SIEMENS

product brand name

Data sheet 3RW5515-1HA15

SIRIUS



SIRIUS soft starter 200-600 V 25 A, 110-250 V AC Screw terminals

product category	Hybrid switching devices
product designation	Soft starter
product type designation	3RW55
manufacturer's article number	
 of high feature HMI module usable 	3RW5980-0HF00
 of communication module PROFINET standard usable 	3RW5980-0CS00
 of communication module PROFINET high-feature usable 	3RW5950-0CH00
 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 	3RV2032-4EA10; Type of coordination 1, Iq = 65 kA, CLASS 10
 of circuit breaker usable at 500 V 	3RV2032-4EA10; Type of coordination 1, Iq = 15 kA, CLASS 10
• of circuit breaker usable at 400 V at inside-delta circuit	3RV2032-4VA10; Type of coordination 1, Iq = 65 kA, CLASS 10
• of circuit breaker usable at 500 V at inside-delta circuit	3RV2032-4VA10; Type of coordination 1, Iq = 15 kA, CLASS 10
 of the gG fuse usable up to 690 V 	3NA3822-6; Type of coordination 1, Iq = 65 kA
 of the gG fuse usable at inside-delta circuit up to 500 V 	3NA3822-6; Type of coordination 1, Iq = 65 kA
 of full range R fuse link for semiconductor protection usable up to 690 V 	3NE1817-0; Type of coordination 2, Iq = 65 kA
 of back-up R fuse link for semiconductor protection usable up to 690 V 	3NE8021-1; Type of coordination 2, Iq = 65 kA
eneral technical data	
starting voltage [%]	20 100 %
stopping voltage [%]	50 %; non-adjustable
start-up ramp time of soft starter	0 360 s
ramp-down time of soft starter	0 360 s
start torque [%]	10 100 %
stopping torque [%]	10 100 %
torque limitation [%]	20 200 %
current limiting value [%] adjustable	125 800 %
breakaway voltage [%] adjustable	40 100 %
breakaway time adjustable	0 2 s
number of parameter sets	3
accuracy class	5 (based on IEC 61557-12)
certificate of suitability	
CE marking	Yes
UL approval	Yes
CSA approval	Yes
product component	
product component	

is supported HMI-High Feature	Yes
product feature integrated bypass contact system	Yes
number of controlled phases	3
trip class	CLASS 10A / 10E (default) / 20E / 30E; acc. to IEC 60947-4-2
current unbalance limiting value [%]	10 60 %
ground-fault monitoring limiting value [%]	10 95 %
buffering time in the event of power failure	
for main current circuit	100 ms
for control circuit	100 ms
idle time adjustable	0 255 s
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	1.15
surge voltage resistance rated value	6 kV
maximum permissible voltage for protective separation	
between main and auxiliary circuit	600 V; does not apply for thermistor connection
shock resistance	15 g / 11 ms, from 6 g / 11 ms with potential contact lifting
vibration resistance	15 mm up to 6 Hz; 2 g up to 500 Hz
recovery time after overload trip adjustable	60 1 800 s
utilization category according to IEC 60947-4-2	AC 53a
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	02/15/2018
product function	
• ramp-up (soft starting)	Yes
• ramp-down (soft stop)	Yes
breakaway pulse	Yes
adjustable current limitation	Yes
 creep speed in both directions of rotation 	Yes
• pump ramp down	Yes
DC braking	Yes
motor heating	Yes
slave pointer function	Yes
• trace function	Yes
intrinsic device protection	Yes
motor overload protection	Yes; Full motor protection (thermistor motor protection and electronic motor overload protection) / When using the motor overload protection according to ATEX, an upstream contactor is required in inside-delta circuit.
 evaluation of thermistor motor protection 	Yes; Type A PTC or Klixon / Thermoclick
inside-delta circuit	Yes
• auto-RESET	Yes
manual RESET	Yes
remote reset	Yes
 communication function 	Yes
 operating measured value display 	Yes
• event list	Yes
error logbook	Yes
 via software parameterizable 	Yes
 via software configurable 	Yes
screw terminal	Yes
spring-loaded terminal	No
PROFlenergy	Yes; in connection with the PROFINET Standard and PROFINET High-Feature communication modules
firmware update	Yes
 removable terminal for control circuit 	Yes
voltage ramp	Yes
torque control	Yes
combined braking	Yes
analog output	Yes; 4 20 mA (default) / 0 10 V
 programmable control inputs/outputs 	Yes
condition monitoring	Yes

 automatic parameterisation 	Yes
 application wizards 	Yes
 alternative run-down 	Yes
 emergency operation mode 	Yes
 reversing operation 	Yes
 soft starting at heavy starting conditions 	Yes
Power Electronics	
operational current	
• at 40 °C rated value	25 A
 at 40 °C rated value minimum 	5 A
• at 50 °C rated value	22.3 A
• at 60 °C rated value	19.6 A
operational current at inside-delta circuit	
• at 40 °C rated value	43.3 A
• at 50 °C rated value	39 A
• at 60 °C rated value	33.9 A
operating voltage	
rated value	200 600 V
at inside-delta circuit rated value	200 600 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	
• at 230 V at 40 °C rated value	5.5 kW
 at 230 V at inside-delta circuit at 40 °C rated value 	11 kW
 at 400 V at 40 °C rated value 	11 kW
 at 400 V at inside-delta circuit at 40 °C rated value 	18.5 kW
 at 500 V at 40 °C rated value 	15 kW
at 500 V at inside-delta circuit at 40 °C rated value	22 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 %
minimum load [%]	10 %; Relative to set le
power loss [W] for rated value of the current at AC	
 at 40 °C after startup 	8 W
• at 50 °C after startup	7 W
at 60 °C after startup	6 W
power loss [W] at AC at current limitation 350 %	
 at 40 °C during startup 	364 W
 at 50 °C during startup 	309 W
at 60 °C during startup	262 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	10 %

frequency	400 4
control supply current in standby mode rated value	100 mA
holding current in bypass operation rated value	165 mA
inrush current by closing the bypass contacts maximum	0.2 A
inrush current peak at application of control supply voltage maximum	43 A
duration of inrush current peak at application of control supply voltage	1.6 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	4
parameterizable	4
 number of digital outputs 	4
 number of digital outputs parameterizable 	3
number of digital outputs not parameterizable	1
digital output version	3 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	Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)
fastening method	screw fixing
height	275 mm
width	170 mm
depth	152 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	2.3 kg
Connections/ Terminals	
type of electrical connection	
for main current circuit	screw-type terminals
• for control circuit	screw-type terminals
wire length for thermistor connection	
• with conductor cross-section = 0.5 mm² maximum	50 m
• with conductor cross-section = 1.5 mm² maximum	150 m
• with conductor cross-section = 2.5 mm² maximum	250 m
type of connectable conductor cross-sections	
• for main contacts	
— solid	2x (1.0 2.5 mm²), 2x (2.5 10 mm²)
 finely stranded with core end processing 	2x (1.0 2.5 mm²), 2x (2.5 6.0 mm²)
• for AWG cables for main current circuit solid	2x (16 12), 2x (14 8)
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 DC maximum	1 000 m
Ambient conditions	
installation altitude at height above sea level maximum	5 000 m; Derating as of 1000 m, see catalog
ambient temperature	,
during operation	-25 +60 °C; Please observe derating at temperatures of 40 °C or above
during storage and transport	-25 +80 °C
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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, Class B on request
Communication/ Protocol	
communication module is supported	
PROFINET standard	Yes
PROFINET high-feature	No
EtherNet/IP	No
Modbus RTU	No
Modbus TCP	Yes
PROFIBUS	Yes
UL/CSA ratings	
manufacturer's article number	
of circuit breaker	
 usable for Standard Faults at 460/480 V according to UL 	Siemens type: 3RV2742, max. 70 A or 3VA51, max. 80 A; lq = 5 kA
— usable for High Faults at 460/480 V according to UL — usable for Standard Faults at 460/480 V at inside-	Siemens type: 3RV2742, max.40 A or 3VA51, max. 60 A; Iq max = 65 kA Siemens type: 3RV2742, max. 70 A or 3VA51, max. 80 A; Iq = 5 kA
delta circuit according to UL — usable for High Faults at 460/480 V at inside-delta	Siemens type: 3VA51, max. 60 A; Iq max = 65 kA
circuit according to UL — usable for Standard Faults at 575/600 V according	Siemens type: 3RV2742, max. 70 A or 3VA51, max. 80 A; Iq = 5 kA
to UL — usable for High Faults at 575/600 V at inside-delta circuit according to UL	Siemens type: 3VA51, max. 60 A; Iq max = 65 kA
usable for Standard Faults at 575/600 V at insidedelta circuit according to UL	Siemens type: 3RV2742, max. 70 A or 3VA51, max. 80 A; lq = 5 kA
of the fuse	
 usable for Standard Faults up to 575/600 V according to UL 	Type: Class RK5 / K5, max. 100 A; Iq = 5 kA
 usable for High Faults up to 575/600 V according to UL 	Type: Class J / L, max. 100 A; Iq = 100 kA
 usable for Standard Faults at inside-delta circuit up to 575/600 V according to UL 	Type: Class RK5 / K5, max. 100 A; Iq = 5 kA
usable for High Faults at inside-delta circuit up to 575/600 V according to UL	Type: Class J / L, max. 100 A; Iq = 100 kA
operating power [hp] for 3-phase motors	
• at 200/208 V at 50 °C rated value	5 hp
• at 220/230 V at 50 °C rated value	7.5 hp
• at 460/480 V at 50 °C rated value	15 hp
at 575/600 V at 50 °C rated value at 200/208 V at inside-delta circuit at 50 °C rated value	20 hp
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 value	10 hp 10 hp
at 460/480 V at inside-delta circuit at 50 °C rated value at 460/480 V at inside-delta circuit at 50 °C rated value	25 hp
at 460/460 V at inside-delta circuit at 50 °C rated value at 575/600 V at inside-delta circuit at 50 °C rated value	25 np 30 hp
contact rating of auxiliary contacts according to UL	R300-B300
Safety related data	
protection class IP on the front according to IEC 60529	IP20
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front
electromagnetic compatibility	acc. to IEC 60947-4-2
ATEX	
certificate of suitability	
• ATEX	Yes
• IECEx	Yes
according to ATEX directive 2014/34/EU	BVS 18 ATEX F 003 X
type of protection according to ATEX directive 2014/34/EU	II (2)G [Ex eb Gb] [Ex db Gb] [Ex pxb Gb], II (2)D [Ex tb Db] [Ex pxb Db], I (M2) [Ex db Mb]
hardware fault tolerance according to IEC 61508 relating to ATEX	0
ATEX	

Certificates/ approvals

General Product Approval





Confirmation









For use in hazardous locations

Declaration of Conformity

Test Certificates

Marine / Shipping









Type Test Certificates/Test Report





Marine / Shipping

other







Confirmation

Further information

Siemens has decided to exit the Russian market (see here).

https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

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=3RW5515-1HA15

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5515-1HA15

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

https://support.industry.siemens.com/cs/ww/en/ps/3RW5515-1HA15

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5515-1HA15&lang=en

Characteristic: Tripping characteristics, I²t, Let-through current

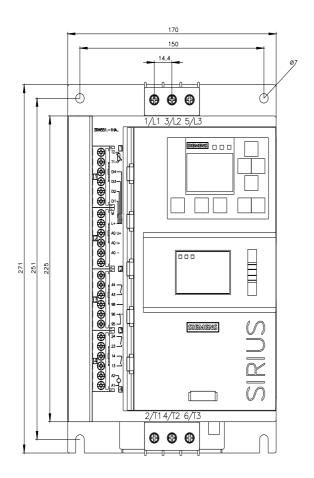
https://support.industry.siemens.com/cs/ww/en/ps/3RW5515-1HA15/char

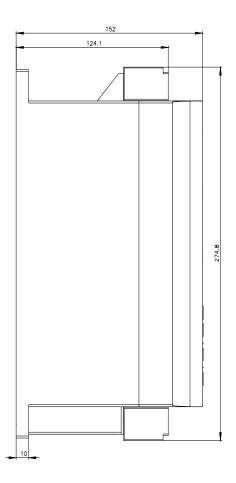
Characteristic: Installation altitude

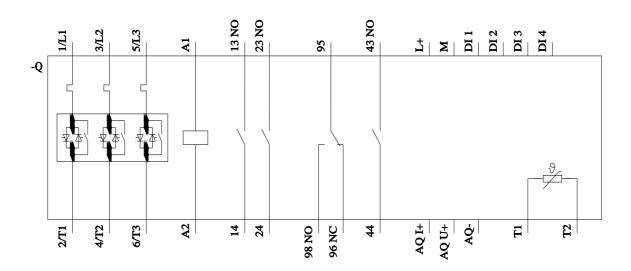
 $\underline{\text{http://www.automation.siemens.com/bilddb/index.aspx?view=Search\&mlfb=3RW5515-1HA15\&objecttype=14\&gridview=view1}$

Simulation Tool for Soft Starters (STS)

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







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