SIEMENS

Data sheet 3RW5073-6AB14

SIRIUS



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

Figure similar

product brand name

product brand name	011100
product category	Hybrid switching devices
product designation	Soft starter
product type designation	3RW50
manufacturer's article number	
 of standard HMI module usable 	3RW5980-0HS01
 of high feature HMI module 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 communication module Modbus RTU usable 	3RW5980-0CR00
 of communication module Ethernet/IP 	3RW5980-0CE00
 of circuit breaker usable at 400 V 	3VA2440-7MN32-0AA0; Type of assignment 1, Iq = 65 kA
 of circuit breaker usable at 500 V 	3VA2440-7MN32-0AA0; Type of assignment 1, Iq = 65 kA
 of the gG fuse usable up to 690 V 	2x3NA3354-6; Type of coordination 1, Iq = 65 kA
 of full range R fuse link for semiconductor protection usable up to 690 V 	3NE1 331-0; Type of coordination 2, Iq = 65 kA
 of back-up R fuse link for semiconductor protection usable up to 690 V 	3NE3 335; Type of coordination 2, Iq = 65 kA
 of line contactor usable up to 480 V 	<u>3RT1065</u>
 of line contactor usable up to 690 V 	<u>3RT1065</u>
General technical data	
starting voltage [%]	30 100 %
stopping voltage [%]	50 50 %
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 acc. to IEC 61557-12	5 %
certificate of suitability	
CE marking	Yes
UL approval	Yes
CSA approval	Yes
product component is supported	
HMI-Standard	Yes
HMI-High Feature	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	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	1 600 V
service factor	1
surge voltage resistance rated value	6 kV
maximum permissible voltage for safe isolation	
 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
reference code acc. to IEC 81346-2	Q
Substance Prohibitance (Date)	23.09.2019 00:00:00
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
	No
evaluation of thermistor motor protection	Yes
• auto-RESET	
• 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
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 	250 A
 at 50 °C rated value 	220 A
• at 60 °C rated value	200 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	75 kW
• at 400 V 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	
at rotary coding switch on switch position 1	100 A
at rotary coding switch on switch position 2	110 A
at rotary coding switch on switch position 3	120 A
actions, sound official position of	

 at rotary coding switch on switch position 4 	130 A
 at rotary coding switch on switch position 5 	140 A
 at rotary coding switch on switch position 6 	150 A
 at rotary coding switch on switch position 7 	160 A
 at rotary coding switch on switch position 8 	170 A
at rotary coding switch on switch position 9	180 A
at rotary coding switch on switch position 10	190 A
at rotary coding switch on switch position 11	200 A
at rotary coding switch on switch position 12	210 A
	220 A
at rotary coding switch on switch position 13 at rotary coding switch on switch position 14	
at rotary coding switch on switch position 14	230 A
at rotary coding switch on switch position 15	240 A
 at rotary coding switch on switch position 16 	250 A
• minimum	100 A
minimum load [%]	15 %; Relative to smallest settable le
power loss [W] for rated value of the current at AC	
 at 40 °C after startup 	23 W
 at 50 °C after startup 	18 W
at 60 °C after startup	15 W
power loss [W] at AC at current limitation 350 %	
 at 40 °C during startup 	2 454 W
 at 50 °C during startup 	2 043 W
 at 60 °C during startup 	1 786 W
type of the motor protection	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	110 250 V
• at 60 Hz	110 250 V
relative negative tolerance of the control supply voltage at AC at 50 Hz	-15 %
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	105 mA
locked-rotor current at close of bypass contact maximum	2.2 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
Inputs/ Outputs	
number of digital inputs	1
number of inputs for thermistor connection	0
number of digital outputs	3
not parameterizable	2
digital output version	2 normally-open contacts (NO) / 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
nstallation/ mounting/ dimensions	
mounting position	with vertical mounting surface +/-90° rotatable, with vertical mounting
mounting position	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	10 mm
• backwards	0 mm
• upwards	100 mm
downwards	75 mm
at the side	5 mm
weight without packaging	7.3 kg
onnections/ Terminals	·
type of electrical connection	
for main current circuit	busbar connection
for control circuit	screw-type terminals
width of connection bar maximum	45 mm
type of connectable conductor cross-sections	
for main contacts for box terminal using the front clamping point solid	95 300 mm²
 for main contacts for box terminal using the front clamping point finely stranded with core end processing 	70 240 mm²
 for main contacts for box terminal using the front clamping point finely stranded without core end processing 	70 240 mm²
for main contacts for box terminal using the front clamping point stranded	95 300 mm²
 at AWG cables for main contacts for box terminal using the front clamping point 	3/0 600 kcmil
 for main contacts for box terminal using the back clamping point solid 	120 240 mm²
 at AWG cables for main contacts for box terminal using the back clamping point 	250 500 kcmil
 for main contacts for box terminal using both clamping points solid 	min. 2x 70 mm², max. 2x 240 mm²
 for main contacts for box terminal using both clamping points finely stranded with core end processing 	min. 2x 50 mm², max. 2x 185 mm²
 for main contacts for box terminal using both clamping points finely stranded without core end processing 	min. 2x 50 mm², max. 2x 185 mm²
 for main contacts for box terminal using both clamping points stranded 	min. 2x 70 mm², max. 2x 240 mm²
 for main contacts for box terminal using the back clamping point finely stranded with core end processing 	120 185 mm²
 for main contacts for box terminal using the back clamping point finely stranded without core end processing 	120 185 mm²
 for main contacts for box terminal using the back clamping point stranded 	120 240 mm²
type of connectable conductor cross-sections	
 at AWG cables for main current circuit solid 	2/0 500 kcmil
 for DIN cable lug for main contacts stranded 	50 240 mm²
• for DIN cable lug for main contacts finely stranded	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 processing 	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	17 (20 12), 27 (20 14)
between soft starter and motor maximum	800 m
	1 000 m
at the digital inputs at AC 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 terminals 	0.8 1.2 N·m
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	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 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 (sand 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 60947-4-2: Class A
	dec. to 120 00047 4-2. Old35 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 	Type: Class L, max. 800 A; Iq = 18 kA
usable for High Faults up to 575/600 V according to UL	Type: Class L, max. 800 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	75 hp
• at 460/480 V at 50 °C rated value	150 hp
Safety related data	
·	
protection class IP on the front acc. to IEC 60529	
TOUCH PROTOCTION ON the trent acc to IEC 60570	IP00; IP20 with cover
touch protection on the front acc. to IEC 60529	IP00; IP20 with cover finger-safe, for vertical contact from the front with cover
ATEX	
·	
ATEX	
ATEX certificate of suitability	finger-safe, for vertical contact from the front with cover
ATEX certificate of suitability • ATEX	finger-safe, for vertical contact from the front with cover Yes
ATEX certificate of suitability • ATEX • IECEX hardware fault tolerance acc. to IEC 61508 relating to	finger-safe, for vertical contact from the front with cover Yes Yes
ATEX certificate of suitability • ATEX • IECEX hardware fault tolerance acc. to IEC 61508 relating to ATEX PFDavg with low demand rate acc. to IEC 61508	Yes Yes O

to ATEX

Safety Integrity Level (SIL) acc. to IEC 61508 relating to ATEX

T1 value for proof test interval or service life acc. to IEC 61508 relating to ATEX

Certificates/ approvals

General Product Approval

For use in hazardous locations













Declaration of Conformity

Test Certificates

other



Miscellaneous

Type Test Certificates/Test Report

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=3RW5073-6AB14

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5073-6AB14

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

https://support.industry.siemens.com/cs/ww/en/ps/3RW5073-6AB14

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5073-6AB14&lang=en

Characteristic: Tripping characteristics, I^2t , Let-through current

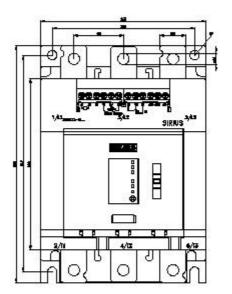
https://support.industry.siemens.com/cs/ww/en/ps/3RW5073-6AB14/char

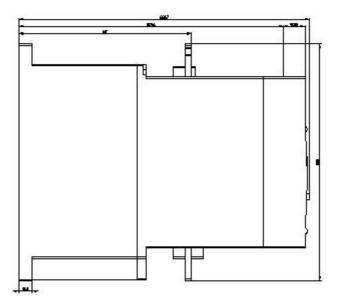
Characteristic: Installation altitude

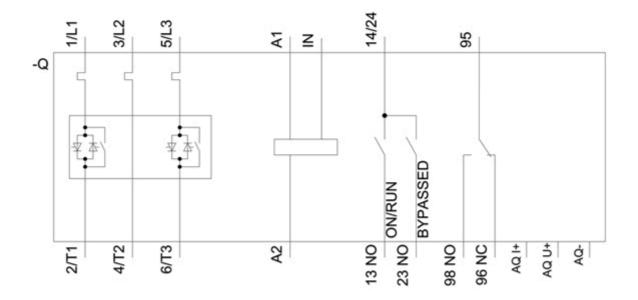
 $\underline{\text{http://www.automation.siemens.com/bilddb/index.aspx?view=Search\&mlfb=3RW5073-6AB14\&objecttype=14\&gridview=view1}$

Simulation Tool for Soft Starters (STS)

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







last modified: 6/24/2021 🖸