SIEMENS

Data sheet 3RW5235-2TC04

SIRIUS soft starter 200-480 V 143 A, 24 V AC/DC spring-type terminals Thermistor input



Figure similar

Product brand name	SIRIUS
Product category	Hybrid switching devices
Product designation	Soft starter
Manufacturer's article number	
 of HMI module usable 	3RW5980-0HS00
 of HMI-Modul high-feature usable 	3RW5980-0HF00
 of communication module PROFINET standard usable 	3RW5980-0CS00
 of communication module PROFIBUS usable 	3RW5980-0CP00
• of communication module Modbus TCP usable	3RW5980-0CT00
 of circuit breaker usable at 400 V 	3VA2220-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10
 of circuit breaker usable at 400 V at inside-delta circuit 	3VA2325-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10
• of the gG fuse usable up to 690 V	3NA3244-6; Type of coordination 1, Iq = 65 kA
 of the gG fuse usable at inside-delta circuit up to 500 V 	3NA3244-6; Type of coordination 1, Iq = 65 kA
 of full range R fuse link for semiconductor protection usable up to 690 V 	3NE1227-0; Type of coordination 2, Iq = 65 kA

• of back-up R fuse link for semiconductor protection usable up to 690 V

3NE3334-0B; Type of coordination 2, Iq = 65 kA

General technical data	
Starting voltage [%]	30 100 %
Start-up ramp time of soft starter	0 20 s
Product component	
• is supported HMI-Standard	Yes
• is supported HMI-High Feature	Yes
Product feature integrated bypass contact system	Yes
Number of controlled phases	3
Trip class	CLASS 10A (default) / 10E / 20E; acc. to IEC 60947-4-2
Insulation voltage	
• rated value	600 V
Degree of pollution	3
Impulse voltage rated value	6 kV
Blocking voltage of the thyristor maximum	1 400 V
Service factor	1
Surge voltage resistance rated value	6 kV
maximum permissible voltage for safe isolation	
 between main and auxiliary circuit 	600 V
Protection class IP	IP00; IP20 with additional terminal covers for vertical touching from the front
Usage category acc. to IEC 60947-4-2	AC 53a
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
Reference code acc. to DIN EN 81346-2	Q
Product function	
ramp-up (soft starting)	Yes
• ramp-down (soft stop)	Yes
• Soft Torque	Yes
Adjustable current limitation	Yes
• pump ramp down	Yes
Intrinsic device protection	Yes
motor overload protection	Yes; Full motor protection (thermistor motor protection and electronic motor overload protection)
Evaluation of thermistor motor protection	Yes; Type A PTC or Klixon / Thermoclick
• inside-delta circuit	Yes
Auto-reset	Yes
Manual RESET	Yes
• remote reset	Yes; By turning off the control supply voltage
communication function	Yes
▼ communicanon muchON	100

• firmware update	Yes
• removable terminal for control circuit	Yes
• analog output	No

Power Electronics	
Operating current	
• at 40 °C rated value	143 A
● at 50 °C rated value	128 A
● at 60 °C rated value	118 A
Operating current at inside-delta circuit	
• at 40 °C rated value	248 A
● at 50 °C rated value	222 A
● at 60 °C rated value	204 A
Operating voltage	
• rated value	200 480 V
 at inside-delta circuit rated value 	200 480 V
Relative negative tolerance of the operating voltage	-15 %
Relative positive tolerance of the operating voltage	10 %
Relative negative tolerance of the operating voltage	-15 %
at inside-delta circuit	40.00
Relative positive tolerance of the operating voltage at inside-delta circuit	10 %
Operating power for three-phase motors	
• at 230 V at 40 °C rated value	37 kW
 at 230 V at inside-delta circuit at 40 °C rated value 	75 kW
• at 400 V at 40 °C rated value	75 kW
 at 400 V at inside-delta circuit at 40 °C rated value 	132 kW
Operating frequency 1 rated value	50 Hz
Operating frequency 2 rated value	60 Hz
Relative negative tolerance of the operating frequency	-10 %
Relative positive tolerance of the operating frequency	10 %
Adjustable motor current	
• minimum	68 A
at inside-delta circuit minimum	118 A
Minimum load [%]	15 %; Relative to smallest settable le
Power loss [W] for rated value of the current at AC	
• at 40 °C to power-up	55 W
• at 50 °C to power-up	50 W
• at 60 °C to power-up	47 W
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 the by-pass mode operating rated value	380 mA
Starting current at close of by-pass contact maximum	7.6 A
Inrush current peak at connect of control supply voltage maximum	3.3 A
Duration of inrush current peak at connect 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 inputs for thermistor connection	1; Type A PTC or Klixon / Thermoclick
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

Mounting position	with vertical mounting surface +/-90° rotatable, with vertical
woulding position	mounting surface +/- 22.5° tiltable to the front and back
Mounting type	screw fixing
Height	306 mm
Width	185 mm
Depth	203 mm
Required spacing with side-by-side mounting	
• forwards	10 mm
Backwards	0 mm
• upwards	100 mm
• downwards	75 mm
• at the side	5 mm
Installation altitude at height above sea level	5 000 m; Derating as of 1000 m, see catalog
maximum	
Weight without packaging	6.6 kg
Connections/Terminals	
Type of electrical connection	
• for main current circuit	screw-type terminals
• for control circuit	spring-loaded terminals
Type of connectable conductor cross-sections	
 for DIN cable lug for main contacts stranded 	2x (16 95 mm²)
 for DIN cable lug for main contacts finely stranded 	2x (25 120 mm²)
Type of connectable conductor cross-sections at AWG conductors for control circuit	
• solid	2x (24 16)
• finely stranded with core end processing	2x (24 16)
Wire length	
• between soft starter and motor maximum	800 m
• at the digital inputs at AC maximum	100 m
• at the digital inputs at DC maximum	1 000 m
Ambient conditions	
Ambient temperature	
• during operation	-25 +60 °C
 during storage and transport 	-40 +80 °C
Environmental category	
• during operation acc. 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 acc. to IEC 60721	1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (san must not get inside the devices), 1M4
• during transport acc. to IEC 60721	2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)

EMC emitted interference acc. to IEC 60947-1	CISPR11, ambience A (industrial sector)
Communication/ Protocol	
Communication module is supported	
 PROFINET standard 	Yes
Modbus TCP	Yes
• PROFIBUS	Yes
UL/CSA ratings	
Manufacturer's article number	
of the fuse usable up to 575/600 V according to	Type: Class RK5 / K5, max, 350 A: Standard fault, Ig = 10 kA

Manufacturer's article number	
• of the fuse usable up to 575/600 V according to	Type: Class RK5 / K5, max. 350 A; Standard fault, Iq = 10 kA
UL	
 of the fuse usable at inside-delta circuit up to 	Type: Class RK5 / K5, max. 350 A
575/600 V according to UL	
Operating power [hp] for three-phase motors	
 at 200/208 V at 50 °C rated value 	40 hp
 at 220/230 V at 50 °C rated value 	40 hp
 at 460/480 V at 50 °C rated value 	100 hp
• at 200/208 V at inside-delta circuit at 50 °C	75 hp
rated value	
• at 220/230 V at inside-delta circuit at 50 °C	75 hp
rated value	
• at 460/480 V at inside-delta circuit at 50 °C	150 hp
rated value	
Contact rating of auxiliary contacts according to UL	R300-B300

General Product Approval

Declaration of other

Conformity









Confirmation

Further information

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

http://www.siemens.com/industrial-controls/catalogs

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RW5235-2TC04

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5235-2TC04

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

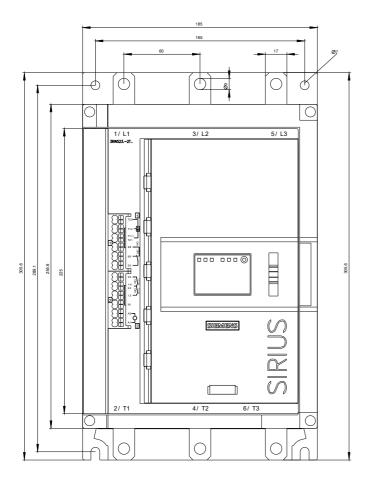
https://support.industry.siemens.com/cs/ww/en/ps/3RW5235-2TC04

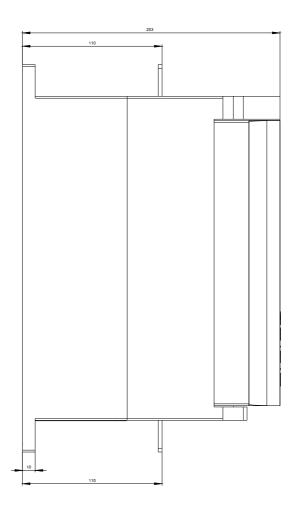
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5235-2TC04&lang=en

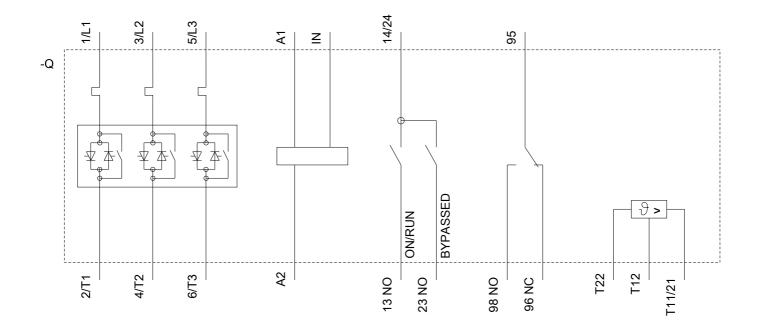
Characteristic: Tripping characteristics, I²t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RW5235-2TC04/char

Characteristic: Installation altitude

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5235-2TC04&objecttype=14&gridview=view1







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