



Figure similar

SIRIUS soft starter 200-480 V 210 A, 110-250 V AC Spring-loaded terminals Thermistor input

product brand name

product category

product designation

product type designation

manufacturer's article number

- of standard HMI module usable
- of high feature HMI module usable
- of communication module PROFINET standard usable
- of communication module PROFIBUS usable
- of communication module Modbus TCP usable
- of communication module Modbus RTU usable
- of communication module Ethernet/IP
- of circuit breaker usable at 400 V
- of circuit breaker usable at 500 V
- of the gG fuse usable up to 690 V
- of full range R fuse link for semiconductor protection usable up to 690 V
- of back-up R fuse link for semiconductor protection usable up to 690 V
- of line contactor usable up to 480 V
- of line contactor usable up to 690 V

SIRIUS

Hybrid switching devices

Soft starter

3RW50

[3RW5980-0HS01](#)

[3RW5980-0HF00](#)

[3RW5980-0CS00](#)

[3RW5980-0CP00](#)

[3RW5980-0CT00](#)

[3RW5980-0CR00](#)

[3RW5980-0CE00](#)

[3VA2440-7MN32-0AA0](#); Type of assignment 1, I_q = 65 kA

[3VA2440-7MN32-0AA0](#); Type of assignment 1, I_q = 65 kA

2x3NA3354-6; Type of coordination 1, I_q = 65 kA

[3NE1 230-2](#); Type of coordination 2, I_q = 65 kA

[3NE3 333](#); Type of coordination 2, I_q = 65 kA

[3RT1064](#)

[3RT1064](#)

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
- UL approval
- CSA approval

Yes

Yes

Yes

product component

- HMI-High Feature
- is supported HMI-Standard
- is supported HMI-High Feature

No

Yes

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

buffering time in the event of power failure

• for main current circuit • for control circuit	100 ms
insulation voltage rated value	100 ms
degree of pollution	600 V
impulse voltage rated value	3, acc. to IEC 60947-4-2
blocking voltage of the thyristor maximum	6 kV
service factor	1 600 V
surge voltage resistance rated value	1
maximum permissible voltage for safe isolation	6 kV
• 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-53a
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	09/23/2019
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 Klaxon / Thermoclick
• auto-RESET	Yes
• manual RESET	Yes
• remote reset	Yes; By turning off the control supply voltage
• communication function	Yes
• operating measured value display	Yes; Only in conjunction with special accessories
• error logbook	Yes; Only in conjunction with special accessories
• via software parameterizable	No
• via software configurable	Yes
• PROFInergy	Yes; in connection with the PROFINET Standard communication module
• voltage ramp	Yes
• torque control	No
• analog output	No

Power Electronics

operational current	
• at 40 °C rated value • at 50 °C rated value • at 60 °C rated value	210 A 186 A 170 A
operating voltage	
• rated value	200 ... 480 V
relative negative tolerance of the operating voltage	-15 %
relative positive tolerance of the operating voltage	10 %
operating power for 3-phase motors	
• at 230 V at 40 °C rated value • at 400 V at 40 °C rated value	55 kW 110 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	
• at rotary coding switch on switch position 1 • at rotary coding switch on switch position 2 • at rotary coding switch on switch position 3 • at rotary coding switch on switch position 4 • at rotary coding switch on switch position 5 • at rotary coding switch on switch position 6 • at rotary coding switch on switch position 7 • at rotary coding switch on switch position 8 • at rotary coding switch on switch position 9	90 A 98 A 106 A 114 A 122 A 130 A 138 A 146 A 154 A

• at rotary coding switch on switch position 10 • at rotary coding switch on switch position 11 • at rotary coding switch on switch position 12 • at rotary coding switch on switch position 13 • at rotary coding switch on switch position 14 • at rotary coding switch on switch position 15 • at rotary coding switch on switch position 16 • minimum	162 A
minimum load [%]	170 A
power loss [W] for rated value of the current at AC	178 A
• at 40 °C after startup • at 50 °C after startup • at 60 °C after startup	186 A
power loss [W] at AC at current limitation 350 %	194 A
• at 40 °C during startup • at 50 °C during startup • at 60 °C during startup	202 A
type of the motor protection	210 A
	90 A
	15 %; Relative to smallest settable I _e
	16 W
	13 W
	11 W
	2 237 W
	1 867 W
	1 637 W
	Electronic, tripping in the event of thermal overload of the motor
Control circuit/ Control	
type of voltage of the control supply voltage	AC
control supply voltage at AC	
• at 50 Hz • at 60 Hz	110 ... 250 V
relative negative tolerance of the control supply voltage at AC at 50 Hz	110 ... 250 V
relative positive tolerance of the control supply voltage at AC at 50 Hz	-15 %
relative negative tolerance of the control supply voltage at AC at 60 Hz	10 %
relative positive tolerance of the control supply voltage at AC at 60 Hz	-15 %
control supply voltage frequency	10 %
relative negative tolerance of the control supply voltage frequency	50 ... 60 Hz
relative positive tolerance of the control supply voltage frequency	-10 %
control supply current in standby mode rated value	10 %
holding current in bypass operation rated value	30 mA
locked-rotor current at close of bypass contact maximum	105 mA
inrush current peak at application of control supply voltage maximum	2.2 A
duration of inrush current peak at application of control supply voltage	12.2 A
design of the overvoltage protection	2.2 ms
design of short-circuit protection for control circuit	Varistor
	4 A gG fuse (I _{cu} =1 kA), 6 A quick-acting fuse (I _{cu} =1 kA), C1 miniature circuit breaker (I _{cu} = 600 A), C6 miniature circuit breaker (I _{cu} = 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 • at DC-13 at 24 V rated value	3 A
	1 A
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	230 mm
width	160 mm
depth	282 mm
required spacing with side-by-side mounting	

- forwards
- backwards
- upwards
- downwards
- at the side

10 mm
0 mm
100 mm
75 mm
5 mm
7.3 kg

weight without packaging

Connections/ Terminals

type of electrical connection

- for main current circuit
- for control circuit

busbar connection
spring-loaded terminals

width of connection bar maximum

35 mm; with connection cover 3RT1966-4EA1 maximum length 45 mm

wire length for thermistor connection

- with conductor cross-section = 0.5 mm² maximum
- with conductor cross-section = 1.5 mm² maximum
- with conductor cross-section = 2.5 mm² maximum

50 m
150 m
250 m

type of connectable conductor cross-sections

- for main contacts for box terminal using the front clamping point solid
- for main contacts for box terminal using the front clamping point finely stranded with core end processing
- for main contacts for box terminal using the front clamping point finely stranded without core end processing
- for main contacts for box terminal using the front clamping point stranded
- at AWG cables for main contacts for box terminal using the front clamping point
- for main contacts for box terminal using the back clamping point solid
- at AWG cables for main contacts for box terminal using the back clamping point
- for main contacts for box terminal using both clamping points solid
- for main contacts for box terminal using both clamping points finely stranded with core end processing
- for main contacts for box terminal using both clamping points finely stranded without core end processing
- for main contacts for box terminal using both clamping points stranded
- for main contacts for box terminal using the back clamping point finely stranded with core end processing
- for main contacts for box terminal using the back clamping point finely stranded without core end processing
- for main contacts for box terminal using the back clamping point stranded

95 ... 300 mm²
70 ... 240 mm²
70 ... 240 mm²
95 ... 300 mm²
3/0 ... 600 kcmil
120 ... 240 mm²
250 ... 500 kcmil
min. 2x 70 mm², max. 2x 240 mm²
min. 2x 50 mm², max. 2x 185 mm²
min. 2x 50 mm², max. 2x 185 mm²
min. 2x 70 mm², max. 2x 240 mm²
120 ... 185 mm²
120 ... 185 mm²
120 ... 240 mm²

type of connectable conductor cross-sections

- at AWG cables for main current circuit solid
- for DIN cable lug for main contacts stranded
- for DIN cable lug for main contacts finely stranded

2/0 ... 500 kcmil
50 ... 240 mm²
70 ... 240 mm²

type of connectable conductor cross-sections

- for control circuit solid
- for control circuit finely stranded with core end processing
- at AWG cables for control circuit solid
- at AWG cables for control circuit finely stranded with core end processing

2x (0.25 ... 1.5 mm²)
2x (0.25 ... 1.5 mm²)
2x (24 ... 16)
2x (24 ... 16)

wire length

- between soft starter and motor maximum
- at the digital inputs at AC maximum

800 m
1 000 m

tightening torque

- for main contacts with screw-type terminals
- for auxiliary and control contacts with screw-type terminals

14 ... 24 N·m
0.8 ... 1.2 N·m

tightening torque [lbf-in]	
- for main contacts with screw-type terminals - for auxiliary and control contacts with screw-type terminals	124 ... 210 lbf-in 7 ... 10.3 lbf-in
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	
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
EtherNet/IP	Yes
Modbus RTU	Yes
Modbus TCP	Yes
PROFIBUS	Yes
UL/CSA ratings	
manufacturer's article number	
of circuit breaker — usable for High Faults at 460/480 V according to UL	Siemens type: 3VA54, max. 600 A; Iq max = 65 kA
of the fuse — usable for Standard Faults up to 575/600 V according to UL — usable for High Faults up to 575/600 V according to UL	Type: Class L, max. 700 A; Iq = 10 kA Type: Class L, max. 700 A; Iq = 100 kA
operating power [hp] for 3-phase motors	
at 200/208 V at 50 °C rated value	60 hp
at 220/230 V at 50 °C rated value	60 hp
at 460/480 V at 50 °C rated value	150 hp
Safety related data	
protection class IP on the front according to IEC 60529	IP00; IP20 with cover
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front with cover
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
PFHD with high demand rate according to EN 62061 relating to ATEX	9E-6 1/h
Safety Integrity Level (SIL) according to IEC 61508 relating to ATEX	SIL1
T1 value for proof test interval or service life according to IEC 61508 relating to ATEX	3 y
Certificates/ approvals	
General Product Approval	For use in hazardous locations



[Confirmation](#)



For use in hazardous locations	Declaration of Conformity	Test Certificates	Marine / Shipping
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[Explosion Protection Certificate](#)



[Type Test Certificates/Test Report](#)



Marine / Shipping	other
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[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=3RW5072-2TB14>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5072-2TB14>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5072-2TB14>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5072-2TB14&lang=en

Characteristic: Tripping characteristics, I_t, Let-through current

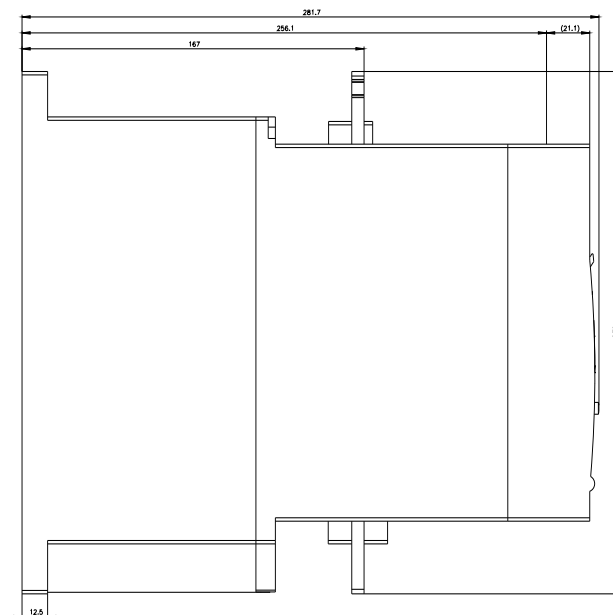
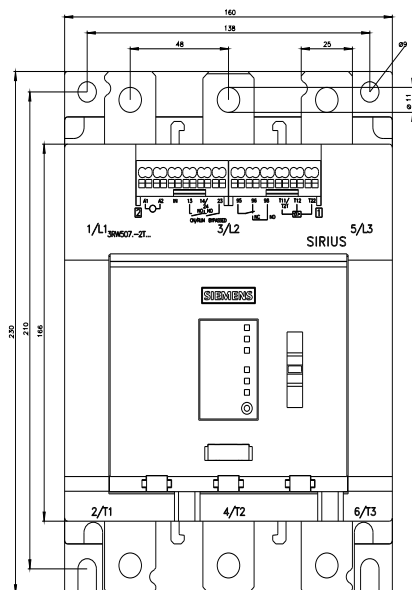
<https://support.industry.siemens.com/cs/ww/en/ps/3RW5072-2TB14/char>

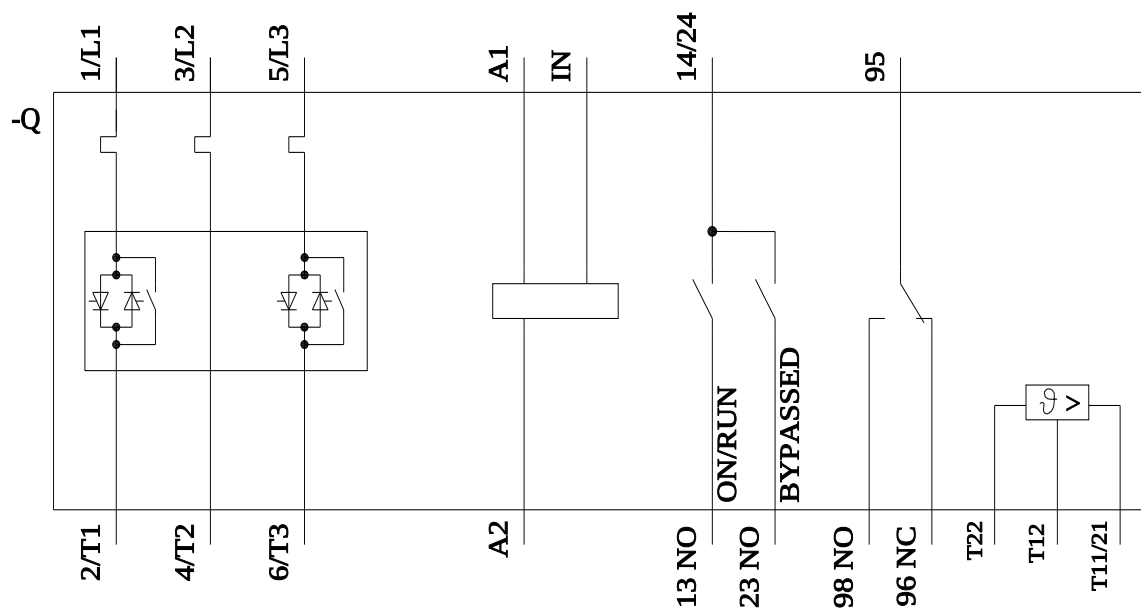
Characteristic: Installation altitude

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5072-2TB14&objecttype=14&gridview=view1>

Simulation Tool for Soft Starters (STS)

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





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