SIEMENS



3RW5548-6HF04

Data sheet



SIRIUS soft starter 200-480 V 570 A, 24 V AC/DC Screw terminals Fail-safe

Figure similar

product brand name	SIRIUS			
product category	Hybrid switching devices			
product designation	Failsafe soft starters			
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 	3VA2580-6HN32-0AA0: Type of coordination 1, Iq = 65 kA, CLASS 10			
 of circuit breaker usable at 500 V 	3VA2580-6HN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10			
 of circuit breaker usable at 400 V at inside-delta circuit 	<u>3VA2510-6HN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10</u>			
 of circuit breaker usable at 500 V at inside-delta circuit 	<u>3VA2510-6HN32-0AA0: Type of coordination 1. lq = 65 kA. CLASS 10</u>			
 of the gG fuse usable up to 690 V 	2x3NA3365-6; Type of coordination 1, Iq = 65 kA			
 of the gG fuse usable at inside-delta circuit up to 500 V 	2x3NA3365-6; Type of coordination 1, Iq = 65 kA			
 of full range R fuse link for semiconductor protection usable up to 690 V 	<u>3NE1437-2; Type of coordination 2, Iq = 65 kA</u>			
 of back-up R fuse link for semiconductor protection usable up to 690 V 	<u>3NC3342-1U; Type of coordination 2, Iq = 65 kA</u>			
General technical data				
starting voltage [%]	20 100 %			
stopping voltage [%]	50 %; non-adjustable			
start-up ramp time of soft starter	0 360 s			
ramp-down time of soft starter	0 360 s			
start torque [%]	10 100 %			
stopping torque [%]	10 100 %			
torque limitation [%]	20 200 %			
current limiting value [%] adjustable	125 800 %			
breakaway voltage [%] adjustable	40 100 %			
breakaway time adjustable	0 2 s			
number of parameter sets	3			
accuracy class according to IEC 61557-12	5 %			

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contificate of quitebility			
certificate of suitability	Yes (p) dientudong		
CE marking	Yes		
UL approval			
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)	11/22/2019		
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		

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relative negative tolerance of the control supply voltage at AC at 50 Hz -20 % relative positive tolerance of the control supply 20 %						
relative positive tolerance of the control supply 20 %	relative negative tolerance of the control supply					
	relative positive tolerance of the control supply	20 %				

relative negative tolerance of the control supply voltage at AC at 60 Hz	^{-20 %} (c) dientudong			
relative positive tolerance of the control supply voltage at AC at 60 Hz				
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	440 mA			
holding current in bypass operation rated value	720 mA			
locked-rotor current at close of bypass contact maximum	6.7 A			
inrush current peak at application of control supply voltage maximum	7.5 A			
duration of inrush current peak at application of control supply voltage	20 ms			
design of the overvoltage protection	Varistor			
design of short-circuit protection for control circuit	4 A gG fuse (Icu=1 kA), 6 A quick-acting fuse (Icu=1 kA), C1 miniature circuit breaker (Icu= 600 A), C6 miniature circuit breaker (Icu= 300 A); Is not part of scope of supply			
Inputs/ Outputs				
number of digital inputs	4			
 with fail-safe 	1			
parameterizable	4			
number of digital outputs	3			
Number of digital outputs with fail-safe	1			
number of digital outputs parameterizable	2			
number of digital outputs not parameterizable	-			
digital output version	2 normally-open contacts (NO) / 1 normally-closed contact (NC) / 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			
Response times				
OFF-delay time with safety-related request when switched off via control inputs maximum	100 ms			
Installation/ mounting/ dimensions				
mounting position	Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)			
fastening method	screw fixing			
height	393 mm			
width	210 mm			
depth	203 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	10.9 kg			
Connections/ Terminals				
type of electrical connection				
for main current circuit	busbar connection			
for control circuit	screw-type terminals			
width of connection bar maximum	45 mm			

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wire length for thermistor connection	d'ante dan a		
 with conductor cross-section = 0.5 mm² maximum 	^{50 m} (c) dientudong		
 with conductor cross-section = 1.5 mm² maximum 	150 m		
 with conductor cross-section = 2.5 mm² maximum 	250 m		
type of connectable conductor cross-sections			
 for DIN cable lug for main contacts stranded 	2x (50 240 mm²)		
 for DIN cable lug for main contacts finely stranded 	2x (70 240 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 	1x (0.5 2.5 mm²), 2x (0.5 1.5 mm²)		
processing			
at AWG cables for control circuit solid	1x (20 12), 2x (20 14)		
wire length			
 between soft starter and motor maximum 	800 m		
at the digital inputs at DC maximum	1 000 m		
tightening torque			
 for main contacts with screw-type terminals 	14 24 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	124 210 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	2 000 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			
during operation according to IEC 60721	3K6 (no ice formation, only occasional condensation), 3C3 (no salt		
	mist), 3S2 (sand must not get into the devices), 3M6		
 during storage 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		
 PROFINET high-feature 	Yes		
EtherNet/IP	Yes		
Modbus RTU	Yes		
Modbus TCP	Yes		
PROFIBUS	Yes		
UL/CSA ratings			
manufacturer's article number			
• of the fuse			
 — usable for Standard Faults up to 575/600 V according to UL 	Type: Class J / L, max. 1600 A; Iq = 30 kA		
— usable for High Faults up to 575/600 V according to UL	Type: Class J / L, max. 1200 A; Iq = 100 kA		
 usable for Standard Faults at inside-delta circuit up to 575/600 V according to UL 	Type: Class J / L, max. 1600 A; Iq = 30 kA		
	Type: Class J / L, max. 1600 A; Iq = 30 kA		
 usable for High Faults at inside-delta circuit up to 575/600 V according to UL 	Type: Class J / L, max. 1600 A; Iq = 30 kA Type: Class J / L, max. 1200 A; Iq = 100 kA		
to 575/600 V according to UL			
to 575/600 V according to UL operating power [hp] for 3-phase motors	Type: Class J / L, max. 1200 A; lq = 100 kA		
to 575/600 V according to UL operating power [hp] for 3-phase motors • at 200/208 V at 50 °C rated value	Type: Class J / L, max. 1200 A; lq = 100 kA 150 hp		
to 575/600 V according to UL operating power [hp] for 3-phase motors • at 200/208 V at 50 °C rated value • at 220/230 V at 50 °C rated value	Type: Class J / L, max. 1200 A; Iq = 100 kA 150 hp 200 hp		

• at 460/480 V at inside-delta circuit at 50 °C rated value	750 hp	diant	tudong	
contact rating of auxiliary contacts according to UL	R300-B300) MEN		
Safety related data			3	
safety device type according to IEC 61508-2	Туре В			
B10d value	648 000			
Safety Integrity Level (SIL)				
 according to IEC 61508 	SIL1			
SIL Claim Limit (subsystem) according to EN 62061	SIL 1			
performance level (PL) according to EN ISO 13849-1	C			
category according to EN ISO 13849-1	2			
stop category according to EN 60204-1	0			
Safe failure fraction (SFF)	60 %			
average diagnostic coverage level (DCavg)	90 %			
diagnostics test interval by internal test function maximum	1 000 s			
PFHD with high demand rate according to EN 62061	1E-6 1/h			
PFDavg with low demand rate according to IEC 61508	0.09			
hardware fault tolerance according to IEC 61508	0			
T1 value for proof test interval or service life according to IEC 61508	20 у			
safe state	Open load circuit			
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				
certificate of suitability				
• ATEX	Yes			
• IECEx	Yes			
 according to ATEX directive 2014/34/EU 	BVS 18 ATEX F 003 X			
type of protection according to ATEX directive 2014/34/EU			Ex tb Db] [Ex pxb Db],	
hardware fault tolerance according to IEC 61508 relating to ATEX	0			
PFDavg with low demand rate according to IEC 61508 relating to ATEX	0.008			
PFHD with high demand rate according to EN 62061 relating to ATEX	5E-7 1/h			
Safety Integrity Level (SIL) according to IEC 61508 relating to ATEX	SIL1			
T1 value for proof test interval or service life 3 s according to IEC 61508 relating to ATEX				
Certificates/ approvals				
General Product Approval				
Confirmatio	ND	•		
	<u>m</u>	(11)	COC	
			CUL	
CSA CCC	TÜV	UL		
EMC For use in hazardous locations	Declaration of Conformity	Test Certificates	Marine / Shipping	
<u> </u>		Type Test Certific-		
🐼 💷 (Ex)	CE	ates/Test Report		
RCM IECEX ATEX	EG-Konf.		ABS	
Marine / Shipping		other		

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Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

https://www.siemens.com/ic10

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RW5548-6HF04

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5548-6HF04

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

https://support.industry.siemens.com/cs/ww/en/ps/3RW5548-6HF04

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5548-6HF04&lang=en

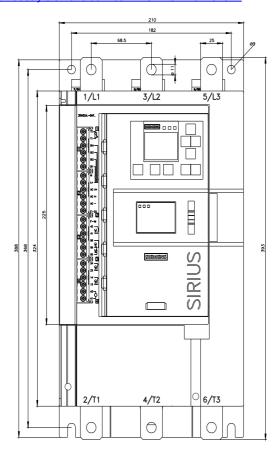
Characteristic: Tripping characteristics, I²t, Let-through current

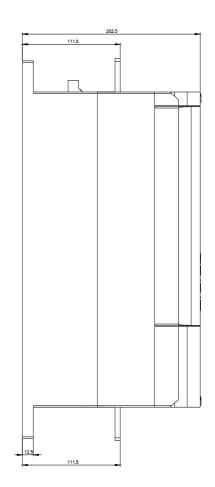
https://support.industry.siemens.com/cs/ww/en/ps/3RW5548-6HF04/char

Characteristic: Installation altitude

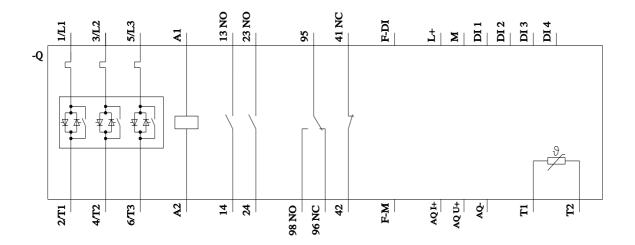
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5548-6HF04&objecttype=14&gridview=view1 Simulation Tool for Soft Starters (STS)

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









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