## **SIEMENS**

Data sheet 3RW5227-1TC04



SIRIUS soft starter 200-480 V 93 A, 24 V AC/DC Screw terminals Thermistor input

product brand name	SIRIUS
product category	Hybrid switching devices
product designation	Soft starter
product type designation	3RW52
manufacturer's article number	
<ul> <li>of standard HMI module usable</li> </ul>	3RW5980-0HS00
<ul> <li>of high feature HMI module usable</li> </ul>	3RW5980-0HF00
<ul> <li>of communication module PROFINET standard usable</li> </ul>	3RW5980-0CS00
<ul> <li>of communication module PROFIBUS usable</li> </ul>	3RW5980-0CP00
<ul> <li>of communication module Modbus TCP usable</li> </ul>	3RW5980-0CT00
<ul> <li>of communication module Modbus RTU usable</li> </ul>	3RW5980-0CR00
<ul> <li>of communication module Ethernet/IP</li> </ul>	3RW5980-0CE00
<ul> <li>of circuit breaker usable at 400 V</li> </ul>	3VA2216-7MN32-0AA0; Type of coordination 1, Iq = 15 kA, CLASS 10
<ul> <li>of circuit breaker usable at 500 V</li> </ul>	3VA2216-7MN32-0AA0; Type of coordination 1, Iq = 10 kA, CLASS 10
<ul> <li>of circuit breaker usable at 400 V at inside-delta circuit</li> </ul>	3VA2220-7MN32-0AA0; Type of coordination 1, Iq = 15 kA, CLASS 10
<ul> <li>of circuit breaker usable at 500 V at inside-delta circuit</li> </ul>	3VA2220-7MN32-0AA0; Type of coordination 1, Iq = 10 kA, CLASS 10
<ul> <li>of the gG fuse usable up to 690 V</li> </ul>	3NA3136-6; Type of coordination 1, Iq = 65 kA
<ul> <li>of the gG fuse usable at inside-delta circuit up to 500 V</li> </ul>	3NA3136-6; Type of coordination 1, Iq = 65 kA
<ul> <li>of full range R fuse link for semiconductor protection usable up to 690 V</li> </ul>	3NE1224-0: Type of coordination 2, Iq = 65 kA
<ul> <li>of back-up R fuse link for semiconductor protection usable up to 690 V</li> </ul>	3NE4124; Type of coordination 2, Iq = 65 kA

General technical data	
starting voltage [%]	30 100 %
stopping voltage [%]	50 %; non-adjustable
start-up ramp time of soft starter	0 20 s
current limiting value [%] adjustable	130 700 %
certificate of suitability	
<ul> <li>CE marking</li> </ul>	Yes
UL approval	Yes
CSA approval	Yes
product component	
HMI-High Feature	No
<ul> <li>is supported HMI-Standard</li> </ul>	Yes
is supported HMI-High Feature	Yes
product feature integrated bypass contact system	Yes
number of controlled phases	3

buffering time in the event of power failure	trin class	CLASS 10A (default) / 10E / 20E; and to IEC 20047 4.2	
• for main current circuit • for control circuit • for pollution • get pollution • for pollution • between main and auxiliary circuit • for motor election actegory according to IEC 69947-4-2  4 CS3a  CA CS3a  Cy 5/2018  Porduct function • ramp-up (soft starting) •	trip class	CLASS 10A (default) / 10E / 20E; acc. to IEC 60947-4-2	
• for control circuit insulation voltage rated value degree of pollution imputes voltage rated value  6 kV  5 kV  5 kV  5 kV  6 kV	·	100 mg	
insulation voltage rated value degree of pollution 3, acc, to IEC 60947-4-2 injustes voltage rated value blocking voltage of the thyristor maximum 1400 V surge voltage resistance rated value 8			
degree of pollution   3, acc, to IEC 60947-4-2   Impulse voltage of the thyristor maximum   1400 V   service factor   1			
Impulse voltage rated value   blocking voltage of the thyristor maximum   1400 V			
Social Sector   1   1   1   1   1   1   1   1   1			
1			
Surge voltage resistance rated value			
washmum permissible voltage for safe isolation  between main and auxiliary circuit  block resistance  vibration resistance  vissory according to IEC 60947-4-2  ASSa  resistance  vessubstance Prohibitance (Dato)  vessory resistance  vessory re			
e between main and auxiliary circuit         600 V           shock resistance         15 g / 11 ms, from 12 g / 11 ms with potential contact lifting           vibration resistance         15 mm to 6 Hz; 2g to 500 Hz           utilization category according to IEC 60947-4-2         AC S38           reference code according to IEC 60947-4-2         AC S39           remoduct function         Yes           * ramp-up (soft starting)         Yes           * soft Torque         Yes           * soft Torque         Yes           * soft Torque         Yes           * pup purp amp down         Yes           * inside-detal circuit         Yes           * remoter verioad protection         Yes           * remoter seet		ONV	
Second Procession		600 V	
vibration resistance         15 mm to 6 Hz; 2g to 500 Hz           vibilization category according to IEC 68947-4-2         AC 53a           reference code according to IEC 81346-2         0           Substance Prohibitance (Date)         02/15/2018           product function         ***           *** ramp-down (soft stop)         Yes           *** Soft Torque         Yes           *** adjustable current limitation         Yes           *** pump a down         Yes           *** intrinsic device protection         Yes           *** evaluation of thermistor motor protection         Yes, Full motor protection (thermistor motor protection and electronic motor overload protection)           *** evaluation of thermistor motor protection         Yes, Full motor protection (thermistor motor protection and electronic motor overload protection)           *** evaluation of thermistor motor protection         Yes, Full motor protection (thermistor motor protection and electronic motor overload protection)           *** evaluation of thermistor motor protection         Yes, Full motor protection (thermistor motor protection and electronic motor overload protection)           *** evaluation of thermistor motor protection         Yes, Full motor protection (thermistor motor protection and electronic motor overload protection)           *** evaluation of thermistor motor protection         Yes, Full motor protection (thermistor motor protection with special accessories with exampl	,		
utilization category according to IEC 80947-4-2 reference code according to IEC 81348-2 Q Substance Prohibitance (Dato) product function  • ramp-up (soft starting) • ramp-down (soft stop) • Soft Torque • adjustable current limitation • pump ramp down • intrinsic device protection • evaluation of thermistor motor protection • pump ramp down • evaluation of thermistor motor protection • evaluation of the control supply voltage • erenor logbook • via software parameterizable • via software configurable • PROFinergy • via software configurable • PROFinergy • via software configurable • removable terminal for control circuit • ves • at 10° C rated value • at 60° C r			
reference code according to IEC 81346-2         Q           Substance Prohibitance (Date)         Q2/15/2018           product function         Yes           • ramp-up (soft starting)         Yes           • Soft Torque         Yes           • adjustable current limitation         Yes           • pump ramp down         Yes           • intrinsic device 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           • auto-RESET         Yes           • manual RESET         Yes           • remote reset         Yes: Type A PTC or Klixon / Thermoclick           • communication function         Yes           • perality remaisured value display         Yes: Type A PTC or Klixon / Thermoclick           • remote reset         Yes: Type A PTC or Klixon / Thermoclick           • communication function         Yes           • perality remaisured value display         Yes: Only in conjunction with special accessories           • error togbook         Yes: Only in conjunction with special accessories           • removable terminal for control circuit         Yes           • formware update         Yes           • fremovable terminal for control circuit </th <th></th> <th></th>			
Substance Prohibitance (Date)  product function  * ramp-up (soft starting)  * ramp-up (soft starting)  * ramp-up (soft starting)  * ramp-down (soft stop)  * Soft Torque  * adjustable current limitation  * yes  * adjustable current limitation  * yes  * pump ramp down  * inthrise deview protection  * evaluation of thermistor motor protection  * yes  * autor-RESET  * yes  * namual RESET  * yes  * ermore reset  * emore reset  * evaluation function  * yes  * only in conjunction with special accessories  * via software configurable  * yes  * ermore update  * removable terminal for control circuit  * torque control  * on analog output  * to for created value  * at 40 °C rated value  * at 40 °C rated value  * at 40 °C rated value  * at 60 °C			
Product function   Framp-up (soft starting)   Yes   Framp-down (soft stop)   Yes   Framp-do	<del>_</del>		
• ramp-up (soft starting) • ramp-down (soft stop) • ramp-down (soft stop) • Soft Torque • adjustable current limitation • pump ramp down • motor overload protection • motor overload protection • evaluation of thermistor motor protection • evaluation of thermistor motor protection • inside-delta circuit • sauto-RESET • manual RESET • manual RESET • remote reset • communication function • operating measured value display • error logbook • via software parameterizable • via software parameterizable • via software parameterizable • removable terminal for control circuit • firmware update • removable terminal for control circuit • torque control • at 40 °C rated value • at 60 °C rated value • at inside-delta circuit relative nogative tolerance of the operating voltage • relative negative tolerance of the operating voltage • relative negative tolerance of the operating voltage • relative negative tolerance of the operating voltage at inside-delta circuit  ves • torque positive tolerance of the operating voltage • relative negative tolerance of the operating voltage at inside-delta circuit  veriated value positive tolerance of the operating voltage at inside-delta circuit  veriated value positive tolerance of the operating voltage at inside-delta circuit  veriative negative tolerance of the operating voltage at inside-delta circuit  veriative negative tolerance of the operating voltage at inside-delta circuit  veriative negative tolerance of the operating voltage at inside-delta circuit  veriative negative tolerance of the operating voltage at inside-delta circuit  veriative negative tolerance of the operating voltage at inside-delta circuit  veriative negative tolerance of the operating voltage at inside-delta circuit  veriative negative tolerance of the operating voltage at inside-delta circuit			
• ramp-down (soft stop) • Soft Torque • Soft Torque • Soft Torque • Adjustable current limitation • pump ramp down • intrinsic device protection • motor overload protection • evaluation of thermistor motor protection • inside-delta circuit • auto-RESET • manual RESET • remote reset • communication function • operating measured value display • error logbook • via software parameterizable • via software configurable • removable terminal for control circuit • torque control • analog output • to crated value • at 60 °C rated value • at inside-delta circuit relative nogative tolerance of the operating voltage • relative negative tolerance of the operating voltage  10 %  res  - 10 %  - 10	•	Yes	
Soft Torque a djustable current limitation pump ramp down intrinsic device protection whose variable and protection pump ramp down e valuation of thermistor motor protection ves; Full motor protection (thermistor motor protection and electronic motor overload protection)  e valuation of thermistor motor protection inside-deflat circuit auto-RESET ves manual RESET remore reset communication function e corrected yes; By turning off the control supply voltage communication function operating measured value display eight software parameterizable via software parameterizable via software configurable Formware update removable terminal for control circuit ot analog output  operational current at 40 °C rated value soft C rated value at 50 °C rated value soft or cated value at 60 °C rated value soft or C rated			
adjustable current limitation     pump ramp down     pump ramp down     motor overload protection     evaluation of thermistor motor protection     inside-detta circuit     euro-RESET     emanual RESET     emanual RESET     eremote reset     eommunication function     eoperating measured value display     error logbook     error logbook     via software parameterizable     evaluation engraped     eremovable terminal for control circuit     eremovable terminal for control circuit     eremovable terminal for control circuit     evaluation durrent     evaluation of crated value     evaluation of crated value     evaluation of crated value     evaluation of the operating voltage     erelative negative tolerance of the operating voltage     relative positive tolerance			
pump ramp down     intrinsic device protection     motor overload protection     motor overload protection     vesuluation of thermistor motor protection     inside-delta circuit     auto-RESET     manual RESET     manual RESET     ves     momunication function     operating measured value display     via software parameterizable     via software parameterizable     via software parameterizable     via software configurable     removable terminal for control circuit     verrouse control     verrouse reset     ves     via software configurable     via software configurable     via software confound to control circuit     verrouse control     verrouse control     verrouse control     verrouse terminal for control circuit     verrouse control     value     vor Electronics     operational current     value 0° rated value     value 0°	•		
intrinsic device protection  motor overload protection  vest Full motor protection (thermistor motor protection and electronic motor overload protection)  evaluation of thermistor motor protection  inside-delta circuit  ves  auto-RESET  manual RESET  remote reset  communication function  operating measured value display  ves; Only in conjunction with special accessories  ves; Only in conjunction with special a	•		
motor overload protection     vealuation of thermistor motor protection     vealuation of thermistor motor protection     inside-delta circuit     vealuation of thermistor motor protection     inside-delta circuit     vealuation of thermistor motor protection     vealuation of the protection of the protectio		Yes	
evaluation of thermistor motor protection  inside-delta circuit  auto-RESET  manual RESET  remote reset  communication function  inside-delta circuit  remote reset  communication function  perating measured value display  remote reset  remote reset  remote reset  communication function  perating measured value display  remote reset  remonunication function  rese, Sonly in conjunction with special accessories  rese, Only in conjunction with specia	•	Yes; Full motor protection (thermistor motor protection and electronic	
iniside-delta circuit auto-RESET auto-RESET auto-RESET auto-RESET auto-RESET  remote reset communication function operating measured value display error logbook ouis oftware parameterizable via software configurable PROFlenergy fermovable terminal for control circuit removable terminal for control circuit auto of C rated value at 60 °C rated	•		
• auto-RESET • manual RESET • remote reset • cremote reset • communication function • operating measured value display • error logbook • via software parameterizable • removable terminal for control circuit • torque control • at 40 °C rated value • at 60 °C rated value • at	<ul> <li>evaluation of thermistor motor protection</li> </ul>		
<ul> <li>manual RESET</li> <li>remote reset</li> <li>communication function</li> <li>operating measured value display</li> <li>error logbook</li> <li>error logbook</li> <li>via software parameterizable</li> <li>via software configurable</li> <li>PROFlenergy</li> <li>firmware update</li> <li>removable terminal for control circuit</li> <li>analog output</li> <li>torque control</li> <li>analog output</li> <li>of rated value</li> <li>at 60 °C rated value<!--</th--><th></th><th></th></li></ul>			
remote reset     communication function     operating measured value display     error logbook     via software parameterizable     via software configurable     via software configurable     via software update     removable terminal for control circuit     torque control     analog output     vor at 40 °C rated value     at 60 °C rated v			
communication function operating measured value display error logbook via software parameterizable via software configurable via software configurable FROFIenergy FROFIenergy Friedrich and the PROFINET Standard communication module firmware update removable terminal for control circuit to analog output  operational current at 40 °C rated value at 50 °C rated value at 60 °C rated valu	manual RESET		
operating measured value display     error logbook     via software parameterizable     via software configurable     PROFlenergy     Ves; Only in conjunction with special accessories     No     via software parameterizable     PROFlenergy     Ves     PROFlenergy     Ves; in connection with the PROFINET Standard communication module     Ves     removable terminal for control circuit     torque control     analog output     No     analog output     No  Power Electronics  Operational current     at 40 °C rated value     at 50 °C rated value     at 60 °C rated va			
<ul> <li>error logbook</li> <li>via software parameterizable</li> <li>via software configurable</li> <li>PROFlenergy</li> <li>firmware update</li> <li>firmware update</li> <li>removable terminal for control circuit</li> <li>torque control</li> <li>analog output</li> <li>no</li> <li>at 40 °C rated value</li> <li>at 50 °C rated value</li> <li>at 60 °C rated value</li> <li>at 40 °C rated value</li> <li>at 60 °C rated value</li> <li>at 60 °C rated value</li> <li>at 50 °C rated value</li> <li>at 40 °C rated value</li> <li>at 50 °C rated value</li> <li>at 60 °C rated value<th></th><th></th></li></ul>			
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via software configurable     PROFlenergy     Yes; in connection with the PROFINET Standard communication module     firmware update     removable terminal for control circuit     Yes     torque control     analog output     No  Power Electronics  Operational current     at 40 °C rated value     at 60 °C rated valu			
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e firmware update firmware update removable terminal for control circuit torque control analog output No  Power Electronics  operational current at 40 °C rated value at 50 °C rated value at 60 °C rated value at 40 °C rated value at 60 °C ra	_		
• firmware update • removable terminal for control circuit • torque control • analog output No  Power Electronics  operational current • at 40 °C rated value • at 50 °C rated value • at 60 °C rated value • at inside-delta circuit rated value • at inside-delta circuit rated value • relative negative tolerance of the operating voltage relative negative tolerance of the operating voltage at inside-delta circuit relative positive tolerance of the operating voltage at inside-delta circuit relative positive tolerance of the operating voltage at inside-delta circuit	PKUFienergy		
removable terminal for control circuit     torque control     analog output     No  Power Electronics  operational current     at 40 °C rated value     at 50 °C rated value     at 60 °C rated value     at 50 °C rated value     at 60 °C rated value     at 60 °C rated value     at 60 °C rated value     at inside-delta circuit rated value     at inside-delta circuit rated value     at inside-delta circuit rated value  relative negative tolerance of the operating voltage relative negative tolerance of the operating voltage at inside-delta circuit  relative positive tolerance of the operating voltage at inside-delta circuit  relative positive tolerance of the operating voltage at inside-delta circuit  at or relative positive tolerance of the operating voltage at inside-delta circuit  at or relative positive tolerance of the operating voltage at inside-delta circuit	firmware update		
torque control     analog output     No  Power Electronics  operational current     at 40 °C rated value     at 50 °C rated value     at 60 °C rated value     at 40 °C rated value     at 50 °C rated value     at 50 °C rated value     at 60 °C rated value     at inside-delta circuit rated value     at inside-delta circuit rated value     at inside-delta circuit rated value  relative negative tolerance of the operating voltage at inside-delta circuit  relative positive tolerance of the operating voltage at inside-delta circuit  relative positive tolerance of the operating voltage at inside-delta circuit  relative positive tolerance of the operating voltage at inside-delta circuit  relative positive tolerance of the operating voltage at inside-delta circuit  relative positive tolerance of the operating voltage at inside-delta circuit  relative positive tolerance of the operating voltage at inside-delta circuit  relative positive tolerance of the operating voltage at inside-delta circuit	•		
analog output     No  Power Electronics  operational current     at 40 °C rated value	torque control		
operational current  • at 40 °C rated value • at 50 °C rated value • at 60 °C rated value  operational current at inside-delta circuit • at 40 °C rated value  operational current at inside-delta circuit • at 40 °C rated value • at 50 °C rated value • at 50 °C rated value • at 60 °C rated value • at 60 °C rated value • at 60 °C rated value • at inside-delta circuit rated value  e at inside-delta circuit rated value  relative negative tolerance of the operating voltage relative negative tolerance of the operating voltage at inside-delta circuit  relative positive tolerance of the operating voltage at inside-delta circuit  relative positive tolerance of the operating voltage at inside-delta circuit  10 %	•		
operational current  • at 40 °C rated value • at 50 °C rated value • at 60 °C rated value  operational current at inside-delta circuit  • at 40 °C rated value  76 A  operational current at inside-delta circuit  • at 40 °C rated value  161 A • at 50 °C rated value  131 A  operating voltage • rated value  • at inside-delta circuit rated value  200 480 V  relative negative tolerance of the operating voltage relative positive tolerance of the operating voltage at inside-delta circuit  relative positive tolerance of the operating voltage at inside-delta circuit  relative positive tolerance of the operating voltage at inside-delta circuit  relative positive tolerance of the operating voltage at inside-delta circuit  10 %	Power Electronics		
<ul> <li>at 40 °C rated value</li> <li>at 50 °C rated value</li> <li>at 60 °C rated value</li> <li>76 A</li> </ul> Operational current at inside-delta circuit <ul> <li>at 40 °C rated value</li> <li>at 50 °C rated value</li> <li>at 50 °C rated value</li> <li>at 60 °C rated value</li> <li>at inside-delta circuit rated value</li> <li>200 480 V</li> <li>at inside-delta circuit rated value</li> <li>relative negative tolerance of the operating voltage</li> <li>relative negative tolerance of the operating voltage at inside-delta circuit</li> <li>relative positive tolerance of the operating voltage at inside-delta circuit</li> </ul>			
<ul> <li>at 50 °C rated value</li> <li>at 60 °C rated value</li> <li>operational current at inside-delta circuit</li> <li>at 40 °C rated value</li> <li>at 50 °C rated value</li> <li>at 50 °C rated value</li> <li>at 60 °C rated value</li> <li>at inside-delta circuit rated value</li> <li>200 480 V</li> <li>at inside-delta circuit rated value</li> <li>relative negative tolerance of the operating voltage</li> <li>relative negative tolerance of the operating voltage at inside-delta circuit</li> <li>relative positive tolerance of the operating voltage at inside-delta circuit</li> <li>relative positive tolerance of the operating voltage at inside-delta circuit</li> <li>10 %</li> </ul>		93 A	
operational current at inside-delta circuit  • at 40 °C rated value • at 50 °C rated value • at 60 °C rated value 131 A  operating voltage • rated value • at inside-delta circuit rated value  relative negative tolerance of the operating voltage relative negative tolerance of the operating voltage relative negative tolerance of the operating voltage relative positive tolerance of the operating voltage at inside-delta circuit  relative positive tolerance of the operating voltage at inside-delta circuit  10 %	at 50 °C rated value		
<ul> <li>at 40 °C rated value</li> <li>at 50 °C rated value</li> <li>at 60 °C rated value</li> <li>operating voltage</li> <li>rated value</li> <li>at inside-delta circuit rated value</li> <li>relative negative tolerance of the operating voltage</li> <li>10 %</li> <li>-15 %</li> <li>-1</li></ul>	at 60 °C rated value	76 A	
<ul> <li>at 50 °C rated value</li> <li>at 60 °C rated value</li> <li>131 A</li> <li>operating voltage <ul> <li>rated value</li> <li>at inside-delta circuit rated value</li> <li>relative negative tolerance of the operating voltage</li> <li>relative negative tolerance of the operating voltage</li> <li>relative negative tolerance of the operating voltage</li> <li>relative positive tolerance of the operating voltage at inside-delta circuit</li> </ul> </li> <li>10 %</li> <li>10 %</li> </ul>	operational current at inside-delta circuit		
<ul> <li>at 60 °C rated value</li> <li>operating voltage         <ul> <li>rated value</li> <li>at inside-delta circuit rated value</li> </ul> </li> <li>relative negative tolerance of the operating voltage</li> <li>relative negative tolerance of the operating voltage</li> <li>relative negative tolerance of the operating voltage</li> <li>10 %</li> </ul> <li>relative positive tolerance of the operating voltage at inside-delta circuit</li> <li>10 %</li>	at 40 °C rated value	161 A	
operating voltage  • rated value  • at inside-delta circuit rated value  relative negative tolerance of the operating voltage relative positive tolerance of the operating voltage relative negative tolerance of the operating voltage relative positive tolerance of the operating voltage at inside-delta circuit  relative positive tolerance of the operating voltage at inside-delta circuit  10 %	• at 50 °C rated value	143 A	
<ul> <li>rated value</li> <li>at inside-delta circuit rated value</li> <li>200 480 V</li> <li>relative negative tolerance of the operating voltage</li> <li>relative positive tolerance of the operating voltage</li> <li>relative negative tolerance of the operating voltage at inside-delta circuit</li> <li>relative positive tolerance of the operating voltage at inside-delta circuit</li> <li>10 %</li> <li>10 %</li> </ul>	• at 60 °C rated value	131 A	
● at inside-delta circuit rated value  relative negative tolerance of the operating voltage relative positive tolerance of the operating voltage  relative negative tolerance of the operating voltage at inside-delta circuit  relative positive tolerance of the operating voltage at inside-delta circuit  10 %  10 %	operating voltage		
relative negative tolerance of the operating voltage  relative positive tolerance of the operating voltage  relative negative tolerance of the operating voltage at inside-delta circuit  relative positive tolerance of the operating voltage at inside-delta circuit  10 %  10 %	• rated value	200 480 V	
relative positive tolerance of the operating voltage relative negative tolerance of the operating voltage at inside-delta circuit relative positive tolerance of the operating voltage at inside-delta circuit  10 %	at inside-delta circuit rated value	200 480 V	
relative negative tolerance of the operating voltage at inside-delta circuit  relative positive tolerance of the operating voltage at inside-delta circuit  10 %	relative negative tolerance of the operating voltage	-15 %	
relative positive tolerance of the operating voltage at inside-delta circuit  10 %		10 %	
relative positive tolerance of the operating voltage at inside-delta circuit		-15 %	
inside-delta circuit		40.07	
operating power for 3-phase motors	inside-delta circuit	10 %	
	operating power for 3-phase motors		

-t 000 V -t 40 %0t- dl	00 144
• 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
Operating frequency 1 rated value	50 Hz
Operating frequency 2 rated value	60 Hz -10 %
relative negative tolerance of the operating frequency relative positive tolerance of the operating frequency	10 %
adjustable motor current	10 76
at rotary coding switch on switch position 1	40.5 A
at rotary coding switch on switch position 2	44 A
at rotary coding switch on switch position 3	47.5 A
at rotary coding switch on switch position 4      at rotary coding switch on switch position 4	51 A
at rotary coding switch on switch position 5	54.5 A
at rotary coding switch on switch position 6	58 A
at rotary coding switch on switch position 7	61.5 A
at rotary coding switch on switch position 8	65 A
at rotary coding switch on switch position 9	68.5 A
at rotary coding switch on switch position 10	72 A
at rotary coding switch on switch position 11	75.5 A
at rotary coding switch on switch position 12	79 A
at rotary coding switch on switch position 13	82.5 A
at rotary coding switch on switch position 14	86 A
at rotary coding switch on switch position 15	89.5 A
<ul> <li>at rotary coding switch on switch position 16</li> </ul>	93 A
• minimum	40.5 A
adjustable motor current	
<ul> <li>for inside-delta circuit at rotary coding switch on switch position 1</li> </ul>	70.1 A
<ul> <li>for inside-delta circuit at rotary coding switch on switch position 2</li> </ul>	76.2 A
<ul> <li>for inside-delta circuit at rotary coding switch on switch position 3</li> </ul>	82.3 A
<ul> <li>for inside-delta circuit at rotary coding switch on switch position 4</li> </ul>	88.3 A
<ul> <li>for inside-delta circuit at rotary coding switch on switch position 5</li> </ul>	94.4 A
<ul> <li>for inside-delta circuit at rotary coding switch on switch position 6</li> </ul>	100 A
<ul> <li>for inside-delta circuit at rotary coding switch on switch position 7</li> </ul>	107 A
<ul> <li>for inside-delta circuit at rotary coding switch on switch position 8</li> </ul>	113 A
for inside-delta circuit at rotary coding switch on switch position 9      for inside delta size with the rotary coding switch on the size with the rotary coding switch on the size with the siz	119 A
for inside-delta circuit at rotary coding switch on switch position 10  for inside delta significant paters and in a switch or	125 A
for inside-delta circuit at rotary coding switch on switch position 11  for inside delta significant paters and in a switch on	131 A
for inside-delta circuit at rotary coding switch on switch position 12      for inside delta significant paters and in a switch on	137 A
<ul> <li>for inside-delta circuit at rotary coding switch on switch position 13</li> </ul>	143 A
<ul> <li>for inside-delta circuit at rotary coding switch on switch position 14</li> </ul>	149 A
<ul> <li>for inside-delta circuit at rotary coding switch on switch position 15</li> </ul>	155 A
<ul> <li>for inside-delta circuit at rotary coding switch on switch position 16</li> </ul>	161 A
at inside-delta circuit minimum	70.1 A
minimum load [%]	15 %; Relative to smallest settable le
power loss [W] for rated value of the current at AC	40.14/
at 40 °C after startup     at 50 °C after startup	40 W
<ul> <li>at 50 °C after startup</li> </ul>	37 W

100.00 %	0.5.111	
at 60 °C after startup	35 W	
power loss [W] at AC at current limitation 350 %		
<ul> <li>at 40 °C during startup</li> </ul>	1 270 W	
<ul> <li>at 50 °C during startup</li> </ul>	1 077 W	
at 60 °C during startup	959 W	
Control circuit/ Control		
type of voltage of the control supply voltage	AC/DC	
control supply voltage at AC		
<ul> <li>at 50 Hz rated value</li> </ul>	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	380 mA	
locked-rotor current at close of bypass contact	7.6 A	
inrush current peak at application of control supply voltage	3.3 A	
maximum  duration of inrush current peak at application of control	12.1 ms	
supply voltage		
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	0	
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	with vertical mounting surface +/-90° rotatable, with vertical mounting	
fastening method	surface +/- 22.5° tiltable to the front and back	
height	306 mm	
width	185 mm	
depth	203 mm	
required spacing with side-by-side mounting	200 111111	
	10 mm	
• forwards	10 mm	
backwards     upwards	0 mm	
• upwards	100 mm	
• downwards	75 mm	
at the side	5 mm	

weight without packaging	6.9 kg	
Connections/ Terminals		
type of electrical connection		
for main current circuit	box terminal	
• for control circuit	screw-type terminals	
width of connection bar maximum	25 mm	
wire length for thermistor connection		
<ul> <li>with conductor cross-section = 0.5 mm² maximum</li> </ul>	50 m	
<ul> <li>with conductor cross-section = 1.5 mm² maximum</li> </ul>	150 m	
<ul> <li>with conductor cross-section = 2.5 mm² maximum</li> </ul>	250 m	
type of connectable conductor cross-sections		
<ul> <li>for main contacts for box terminal using the front clamping point solid</li> </ul>	1x (2.5 16 mm²)	
<ul> <li>for main contacts for box terminal using the front clamping point finely stranded with core end processing</li> </ul>	1x (2.5 50 mm²)	
<ul> <li>for main contacts for box terminal using the front clamping point stranded</li> </ul>	1x (10 70 mm²)	
<ul> <li>at AWG cables for main contacts for box terminal using the front clamping point</li> </ul>	1x (10 2/0)	
for main contacts for box terminal using the back clamping point solid  ANO achieve for main appearant for how to revise the	1x (2.5 16 mm²)	
at AWG cables for main contacts for box terminal using the back clamping point     for main contacts for box terminal using both	1x (10 2/0)	
for main contacts for box terminal using both clamping points solid     for main contacts for box terminal using both	2x (2.5 16 mm²)	
<ul> <li>for main contacts for box terminal using both clamping points finely stranded with core end processing</li> </ul>	2x (2.5 35 mm²)	
<ul> <li>for main contacts for box terminal using both clamping points stranded</li> </ul>	2x (6 16 mm²), 2x (10 50 mm²)	
<ul> <li>for main contacts for box terminal using the back clamping point finely stranded with core end processing</li> </ul>	1x (2.5 50 mm²)	
for main contacts for box terminal using the back clamping point stranded	1x (10 70 mm²)	
type of connectable conductor cross-sections	4 (0.5 4.0 0) 0 (0.5 5.5	
for control circuit solid	1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²)	
<ul> <li>for control circuit finely stranded with core end processing</li> </ul>	1x (0.5 2.5 mm²), 2x (0.5 1.5 mm²)	
at AWG cables for control circuit solid	1x (20 12), 2x (20 14)	
wire length		
between soft starter and motor maximum     at the digital inputs at A.C. requireurs	800 m	
at the digital inputs at AC maximum     at the digital inputs at DC maximum	100 m	
at the digital inputs at DC maximum  tightening torque	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		
installation altitude at height above sea level maximum	5 000 m; Derating as of 1000 m, see catalog	
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		
<ul> <li>during operation according to IEC 60721</li> </ul>	3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6	
during storage according to IEC 60721	1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4	
<ul> <li>during transport according to IEC 60721</li> </ul>	2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)	

EMC emitted interference	acc. to IEC 60947-4-2: Class A	
Communication/ Protocol		
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		
<ul> <li>usable for Standard Faults at 460/480 V according to UL</li> </ul>	Siemens type: 3VA51, max. 125 A; lq = 10 kA	
<ul> <li>usable for High Faults at 460/480 V according to UL</li> </ul>	Siemens type: 3VA51, max. 125 A; lq max = 65 kA	
<ul> <li>usable for Standard Faults at 460/480 V at inside-delta circuit according to UL</li> </ul>	Siemens type: 3VA51, max. 125 A; lq = 10 kA	
<ul> <li>usable for High Faults at 460/480 V at inside- delta circuit according to UL</li> </ul>	Siemens type: 3VA51, max. 125 A; Iq max = 65 kA	
<ul> <li>usable for Standard Faults at 575/600 V according to UL</li> </ul>	Siemens type: 3VA51, max. 125 A; Iq = 10 kA	
<ul> <li>usable for Standard Faults at 575/600 V at inside-delta circuit according to UL</li> </ul>	Siemens type: 3VA51, max. 125 A; Iq = 10 kA	
• of the fuse		
<ul> <li>usable for Standard Faults up to 575/600 V according to UL</li> </ul>	Type: Class RK5 / K5, max. 300 A; Iq = 10 kA	
<ul> <li>usable for High Faults up to 575/600 V according to UL</li> </ul>	Type: Class J / L, max. 250 A; Iq = 100 kA	
<ul> <li>usable for Standard Faults at inside-delta circuit up to 575/600 V according to UL</li> </ul>	Type: Class RK5 / K5, max. 300 A; Iq = 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; Iq = 100 kA	
operating power [hp] for 3-phase motors		
<ul> <li>at 200/208 V at 50 °C rated value</li> </ul>	25 hp	
● at 220/230 V at 50 °C rated value	30 hp	
<ul> <li>at 460/480 V at 50 °C rated value</li> </ul>	60 hp	
<ul> <li>at 200/208 V at inside-delta circuit at 50 °C rated value</li> </ul>	40 hp	
<ul> <li>at 220/230 V at inside-delta circuit at 50 °C rated value</li> </ul>	50 hp	
at 460/480 V at inside-delta circuit at 50 °C rated value	100 hp	
contact rating of auxiliary contacts according to UL	R300-B300	
Safety related data		
protection class IP on the front according to IEC 60529	IP00; IP20 with cover	
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front with c	over
electromagnetic compatibility	in accordance with IEC 60947-4-2	
Certificates/ approvals		
General Product Approval		EMC



Confirmation









Declaration of Conformity Test Certificates Marine / Shipping





Type Test Certificates/Test Report







Marine / Shipping

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=3RW5227-1TC04

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5227-1TC04

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

https://support.industry.siemens.com/cs/ww/en/ps/3RW5227-1TC04

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

http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RW5227-1TC04&lang=en

Characteristic: Tripping characteristics, I2t, Let-through current

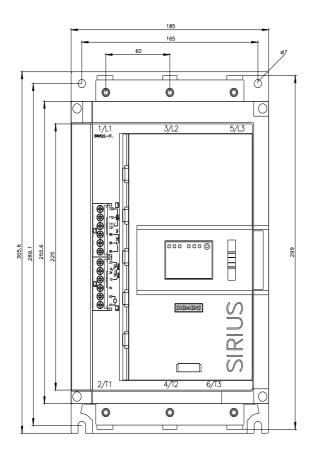
https://support.industry.siemens.com/cs/ww/en/ps/3RW5227-1TC04/char

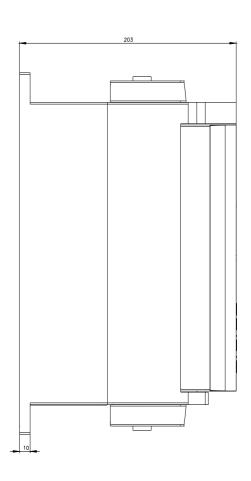
Characteristic: Installation altitude

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5227-1TC04&objecttype=14&gridview=view1

Simulation Tool for Soft Starters (STS)

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





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