SIEMENS

Data sheet

3RW5055-6TB15



SIRIUS soft starter 200-600 V 143 A, 110-250 V AC Screw terminals Thermistor input

Figure similar

product brand name	SIRIUS			
product category	Hybrid switching devices			
product designation	Soft starter			
product type designation	3RW50			
manufacturer's article number				
 of standard HMI module usable 	<u>3RW5980-0HS01</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 	3VA2220-7MN32-0AA0; Type of assignment 1, Iq = 20 kA			
 of circuit breaker usable at 500 V 	3VA2220-7MN32-0AA0; Type of assignment 1, Iq = 20 kA			
 of the gG fuse usable up to 690 V 	<u>3NA3244-6: Type of coordination 1, lq = 65 kA</u>			
 of full range R fuse link for semiconductor protection usable up to 690 V 	<u>3NE1 227-0; Type of coordination 2, Iq = 65 kA</u>			
 of back-up R fuse link for semiconductor protection usable up to 690 V 	<u>3NE3 334 -0B; Type of coordination 2, Iq = 65 kA</u>			
 of line contactor usable up to 480 V 	<u>3RT1055</u>			
 of line contactor usable up to 690 V 	<u>3RT1055</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	1 800 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; Full motor protection (thermistor motor protection and electronic
	motor overload protection)
evaluation of thermistor motor protection	Yes; Type A PTC or Klixon / Thermoclick
• 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
 voltage ramp 	Yes
torque control	No
analog output	No
Power Electronics	
operational current	
 at 40 °C rated value 	143 A
• at 50 °C rated value	128 A
• at 60 °C rated value	118 A
operating voltage	
rated value	200 600 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 	37 kW
 at 400 V at 40 °C rated value 	75 kW
• at 500 V at 40 °C rated value	90 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 	68 A
 at rotary coding switch on switch position 2 	73 A

 at rotary coding switch on switch position 3 	78 A
 at rotary coding switch on switch position 4 	83 A
 at rotary coding switch on switch position 5 	88 A
 at rotary coding switch on switch position 6 	93 A
 at rotary coding switch on switch position 7 	98 A
 at rotary coding switch on switch position 8 	103 A
 at rotary coding switch on switch position 9 	108 A
 at rotary coding switch on switch position 10 	113 A
 at rotary coding switch on switch position 11 	118 A
 at rotary coding switch on switch position 12 	123 A
 at rotary coding switch on switch position 13 	128 A
 at rotary coding switch on switch position 14 	133 A
 at rotary coding switch on switch position 15 	138 A
 at rotary coding switch on switch position 16 	143 A
• minimum	68 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	19 W
• at 60 °C after startup	16 W
power loss [W] at AC at current limitation 350 %	
• at 40 °C during startup	1 336 W
• at 50 °C during startup	1 134 W
• at 60 °C during startup	1 007 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	-10 %
voltage frequency	10 %
relative positive tolerance of the control supply voltage frequency	
control supply current in standby mode rated value	30 mA 80 mA
holding current in bypass operation rated value	
locked-rotor current at close of bypass contact maximum	2.5 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	1; Type A PTC or Klixon / Thermoclick
number of digital outputs	3
not parameterizable	2
digital output version	2 permally open contacts (NO) / 1 ehendrower contact (CO)
	2 normally-open contacts (NO) / 1 changeover contact (CO)

number of analog outputs	0
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	198 mm
width	120 mm
depth	249 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	3.2 kg
Connections/ Terminals	-
type of electrical connection	
 for main current circuit 	busbar connection
for control circuit	screw-type terminals
width of connection bar maximum	25 mm
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 for box terminal using the front clamping point solid 	16 120 mm²
 for main contacts for box terminal using the front clamping point finely stranded with core end processing 	16 120 mm²
 for main contacts for box terminal using the front clamping point finely stranded without core end processing 	10 120 mm²
 for main contacts for box terminal using the front clamping point stranded 	16 70 mm²
 at AWG cables for main contacts for box terminal using the front clamping point 	6 250 kcmil
 for main contacts for box terminal using the back clamping point solid 	16 120 mm²
 at AWG cables for main contacts for box terminal using the back clamping point 	6 250 kcmil
• for main contacts for box terminal using both clamping points solid	max. 1x 95 mm², 1x 120 mm²
 for main contacts for box terminal using both clamping points finely stranded with core end processing 	max. 1x 95 mm², 1x 120 mm²
 for main contacts for box terminal using both clamping points finely stranded without core end processing 	max. 1x 95 mm², 1x 120 mm²
 for main contacts for box terminal using both clamping points stranded 	max. 2x 120 mm²
 for main contacts for box terminal using the back clamping point finely stranded with core end processing 	16 120 mm²
 for main contacts for box terminal using the back clamping point finely stranded without core end processing 	10 120 mm²
for main contacts for box terminal using the back clamping point stranded type of connectable conductor cross-sections	16 120 mm²

	4 050 kamil
at AWG cables for main current circuit solid	4 250 kcmil
for DIN cable lug for main contacts stranded	16 95 mm ²
for DIN cable lug for main contacts finely stranded	25 120 mm²
type of connectable conductor cross-sections	
for control circuit solid	1x (0.5 4.0 mm ²), 2x (0.5 2.5 mm ²)
 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	
 between soft starter and motor maximum 	800 m
 at the digital inputs at AC 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 terminals 	0.8 1.2 N·m
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 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
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 Standard Faults at 460/480 V according to UL	Siemens type: 3VA5225, max. 250 A; Iq = 10 kA
• of the fuse	
— usable for Standard Faults up to 575/600 V	Type: Class RK5 / K5, max. 350 A; lq = 10 kA
according to UL — usable for High Faults up to 575/600 V	Type: Class J, max. 350 A; Iq = 100 kA
according to UL	
operating power [hp] for 3-phase motors	
• at 200/208 V at 50 °C rated value	40 hp
• at 220/230 V at 50 °C rated value	40 hp
• at 460/480 V at 50 °C rated value	100 hp
• at 575/600 V at 50 °C rated value	125 hp
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
ATEX	
certificate of suitability	
	Yes

 IECEx 			Yes		
	rance acc. to IEC 6150	8 relating to	0		
PFDavg with low de relating to ATEX	emand rate acc. to IEC	61508	0.09		
PFHD with high dent to ATEX	mand rate acc. to EN 6	2061 relating	0.000009 1/h		
Safety Integrity Level (SIL) acc. to IEC 61508 relating to ATEX		SIL1			
T1 value for proof t IEC 61508 relating	test interval or service to ATEX	life acc. to	3 у		
Certificates/ approva	als				
General Product Approval				For use in hazardous locations	
(SP)	CCC	UL) ut	EHC	IECE×	K ATEX



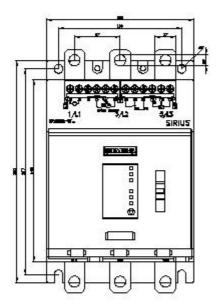


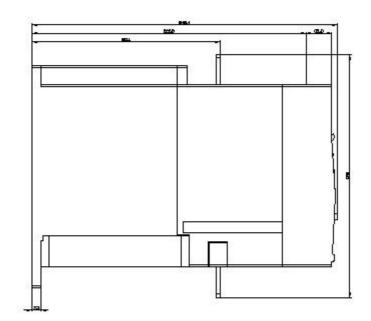
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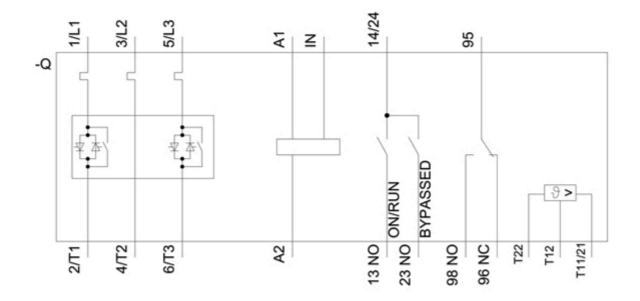
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