SIEMENS

Data sheet 3RW5073-6AB04

SIRIUS



SIRIUS soft starter 200-480 V 250 A, 24 V AC/DC Screw terminals Analog output



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>	
Seneral 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 %	
certificate of suitability		
CE marking	Yes	
UL approval	Yes	
CSA approval	Yes	
product component		
HMI-High Feature	No	
• is supported HMI-Standard	Yes	
• is supported HMI-High Feature	Yes	
product feature integrated bypass contact system	Yes	
number of controlled phases	2	
buffering time in the event of power failure		

for main assessed 1 - 11	400		
• 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 1 600 V		
blocking voltage of the thyristor maximum service factor	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
surge voltage resistance rated value	6 kV		
maximum permissible voltage for protective separation	V AV		
between main and auxiliary circuit	600 V		
shock resistance	15 g / 11 ms, from 12 g / 11 ms with potential contact lifting		
utilization category according to IEC 60947-4-2	AC-53a		
reference code according to IEC 81346-2	Q		
Substance Prohibitance (Date)	09/23/2019		
SVHC substance name	Lead - 7439-92-1		
	Lead monoxide (lead oxide) - 1317-36-8 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one - 71868-10-5 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol - 79-94-7 1,6,7,8,9,14,15,16,17,17,18,18- Dodecachloropentacyclo[12.2.1.16,9.02,13.05,10]octadeca-7,15-diene ("Dechlorane Plus"™) covering any of its individual anti- and syn-isomers or any combination thereof Dicyclohexyl phthalate (DCHP) - 84-61-7		
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	Yes		
• remote reset	Yes; By turning off the control supply voltage		
communication function	Yes		
operating measured value display orrest leghook	Yes; Only in conjunction with special accessories		
error logbook via coffware parameterizable	Yes; Only in conjunction with special accessories		
via software configurable	No Yes		
via software configurablePROFlenergy	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	. 20, 20 mm (doldary) 10 v (poramotorizable with riight)		
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 %		
	10 %		
adjustable motor current	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 	120 A
 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	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	J. Fr. J.
type of voltage of the control supply voltage	AC/DC
control supply voltage at AC	7.000
at 50 Hz rated value	24 V
at 60 Hz rated value	24 V
relative negative tolerance of the control supply voltage at	-20 %
AC at 50 Hz	
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	10 %
frequency	
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 bypass operation rated value	490 mA
inrush current by closing the bypass contacts maximum	7.6 A
inrush current peak at application of control supply voltage maximum	3.3 A
duration of inrush current peak at application 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
	2

digital output version	2 normally-open contacts (NO) / 1 changeover contact (CO)	
number of analog outputs	2 hormany-open contacts (NO) / 1 changeover contact (CO)	
<u> </u>	1	
switching capacity current of the relay outputs at AC-15 at 250 V rated value	2.4	
	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 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	
Connections/ Terminals		
type of electrical connection		
for main current circuit	busbar connection	
for control circuit	screw-type terminals	
width of connection bar maximum	35 mm; with connection cover 3RT1966-4EA1 maximum length 45 mm	
type of connectable conductor cross-sections for main contacts for box terminal		
using the front clamping point solid	95 300 mm²	
using the front clamping point finely stranded with core	70 240 mm²	
end processing		
using the front clamping point finely stranded without core end processing	70 240 mm²	
using the front clamping point stranded	95 300 mm²	
 using the back clamping point solid 	120 240 mm²	
 r box terminal using the back clamping point 	250 500 kcmil	
 using both clamping points solid 	min. 2x 70 mm², max. 2x 240 mm²	
 using both clamping points finely stranded with core end processing 	min. 2x 50 mm², max. 2x 185 mm²	
 using both clamping points finely stranded without core end processing 	min. 2x 50 mm², max. 2x 185 mm²	
 using both clamping points stranded 	min. 2x 70 mm², max. 2x 240 mm²	
 using the back clamping point finely stranded with core end processing 	120 185 mm²	
 using the back clamping point finely stranded without core end processing 	120 185 mm²	
 using the back clamping point stranded 	120 240 mm²	
type of connectable conductor cross-sections		
 for 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)	
for 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 AC maximum tightening torque	1 000 m	
tightening torque	44 04 N m	
	14 24 N·m	
for main contacts with screw-type terminals		
 for main contacts with screw-type terminals for auxiliary and control contacts with screw-type terminals 	0.8 1.2 N·m	
for auxiliary and control contacts with screw-type	0.8 1.2 N·m	
for auxiliary and control contacts with screw-type terminals	0.8 1.2 N·m 124 210 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)	
Environmental footprint		
Siemens Eco Profile (SEP)	Siemens EcoTech	
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	Oldfield type. 37704, max. 000 A, iq max – 00 kA	
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	
Electrical Safety	100 110	
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	iniger-sale, for vertical contact from the front with cover	
Safety Integrity Level (SIL) according to IEC 61508 relating to ATEX	SIL1	
PFHD with high demand rate according to IEC 61508 relating to ATEX	9E-6 1/h	
PFDavg with low demand rate according to IEC 61508 relating to ATEX	0.09	
hardware fault tolerance according to IEC 61508 relating to ATEX	0	
T1 value for proof test interval or service life according to IEC 61508 relating to ATEX	3 a	
certificate of suitability		
• ATEX	Yes	
• IECEx	Yes	
• UKEX	Yes	
Approvals Certificates		

Approvais Certificates

General Product Approval





Confirmation







General Product Approval	EMV	For use in hazardous locations	Test Certificates



<u>KC</u>





Miscellaneous

Type Test Certificates/Test Report

Marine / Shipping other Environment







Confirmation







Environmental Confirmations

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=3RW5073-6AB04

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5073-6AB04

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

https://support.industry.siemens.com/cs/ww/en/ps/3RW5073-6AB04

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5073-6AB04&lang=en

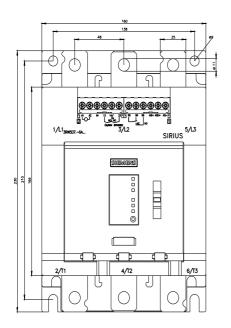
Characteristic: Tripping characteristics, I2t, Let-through current

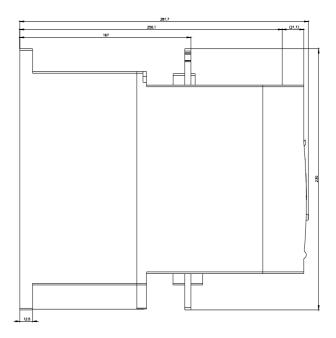
https://support.industry.siemens.com/cs/ww/en/ps/3RW5073-6AB04/char

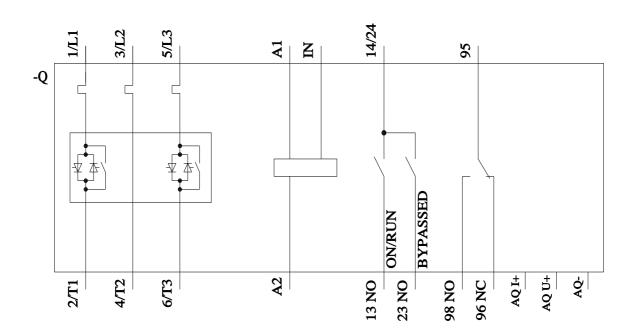
Characteristic: Installation altitude

Simulation Tool for Soft Starters (STS)

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







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