



SIRIUS soft starter 200-600 V 113 A, 110-250 V AC 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	<ul style="list-style-type: none"> • of standard HMI module usable • of high feature HMI module usable • of communication module PROFINET standard usable • of communication module PROFIBUS usable • of communication module Modbus TCP usable • of communication module Modbus RTU usable • of communication module Ethernet/IP • of circuit breaker usable at 400 V • of circuit breaker usable at 400 V at inside-delta circuit • of the gG fuse usable up to 690 V • of the gG fuse usable at inside-delta circuit up to 500 V • of full range R fuse link for semiconductor protection usable up to 690 V • of back-up R fuse link for semiconductor protection usable up to 690 V
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	<ul style="list-style-type: none"> • CE marking • UL approval • CSA approval
product component is supported	<ul style="list-style-type: none"> • HMI-Standard • HMI-High Feature
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	

<ul style="list-style-type: none"> • for main current circuit • for control circuit 	100 ms
insulation voltage rated value	100 ms
degree of pollution	600 V
impulse voltage rated value	3, acc. to IEC 60947-4-2
blocking voltage of the thyristor maximum	6 kV
service factor	1 800 V
surge voltage resistance rated value	1
maximum permissible voltage for safe isolation <ul style="list-style-type: none"> • between main and auxiliary circuit 	6 kV
shock resistance	600 V
vibration resistance	15 g / 11 ms, from 12 g / 11 ms with potential contact lifting
utilization category acc. to IEC 60947-4-2	15 mm to 6 Hz; 2g to 500 Hz
reference code acc. to IEC 81346-2	AC 53a
Substance Prohibitance (Date)	Q
product function <ul style="list-style-type: none"> • ramp-up (soft starting) • ramp-down (soft stop) • Soft Torque • adjustable current limitation • pump ramp down • intrinsic device protection • motor overload protection • evaluation of thermistor motor protection • inside-delta circuit • auto-RESET • manual RESET • remote reset • communication function • operating measured value display • error logbook • via software parameterizable • via software configurable • PROFlenergy • firmware update • removable terminal for control circuit • torque control • analog output 	15.02.2018 00:00:00 Yes Yes Yes Yes Yes Yes Yes; Full motor protection (thermistor motor protection and electronic motor overload protection) Yes; Type A PTC or Klaxon / Thermoclick Yes Yes Yes Yes; By turning off the control supply voltage Yes Yes; Only in conjunction with special accessories Yes; Only in conjunction with special accessories No Yes Yes; in connection with the PROFINET Standard communication module Yes Yes No No
Power Electronics	
operational current <ul style="list-style-type: none"> • at 40 °C rated value • at 50 °C rated value • at 60 °C rated value 	113 A 101 A 89 A
operational current at inside-delta circuit <ul style="list-style-type: none"> • at 40 °C rated value • at 50 °C rated value • at 60 °C rated value 	196 A 175 A 154 A
operating voltage <ul style="list-style-type: none"> • rated value • at inside-delta circuit rated value 	200 ... 600 V 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	

<ul style="list-style-type: none"> • at 230 V at 40 °C rated value • at 230 V at inside-delta circuit at 40 °C rated value • at 400 V at 40 °C rated value • at 400 V at inside-delta circuit at 40 °C rated value • at 500 V at 40 °C rated value • at 500 V at inside-delta circuit at 40 °C rated value 	30 kW 55 kW 55 kW 110 kW 75 kW 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 %
adjustable motor current	
<ul style="list-style-type: none"> • at rotary coding switch on switch position 1 • at rotary coding switch on switch position 2 • at rotary coding switch on switch position 3 • at rotary coding switch on switch position 4 • at rotary coding switch on switch position 5 • at rotary coding switch on switch position 6 • at rotary coding switch on switch position 7 • at rotary coding switch on switch position 8 • at rotary coding switch on switch position 9 • at rotary coding switch on switch position 10 • at rotary coding switch on switch position 11 • at rotary coding switch on switch position 12 • at rotary coding switch on switch position 13 • at rotary coding switch on switch position 14 • at rotary coding switch on switch position 15 • at rotary coding switch on switch position 16 • minimum 	53 A 57 A 61 A 65 A 69 A 73 A 77 A 81 A 85 A 89 A 93 A 97 A 101 A 105 A 109 A 113 A 53 A
adjustable motor current	
<ul style="list-style-type: none"> • for inside-delta circuit at rotary coding switch on switch position 1 • for inside-delta circuit at rotary coding switch on switch position 2 • for inside-delta circuit at rotary coding switch on switch position 3 • for inside-delta circuit at rotary coding switch on switch position 4 • for inside-delta circuit at rotary coding switch on switch position 5 • for inside-delta circuit at rotary coding switch on switch position 6 • for inside-delta circuit at rotary coding switch on switch position 7 • for inside-delta circuit at rotary coding switch on switch position 8 • for inside-delta circuit at rotary coding switch on switch position 9 • for inside-delta circuit at rotary coding switch on switch position 10 • for inside-delta circuit at rotary coding switch on switch position 11 • for inside-delta circuit at rotary coding switch on switch position 12 • for inside-delta circuit at rotary coding switch on switch position 13 • for inside-delta circuit at rotary coding switch on switch position 14 • for inside-delta circuit at rotary coding switch on switch position 15 • for inside-delta circuit at rotary coding switch on switch position 16 • at inside-delta circuit minimum 	91.8 A 98.7 A 106 A 113 A 120 A 126 A 133 A 140 A 147 A 154 A 161 A 168 A 175 A 182 A 189 A 196 A 91.8 A

minimum load [%]	15 %; Relative to smallest settable I _e
power loss [W] for rated value of the current at AC	
• 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
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 frequency	10 %
control supply current in standby mode rated value	30 mA
holding current in bypass operation rated value	75 mA
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 (I _{cu} =1 kA), 6 A quick-acting fuse (I _{cu} =1 kA), C1 miniature circuit breaker (I _{cu} = 600 A), C6 miniature circuit breaker (I _{cu} = 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 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	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
wire length for thermistor connection	
• with conductor cross-section = 0.5 mm ² maximum	50 m
• with conductor cross-section = 1.5 mm ² maximum	150 m
• with conductor cross-section = 2.5 mm ² maximum	250 m
type of connectable conductor cross-sections	
• for DIN cable lug for main contacts stranded	2x (16 ... 95 mm ²)
• for DIN cable lug for main contacts finely stranded	2x (25 ... 120 mm ²)
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 mm ²)
• 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
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 catalog
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: 3VA52, max. 250 A; I _q = 10 kA
— usable for High Faults at 460/480 V according to UL	Siemens type: 3VA52, max. 250 A; I _q max = 65 kA
— usable for Standard Faults at 460/480 V at	Siemens type: 3VA52, max. 250 A; I _q = 10 kA

<div>inside-delta circuit according to UL</div> <div>— usable for High Faults at 460/480 V at inside-delta circuit according to UL</div> <div>— usable for Standard Faults at 575/600 V according to UL</div> <div>— usable for Standard Faults at 575/600 V at inside-delta circuit according to UL</div> <div>• of the fuse</div> <div>— usable for Standard Faults up to 575/600 V according to UL</div> <div>— usable for High Faults up to 575/600 V according to UL</div> <div>— usable for Standard Faults at inside-delta circuit up to 575/600 V according to UL</div> <div>— usable for High Faults at inside-delta circuit up to 575/600 V according to UL</div>	<div>Siemens type: 3VA52, max. 250 A; Iq max = 65 kA</div> <div>Siemens type: 3VA52, max. 250 A; Iq = 10 kA</div> <div>Siemens type: 3VA52, max. 250 A; Iq = 10 kA</div> <div>Type: Class RK5 / K5, max. 350 A; Iq = 10 kA</div> <div>Type: Class J / L, max. 350 A; Iq = 100 kA</div> <div>Type: Class RK5 / K5, max. 350 A; Iq = 10 kA</div> <div>Type: Class J / L, max. 350 A; Iq = 100 kA</div>	
<div>operating power [hp] for 3-phase motors</div> <div>• at 200/208 V at 50 °C rated value</div> <div>• at 220/230 V at 50 °C rated value</div> <div>• at 460/480 V at 50 °C rated value</div> <div>• at 575/600 V at 50 °C rated value</div> <div>• at 200/208 V at inside-delta circuit at 50 °C rated value</div> <div>• at 220/230 V at inside-delta circuit at 50 °C rated value</div> <div>• at 460/480 V at inside-delta circuit at 50 °C rated value</div> <div>• at 575/600 V at inside-delta circuit at 50 °C rated value</div>	<div>30 hp</div> <div>30 hp</div> <div>75 hp</div> <div>100 hp</div> <div>50 hp</div> <div>60 hp</div> <div>125 hp</div> <div>150 hp</div>	
<div>contact rating of auxiliary contacts according to UL</div>	<div>R300-B300</div>	
<div>Safety related data</div>		
<div>protection class IP on the front acc. to IEC 60529</div>	<div>IP00; IP20 with cover</div>	
<div>touch protection on the front acc. to IEC 60529</div>	<div>finger-safe, for vertical contact from the front with cover</div>	
<div>electromagnetic compatibility</div>	<div>in accordance with IEC 60947-4-2</div>	
<div>Certificates/ approvals</div>		
<div>General Product Approval</div>	<div>EMC</div>	<div>Declaration of Conformity</div>
<div><div><div>CSA</div></div><div><div>CCC</div></div><div><div>UL</div></div><div></div><div><div>RCM</div></div><div><div>EG-Konf.</div></div></div>		
<div>Test Certificates</div>	<div>Marine / Shipping</div>	
<div>Type Test Certificates/Test Report</div>	<div><div><div>ABS</div></div><div><div>BUREAU VERITAS</div></div><div><div>LRS</div></div><div><div>PRS</div></div><div><div>DNV GL</div></div></div>	
<div>other</div>		
<div>Confirmation</div>		
<div>Further information</div>		

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=3RW5234-2TC15>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5234-2TC15>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW5234-2TC15>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW5234-2TC15&lang=en

Characteristic: Tripping characteristics, I^2t , Let-through current

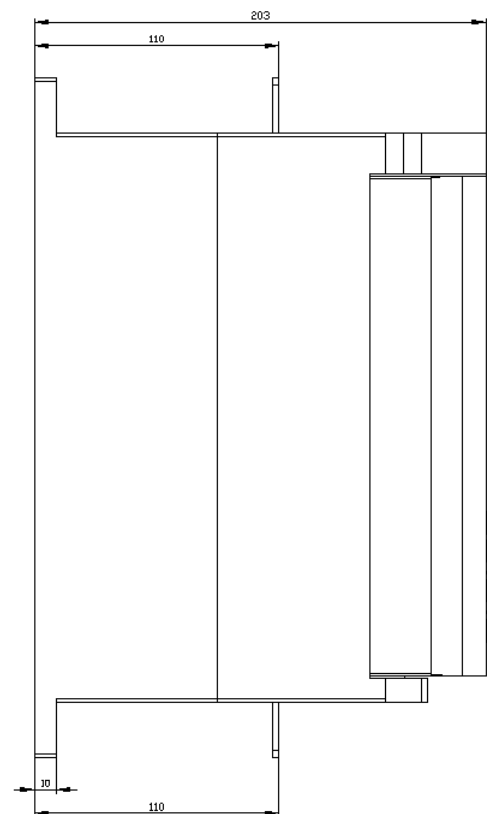
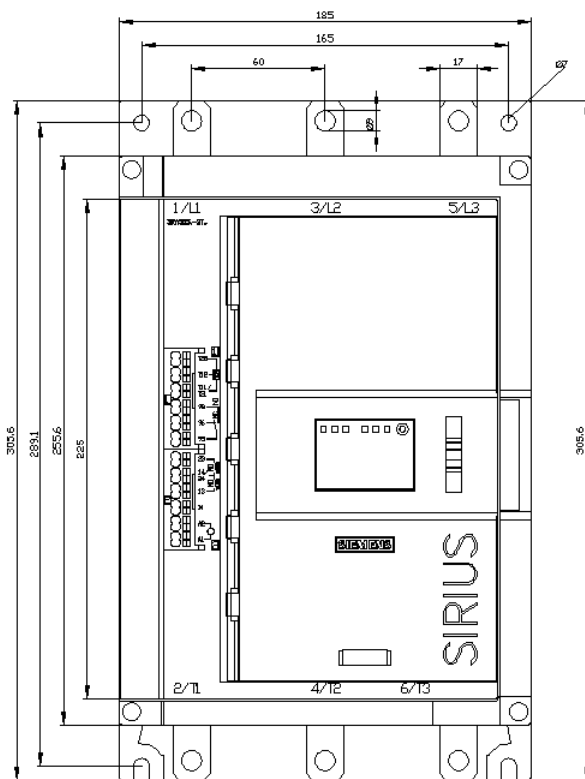
<https://support.industry.siemens.com/cs/ww/en/ps/3RW5234-2TC15/char>

Characteristic: Installation altitude

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RW5234-2TC15&objecttype=14&gridview=view1>

Simulation Tool for Soft Starters (STS)

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





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