ATEX			9E-6 1/h		
Safety Integrity Lev relating to ATEX	el (SIL) according to I	EC 61508	SIL1			
	est interval or service 508 relating to ATEX	life	3 у			
Certificates/ approval	•					
General Product A	oproval					For use in hazard- ous locations
	CCC	Confirmatio	<u>on</u>	(UL) II	EAC	ATEX
For use in hazard- ous locations	Declaration of Conformity	Test Certifica	ates	Marine / Shipping		
IECEx	CE EG-Konf.	<u>Type Test Ce</u> ates/Test Re		ABS	Llovd's Kegister uts	PRS
other						
Confirmation						
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=3RW5056-2TB04 Cax online generator http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5056-2TB04						
Service&Support (Manuals, Certificates, Characteristics, FAQs,) https://support.industry.siemens.com/cs/ww/en/ps/3RW5056-2TB04						
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros,) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5056-2TB04⟨=en Characteristic: Tripping characteristics, I ² t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RW5056-2TB04/char						
Characteristic: Insta	allation altitude	·		<u>7cmar</u> <u>n&mlfb=3RW5056-2TBC</u>	04&objecttype=14&gri	<u>dview=view1</u>
Simulation Tool for https://support.indust	Soft Starters (STS) ry.siemens.com/cs/ww/	/en/view/1014949	917		-	

last modified:

4/11/2022 🖸