SIEMENS

3RW5234-2AC04 **Data sheet**



SIRIUS soft starter 200-480 V 113 A, 24 V AC/DC spring-type terminals Analog output

product brand name	SIRIUS
product category	Hybrid switching devices
product designation	Soft starter
product type designation	3RW52
manufacturer's article number	
 of standard HMI module usable 	3RW5980-0HS00
 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 	3VA2216-7MN32-0AA0; Type of coordination 1, Iq = 65 kA, CLASS 10
 of circuit breaker usable at 400 V at inside-delta circuit 	3VA2220-7MN32-0AA0; 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 	3NE1225-0; Type of coordination 2, Iq = 65 kA
 of back-up R fuse link for semiconductor protection usable up to 690 V 	3NE3332-0B; Type of coordination 2, Iq = 65 kA
General technical data	
starting voltage [%]	30 100 %
stopping voltage [%]	50 50 %
start-up ramp 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 is supported	
HMI-Standard	Yes
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
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	1 400 V
service factor	1
surge voltage resistance rated value	6 kV
maximum permissible voltage for safe isolation	O 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 acc. to IEC 60947-4-2	AC 53a
reference code acc. to IEC 81346-2	Q
Substance Prohibitance (Date)	15.02.2018 00:00:00
product function	10.02.2010 00.00.00
• 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
• inside-delta circuit	Yes
• 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
PROFlenergy	Yes; in connection with the PROFINET Standard communication
	module
firmware update	Yes
 removable terminal for control circuit 	Yes
torque control	No
analog output	Yes; 4 20 mA (default) / 0 10 V (parameterizable with High Feature
	HMI)
Power Electronics	
operational current	440.4
• at 40 °C rated value	113 A
• at 50 °C rated value	101 A
at 60 °C rated value	89 A
operational current at inside-delta circuit	400 A
• at 40 °C rated value	196 A
• at 50 °C rated value	175 A
at 60 °C rated value	154 A
operating voltage	200 490 V
rated value at incide delta circuit rated value	200 480 V
at inside-delta circuit rated value relative negative telegrance of the enerating veltage.	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 at inside-delta circuit	-15 %
relative positive tolerance of the operating voltage at inside-delta circuit	10 %
operating power for 3-phase motors	
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at 230 V at 40 °C rated value	30 kW
 at 230 V at inside-delta circuit at 40 °C rated value 	55 kW
 at 400 V at 40 °C rated value 	55 kW
at 400 V at inside-delta circuit at 40 °C rated value	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 	53 A
 at rotary coding switch on switch position 2 	57 A
 at rotary coding switch on switch position 3 	61 A
 at rotary coding switch on switch position 4 	65 A
at rotary coding switch on switch position 5	69 A
 at rotary coding switch on switch position 6 	73 A
 at rotary coding switch on switch position 7 	77 A
 at rotary coding switch on switch position 8 	81 A
at rotary coding switch on switch position 9	85 A
at rotary coding switch on switch position 10	89 A
at rotary coding switch on switch position 11	93 A
at rotary coding switch on switch position 12	97 A
at rotary coding switch on switch position 12 at rotary coding switch on switch position 13	101 A
at rotary coding switch on switch position 14 at rotary coding switch on switch position 14	105 A
at rotary coding switch on switch position 15	109 A
at rotary coding switch on switch position 16 at rotary coding switch on switch position 16	113 A
minimum	53 A
adjustable motor current	33 A
•	04.9.4
for inside-delta circuit at rotary coding switch on switch position 1	91.8 A
 for inside-delta circuit at rotary coding switch on switch position 2 	98.7 A
 for inside-delta circuit at rotary coding switch on switch position 3 	106 A
 for inside-delta circuit at rotary coding switch on switch position 4 	113 A
 for inside-delta circuit at rotary coding switch on switch position 5 	120 A
 for inside-delta circuit at rotary coding switch on switch position 6 	126 A
 for inside-delta circuit at rotary coding switch on switch position 7 	133 A
 for inside-delta circuit at rotary coding switch on switch position 8 	140 A
 for inside-delta circuit at rotary coding switch on switch position 9 	147 A
 for inside-delta circuit at rotary coding switch on switch position 10 	154 A
 for inside-delta circuit at rotary coding switch on switch position 11 	161 A
 for inside-delta circuit at rotary coding switch on switch position 12 	168 A
 for inside-delta circuit at rotary coding switch on switch position 13 	175 A
 for inside-delta circuit at rotary coding switch on switch position 14 	182 A
 for inside-delta circuit at rotary coding switch on switch position 15 	189 A
 for inside-delta circuit at rotary coding switch on switch position 16 	196 A
at inside-delta circuit minimum	91.8 A
minimum load [%]	15 %; Relative to smallest settable le

 at 40 °C after startup 	46 W
 at 50 °C after startup 	42 W
at 60 °C after startup	39 W
power loss [W] at AC at current limitation 350 %	
 at 40 °C during startup 	1 512 W
 at 50 °C during startup 	1 291 W
 at 60 °C during startup 	1 086 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 bypass operation rated value	380 mA
locked-rotor current at close of bypass contact 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 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
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	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
weight without packaging	6.6 kg
Connections/ Terminals	
type of electrical connection	
for main current circuit	busbar connection
• for control circuit	spring-loaded terminals
width of connection bar maximum	25 mm
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	·
for control circuit solid	2x (0.25 1.5 mm²)
for control circuit finely stranded with core end	2x (0.25 1.5 mm²)
processing	
 at AWG cables for control circuit solid 	2x (24 16)
 at AWG cables for control circuit finely stranded with 	2x (24 16)
core end processing	
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
tightening torque	
 for main contacts with screw-type terminals 	10 14 N·m
 for auxiliary and control contacts with screw-type 	0.8 1.2 N·m
terminals	
tightening torque [lbf·in]	
for main contacts with screw-type terminals	89 124 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 catalog
ambient temperature	- Coocin, Bordanig at or root in, ood calalog
during operation	-25 +60 °C; Please observe derating at temperatures of 40 °C or
adming operation	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
Communication/ Protocol	300. 10 1EO 000 Tr 1 E. O1000 M
communication module is supported	
PROFINET standard	Yes
EtherNet/IP	Yes
Modbus RTU	Yes
Modbus TCP PROFIBLIS	Yes
PROFIBUS III (CSA refinese)	Yes
UL/CSA ratings	
manufacturer's article number	
of circuit breaker	0:
usable for Standard Faults at 460/480 V according to UL	Siemens type: 3VA52, max. 250 A; lq = 10 kA
 usable for High Faults at 460/480 V according to UL 	Siemens type: 3VA52, max. 250 A; lq max = 65 kA

— usable for Standard Faults at 460/480 V a inside-delta circuit according to UL
 usable for High Faults at 460/480 V at ins delta circuit according to UL

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- usable for Standard Faults at 575/600 V according to UL

- usable for Standard Faults at 575/600 V at inside-delta circuit according to UL

- usable for Standard Faults up to 575/600 V according to UL

- usable for High Faults up to 575/600 V according to UL

- usable for Standard Faults at inside-delta circuit up to 575/600 V according to UL

- usable for High Faults at inside-delta circuit up to 575/600 V according to UL

Siemens type: 3VA52, max. 250 A; Iq = 10 kA

Siemens type: 3VA52, max. 250 A; Iq max = 65 kA

Siemens type: 3VA52, max. 250 A; Iq = 10 kA

Siemens type: 3VA52, max. 250 A; Iq = 10 kA

Type: Class RK5 / K5, max. 350 A; Iq = 10 kA

Type: Class J / L, max. 350 A; Iq = 100 kA

Type: Class RK5 / K5, max. 350 A; Iq = 10 kA

Type: Class J / L, max. 350 A; Iq = 100 kA

operating power [hp] for 3-phase motors

• at 200/208 V at 50 °C rated value
• at 220/230 V at 50 °C rated value
• at 460/480 V at 50 °C rated value
• at 200/208 V at inside-delta circuit at 50 °C rated

value • at 220/230 V at inside-delta circuit at 50 °C rated

• at 460/480 V at inside-delta circuit at 50 °C rated

value

30 hp

30 hp

75 hp

50 hp

60 hp

125 hp

contact rating of auxiliary contacts according to UL

R300-B300

Safety related data

protection class IP on the front acc. to IEC 60529	IP00; IP20 with cover
touch protection on the front acc. to IEC 60529	finger-safe, for vertical contact from the front with cover
electromagnetic compatibility	in accordance with IEC 60947-4-2

Certificates/ approvals

General Product Approval

EMC

Declaration of Conformity













Test Certificates

Marine / Shipping

Type Test Certificates/Test Report











other

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=3RW5234-2AC04

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5234-2AC04

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

https://support.industry.siemens.com/cs/ww/en/ps/3RW5234-2AC04

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax de.aspx?mlfb=3RW5234-2AC04&lang=en

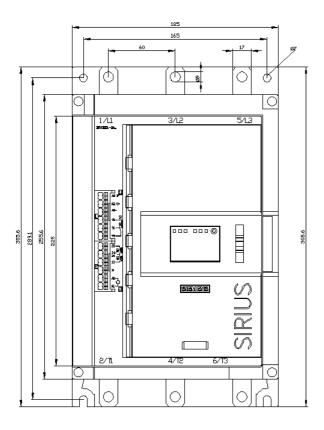
Characteristic: Tripping characteristics, I²t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RW5234-2AC04/char

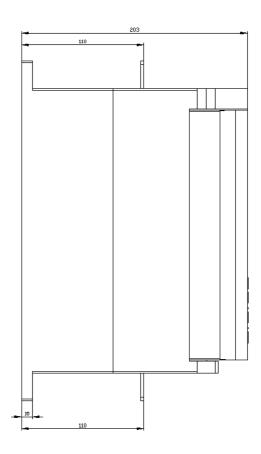
Characteristic: Installation altitude

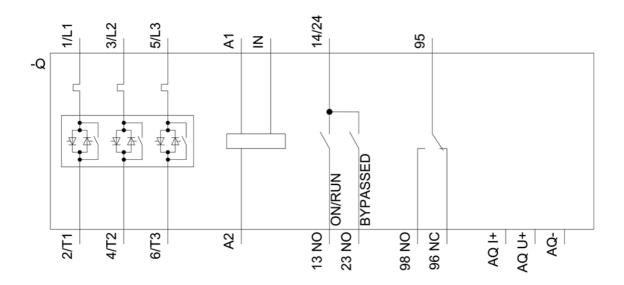
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5234-2AC04&objecttype=14&gridview=view1

Simulation Tool for Soft Starters (STS)

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







last modified: 12/15/2020 🖸