SIEMENS

Data sheet 3RW5056-6AB14



SIRIUS soft starter 200-480 V 171 A, 110-250 V AC Screw terminals Analog output

Figure similar

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

3VA2220-7MN32-0AA0; Type of assignment 1, Iq = 20 kA

3VA2220-7MN32-0AA0; Type of assignment 1, Iq = 20 kA

3NA3244-6; Type of coordination 1, Iq = 65 kA

3NE1 230-0; Type of coordination 2, Iq = 65 kA

3NE3 335; Type of coordination 2, Iq = 65 kA

3RT1056

3RT1064

General technical data

starting voltage [%] stopping voltage [%] start-up ramp time of soft starter ramp-down time of soft starter

current limiting value [%] adjustable

accuracy class according to IEC 61557-12 certificate of suitability

- CE marking
- UL approval
- CSA approval

product component

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

product feature integrated bypass contact system number of controlled phases

trip class

buffering time in the event of power failure

30 ... 100 %

50 %; non-adjustable

0 ... 20 s

0 ... 20 s

130 ... 700 %

5 %

Yes

Yes

Yes

No

Yes

Yes

Yes

CLASS 10A / 10E (preset) / 20E; acc. to IEC 60947-4-2

	100
for main current circuit	100 ms
• for control circuit	100 ms
insulation voltage rated value	600 V
degree of pollution	3, acc. to IEC 60947-4-2
impulse voltage rated value	6 kV
blocking voltage of the thyristor maximum service factor	1 400 V 1
surge voltage resistance rated value	6 kV
maximum permissible voltage for safe isolation	O NV
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; Electronic motor overload protection
evaluation of thermistor motor protection	No
auto-RESET	Yes
manual RESET remete reset	Yes
remote reset communication function	Yes; By turning off the control supply voltage 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
PROFlenergy	Yes; in connection with the PROFINET Standard communication
•	module
voltage ramp	Yes
• torque control	No
analog output	Yes; 4 20 mA (default) / 0 10 V (parameterizable with High Feature HMI)
Power Electronics	
operational current	
 at 40 °C rated value 	171 A
• at 50 °C rated value	153 A
• at 60 °C rated value	141 A
operating voltage	200 490 \
• rated value	200 480 V -15 %
relative negative tolerance of the operating voltage relative positive tolerance of the operating voltage	10 %
operating power for 3-phase motors	
• at 230 V at 40 °C rated value	45 kW
• at 400 V at 40 °C rated value	90 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 	81 A
 at rotary coding switch on switch position 2 	87 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 ? at rotary coding switch on switch position ?	117 A
at rotary coding switch on switch position 8 at rotary coding switch on switch position 9	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
 at rotary coding switch on switch position 12 	147 A
 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	10 70, 110,000 00 001,000 001,000 10
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	<u></u>
type of voltage of the control supply voltage	AC
control supply voltage at AC	7.0
• at 50 Hz	110 250 V
• at 60 Hz	110 250 V
relative negative tolerance of the control supply	-15 %
voltage at AC at 50 Hz	
relative positive tolerance of the control supply voltage at AC at 50 Hz	10 %
relative negative tolerance of the control supply voltage at AC at 60 Hz	-15 %
relative positive tolerance of the control supply voltage at AC at 60 Hz	10 %
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 current in standby mode rated value	30 mA
holding current in bypass operation rated value	80 mA
inrush current by closing the bypass contacts maximum	2.5 A
inrush current peak at application of control supply voltage maximum	12.2 A
duration of inrush current peak at application of control supply voltage	2.2 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
Inpute/Outpute	ποι γαιτ οι σουρε οι συργιγ
Inputs/ Outputs	1
number of digital outputs	1
number of digital outputs	3
not parameterizable digital autout varian	2 and the contracts (NO) / 4 about contract (CO)
digital output version	2 normally-open contacts (NO) / 1 changeover contact (CO)
number of analog outputs	1
switching capacity current of the relay outputs	2.4
at AC-15 at 250 V rated value 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
factoring mothers	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	

	40
• 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	screw-type terminals
width of connection bar maximum	25 mm
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 mm²
 for main contacts for box terminal using the back clamping point finely stranded with core end processing 	16 120 mm ²
 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

• 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

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

wire length

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

tightening torque

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

terminals

tightening torque [lbf·in]

terminals

16 ... 95 mm² 25 ... 120 mm²

1x (0.5 ... 4.0 mm²), 2x (0.5 ... 2.5 mm²) 1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.5 mm²)

1x (20 ... 12), 2x (20 ... 14)

800 m 1 000 m

10 ... 14 N·m 0.8 ... 1.2 N·m

• for main contacts with screw-type terminals

• for auxiliary and control contacts with screw-type

Ambient conditions

installation altitude at height above sea level maximum

89 ... 124 lbf·in 7 ... 10.3 lbf·in

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 Standard Faults at 460/480 V Siemens type: 3VA5225, max. 250 A; Iq = 10 kA according to UL - usable for High Faults at 460/480 V according Siemens type: 3VA52, max. 250 A; Iq max = 65 kA to UL • of the fuse usable for Standard Faults up to 575/600 V Type: Class RK5 / K5, max. 400 A; Iq = 10 kA according to UL usable for High Faults up to 575/600 V Type: Class J, max. 350 A; Iq = 100 kA according to UL 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 UKEX Yes hardware fault tolerance according to IEC 61508 0 relating to ATEX PFDavg with low demand rate according to IEC 61508 0.09 relating to ATEX PFHD with high demand rate according to EN 62061 9E-6 1/h relating to ATEX Safety Integrity Level (SIL) according to IEC 61508 SIL1 relating to ATEX T1 value for proof test interval or service life 3 a according to IEC 61508 relating to ATEX Certificates/ approvals For use in hazard-**General Product Approval**

ous locations





Confirmation







For use in hazardous locations **Declaration of Conformity Test Certificates** Marine / Shipping



Explosion Protection Certificate





Type Test Certificates/Test Report



Marine / Shipping

other





Confirmation

Further information

Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

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=3RW5056-6AB14

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5056-6AB14

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

https://support.industry.siemens.com/cs/ww/en/ps/3RW5056-6AB14

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5056-6AB14&lang=en

Characteristic: Tripping characteristics, I2t, Let-through current

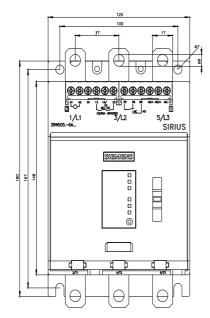
https://support.industry.siemens.com/cs/ww/en/ps/3RW5056-6AB14/char

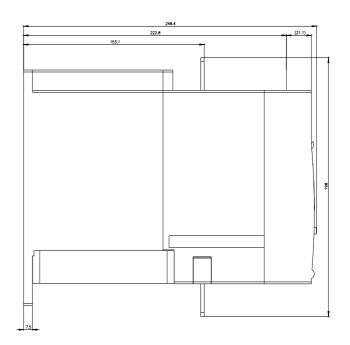
Characteristic: Installation altitude

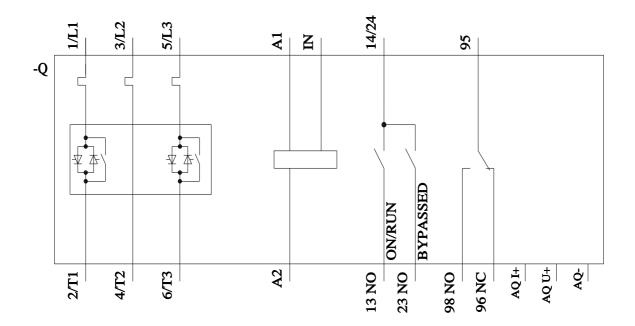
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5056-6AB14&objecttype=14&gridview=view1

Simulation Tool for Soft Starters (STS)

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







last modified: 1/14/2023 🖸