SIEMENS

Data sheet

3RW5215-3TC05



SIRIUS soft starter 200-600 V 25 A, 24 V AC/DC spring-type terminals Thermistor input

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 	<u>3RW5980-0HS00</u>		
 of high feature HMI module usable 	<u>3RW5980-0HF00</u>		
 of communication module PROFINET standard usable 	<u>3RW5980-0CS00</u>		
 of communication module PROFIBUS usable 	<u>3RW5980-0CP00</u>		
 of communication module Modbus TCP usable 	<u>3RW5980-0CT00</u>		
 of communication module Modbus RTU usable 	<u>3RW5980-0CR00</u>		
 of communication module Ethernet/IP 	<u>3RW5980-0CE00</u>		
 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 	<u>3RV2032-4VA10: Type of coordination 1, Iq = 65 kA, CLASS 10</u>		
 of circuit breaker usable at 500 V at inside-delta circuit 	<u>3RV2032-4VA10; Type of coordination 1, Iq = 15 kA, CLASS 10</u>		
 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 	<u>3NA3822-6; Type of coordination 1, Iq = 65 kA</u>		
 of full range R fuse link for semiconductor protection usable up to 690 V 	<u>3NE1817-0; Type of coordination 2, Iq = 65 kA</u>		
 of back-up R fuse link for semiconductor protection usable up to 690 V 	<u>3NE8021-1; Type of coordination 2, Iq = 65 kA</u>		
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		

Intersection Ves buffering time in the oven of power failure • (c) main current circuit 100 ms • (c) main current circuit 100 ms 100 ms • (c) main current circuit 100 ms 100 ms • (c) main current circuit 100 ms 100 ms • (c) main current circuit 100 ms 100 ms • (c) main current circuit 100 ms 100 ms • (c) main current circuit 100 ms 100 ms • (c) main current circuit 100 ms 100 ms • (c) main current circuit 100 ms 100 ms • (c) main current circuit 600 V 100 ms • (c) main current circuit 600 V 100 ms • (c) main current circuit 600 V 100 ms • (c) main current circuit 600 V 100 ms • (c) main current circuit 600 V 100 ms • (c) main current circuit 600 V 100 ms • (c) main current circuit 600 V 100 ms • (c) main current current main current current 110 ms 110 ms • (c) main curr	number of controlled phases	3		
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• removable terminal for control circuitYes• torque controlNo• analog outputNoPower ElectronicsNooperational current25 A• at 40 °C rated value25 A• at 50 °C rated value20 A• operational current at inside-delta circuit43.3 A• at 40 °C rated value39 A• at 60 °C rated value30 A• at 60 °C rated value20 A• at 60 °C rated value10 %• rated value200 600 V• at inside-delta circuit rated value15 %	PROFlenergy	,		
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 at 50 °C rated value at 60 °C rated value 20 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 30 600 V 30	operational current			
• at 60 °C rated value20 Aoperational current at inside-delta circuit• at 40 °C rated value43.3 A• at 50 °C rated value39 A• at 60 °C rated value33.9 Aoperating voltage• rated value200 600 V• at inside-delta circuit rated value200 600 V• at inside-delta circuit rated value200 600 V• at inside-delta circuit rated value200 600 V• relative negative tolerance of the operating voltage-15 %relative negative tolerance of the operating voltage at-15 %	• at 40 °C rated value	25 A		
operational current at inside-delta circuit43.3 A• at 40 °C rated value43.3 A• at 50 °C rated value39 A• at 60 °C rated value33.9 Aoperating voltage200 600 V• rated value200 600 V• at inside-delta circuit rated value200 600 V• relative negative tolerance of the operating voltage-15 %relative negative tolerance of the operating voltage at-15 %	• at 50 °C rated value	22 A		
• at 40 °C rated value43.3 A• at 50 °C rated value39 A• at 60 °C rated value33.9 Aoperating voltage200 600 V• at inside-delta circuit rated value200 600 Vrelative negative tolerance of the operating voltage-15 %relative negative tolerance of the operating voltage at-15 %	 at 60 °C rated value 	20 A		
• at 40 °C rated value43.3 A• at 50 °C rated value39 A• at 60 °C rated value33.9 Aoperating voltage200 600 V• at inside-delta circuit rated value200 600 Vrelative negative tolerance of the operating voltage-15 %relative negative tolerance of the operating voltage at-15 %	operational current at inside-delta circuit			
• 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 negative tolerance of the operating voltage at -15 %	-	43.3 A		
operating voltage 200 600 V • rated value 200 600 V • at inside-delta circuit rated value 200 600 V relative negative tolerance of the operating voltage -15 % relative negative tolerance of the operating voltage at 10 % relative negative tolerance of the operating voltage at -15 %	• at 50 °C rated value	39 A		
 rated value at inside-delta circuit rated value 200 600 V 200 600 V relative negative tolerance of the operating voltage -15 % relative negative tolerance of the operating voltage 10 % relative negative tolerance of the operating voltage at -15 % 	• at 60 °C rated value	33.9 A		
 rated value at inside-delta circuit rated value 200 600 V 200 600 V relative negative tolerance of the operating voltage -15 % relative negative tolerance of the operating voltage 10 % relative negative tolerance of the operating voltage at -15 % 	operating voltage			
• at inside-delta circuit rated value200 600 Vrelative negative tolerance of the operating voltage-15 %relative negative tolerance of the operating voltage at-15 %		200 600 V		
relative negative tolerance of the operating voltage-15 %relative positive tolerance of the operating voltage10 %relative negative tolerance of the operating voltage at-15 %				
relative positive tolerance of the operating voltage 10 % relative negative tolerance of the operating voltage at -15 %				
relative negative tolerance of the operating voltage at -15 %		10 %		

 operating power for 3-phase motors at 230 V at 40 °C rated value 	
 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 %
adjustable motor current	
 at rotary coding switch on switch position 1 	11.5 A
 at rotary coding switch on switch position 2 	12.4 A
 at rotary coding switch on switch position 3 	13.3 A
 at rotary coding switch on switch position 4 	14.2 A
 at rotary coding switch on switch position 5 	15.1 A
 at rotary coding switch on switch position 6 	16 A
 at rotary coding switch on switch position 7 	16.9 A
 at rotary coding switch on switch position 8 	17.8 A
 at rotary coding switch on switch position 9 	18.7 A
 at rotary coding switch on switch position 10 	19.6 A
 at rotary coding switch on switch position 11 	20.5 A
 at rotary coding switch on switch position 12 	21.4 A
 at rotary coding switch on switch position 13 	22.3 A
 at rotary coding switch on switch position 14 	23.2 A
 at rotary coding switch on switch position 15 	24.1 A
 at rotary coding switch on switch position 16 	25 A
• minimum	11.5 A
adjustable motor current	
 for inside-delta circuit at rotary coding switch on switch position 1 	19.9 A
 for inside-delta circuit at rotary coding switch on switch position 2 	21.5 A
 for inside-delta circuit at rotary coding switch on switch position 3 	23 A
• for inside-delta circuit at rotary coding switch on switch position 4	24.6 A
for inside-delta circuit at rotary coding switch on switch position 5	26.2 A
 for inside-delta circuit at rotary coding switch on switch position 6 for inside delta circuit at rotary coding switch on 	27.7 A
 for inside-delta circuit at rotary coding switch on switch position 7 for inside-delta circuit at rotary coding switch on 	29.3 A 30.8 A
 for inside-delta circuit at rotary coding switch on for inside-delta circuit at rotary coding switch on 	32.4 A
 for inside-delta circuit at rotary coding switch on for inside-delta circuit at rotary coding switch on 	33.9 A
 for inside-delta circuit at rotary coding switch on for inside-delta circuit at rotary coding switch on 	35.5 A
 switch position 11 for inside-delta circuit at rotary coding switch on 	37.1 A
switch position 12 • for inside-delta circuit at rotary coding switch on	38.6 A
switch position 13 • for inside-delta circuit at rotary coding switch on	40.2 A
switch position 14 • for inside-delta circuit at rotary coding switch on switch position 15	41.7 A

 for inside-delta circuit at rotary coding switch on switch position 16 	43.3 A		
at inside-delta circuit minimum	19.9 A		
	15.9 A 15 %: Relative to smallest settable le		
minimum load [%]	15 %, Relative to smallest settable le		
power loss [W] for rated value of the current at AC	20.14		
• at 40 °C after startup	20 W 19 W		
 at 50 °C after startup at 60 °C after startup 			
	18 W		
power loss [W] at AC at current limitation 350 %	070.14		
• at 40 °C during startup	376 W		
• at 50 °C during startup	318 W		
• at 60 °C during startup	278 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	360 mA		
locked-rotor current at close of bypass contact	0.75 A		
maximum inrush current peak at application of control supply voltage	3.3 A		
maximum			
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	1; Type A PTC or Klixon / Thermoclick		
number of digital outputs	3		
not parameterizable	2		
digital output version	2 2 normally-open contacts (NO) / 1 changeover contact (CO)		
number of analog outputs			
switching capacity current of the relay outputs			
at AC-15 at 250 V rated value	3 A		
• at DC-13 at 250 V rated value	1A		
Installation/ mounting/ dimensions			
	+/ 10° rotation pageible and can be tilted forward as beclaviord as		
mounting position	+/- 10° rotation possible and can be tilted forward or backward on vertical mounting surface		
fastening method	screw fixing		

height	275 mm		
width	170 mm		
depth	152 mm		
required spacing with side-by-side mounting			
forwards	10 mm		
backwards	10 mm		
	0 mm 100 mm		
● upwards ● downwards	75 mm		
at the side			
weight without packaging	5 mm		
Connections/ Terminals	2.1 kg		
type of electrical connection			
for main current circuit	screw-type terminals		
for control circuit	spring-loaded terminals		
	spring-loaded terminals		
wire length for thermistor connection	50 m		
• with conductor cross-section = 0.5 mm ² maximum	50 m		
 with conductor cross-section = 1.5 mm² maximum with conductor cross-section = 2.5 mm² maximum 	150 m		
	250 m		
type of connectable conductor cross-sections			
for main contacts	$2 \times (4.0 - 2.5 \text{ mm}^2) = 2 \times (2.5 - 4.0 \text{ mm}^2)$		
— solid	2x (1.0 2.5 mm ²), 2x (2.5 10 mm ²)		
— finely stranded with core end processing	2x (1.0 2.5 mm ²), 2x (2.5 6.0 mm ²)		
at AWG cables for main current circuit solid	2x (16 12), 2x (14 8)		
type of connectable conductor cross-sections			
for control circuit solid	2x (0.25 1.5 mm ²)		
 for control circuit finely stranded with core end processing 	2x (0.25 1.5 mm²)		
 at AWG cables for control circuit solid 	2x (24 16)		
 at AWG cables for control circuit finely stranded with core end processing 	2x (24 16)		
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 	2 2.5 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 	18 22 lbf·in		
 for auxiliary and control contacts with screw-type 	7 10.3 lbf·in		
terminals			
Ambient conditions			
installation altitude at height above sea level maximum	5 000 m; Derating as of 1000 m, see catalog		
ambient temperatureduring 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		
Communication/ Protocol			
communication module is supported			
PROFINET standard	Yes		
• EtherNet/IP	Yes		
Modbus RTU	Yes		

Modbus TCP	Yes				
PROFIBUS	Yes				
CSA ratings					
anufacturer's article number					
 of circuit breaker 					
 — usable for Standard Faults at 460/480 V according to UL 	Siemens type: 3RV2742, n	nax. 70 A or 3VA51, r	max. 80 A; lq = 5 kA		
 — usable for High Faults at 460/480 V according to UL 	Siemens type: 3RV2742, max.40 A or 3VA51, max. 60 A; Iq max = 65 kA				
 — usable for Standard Faults at 460/480 V at inside-delta circuit 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 at inside- delta circuit according to UL 	Siemens type: 3VA51, max. 60 A; lq max = 65 kA				
 — usable for Standard Faults at 575/600 V according to UL 	Siemens type: 3RV2742, max. 70 A or 3VA51, max. 80 A; Iq = 5 kA				
 — usable for Standard Faults at 575/600 V at inside-delta circuit according to UL 	Siemens type: 3RV2742, m	nax. 70 A or 3VA51, r	max. 80 A; Iq = 5 kA		
 of the fuse 					
 — usable for Standard Faults up to 575/600 V according to UL 	Type: Class RK5 / K5, max. 100 A; lq = 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; lq = 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				
perating 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 	20 hp				
 at 200/208 V at inside-delta circuit at 50 °C rated value 	10 hp				
 at 220/230 V at inside-delta circuit at 50 °C rated value 	10 hp				
 at 460/480 V at inside-delta circuit at 50 °C rated value 	25 hp				
 at 575/600 V at inside-delta circuit at 50 °C rated value 	30 hp				
ontact rating of auxiliary contacts according to UL	R300-B300				
ety related data					
otection class IP on the front acc. to IEC 60529	IP20				
uch protection on the front acc. to IEC 60529	finger-safe, for vertical con	tact from the front			
ectromagnetic compatibility	finger-safe, for vertical contact from the front in accordance with IEC 60947-4-2				
tificates/ approvals		511 12			
ieneral Product Approval		EMC	Declaration of		
ieneral Product Approval		EMC	Conformity		
③ € (€)	EHC	<u>i</u>	CE EG-Konf.		
		rie M	es-konr.		
est Certificates Marine / Shipping					
		-			
ype Test Certific- ates/Test Report	Lloyd's Register		(DNV-GL)		

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=3RW5215-3TC05

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5215-3TC05

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

https://support.industry.siemens.com/cs/ww/en/ps/3RW5215-3TC05

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5215-3TC05&lang=en

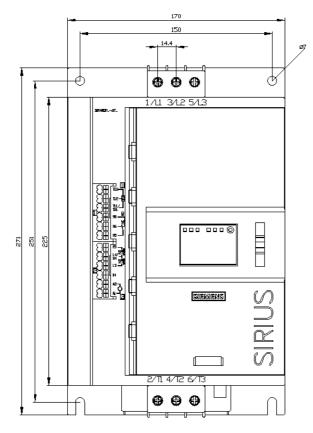
Characteristic: Tripping characteristics, I²t, Let-through current

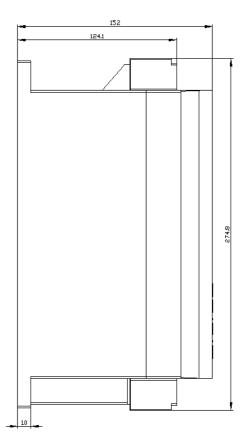
https://support.industry.siemens.com/cs/ww/en/ps/3RW5215-3TC05/char

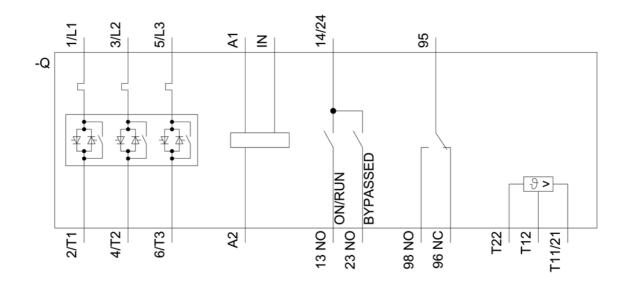
Characteristic: Installation altitude

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5215-3TC05&objecttype=14&gridview=view1 Simulation Tool for Soft Starters (STS)

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







last modified:

8/10/2021 🖸