

Siemens
EcoTech



SIRIUS soft starter SO 12.5 A, 5.5 kW/400 V, 40 °C 200-480 V AC, 24 V AC/DC
Screw terminals



General technical data

product brand name	SIRIUS
product designation	Soft starter
product feature	
• integrated bypass contact system	Yes
• thyristors	Yes
product function	
• intrinsic device protection	Yes
• motor overload protection	Yes
• evaluation of thermistor motor protection	No
• external reset	Yes
• adjustable current limitation	Yes
• inside-delta circuit	No
product component motor brake output	No
insulation voltage rated value	600 V
degree of pollution	3, acc. to IEC 60947-4-2
blocking voltage of the thyristor maximum	1 600 V
reference code according to EN 61346-2	Q
reference code according to DIN 40719 extended according to IEC 204-2 according to IEC 750	G

Power Electronics

operational current	
• at 40 °C rated value	12.5 A
• at 50 °C rated value	11 A
• at 60 °C rated value	10 A
yielded mechanical performance for 3-phase motors	
• at 230 V	
— at standard circuit at 40 °C rated value	3 kW
• at 400 V	
— at standard circuit at 40 °C rated value	5.5 kW
yielded mechanical performance [hp] for 3-phase AC motor at 200/208 V at standard circuit at 50 °C rated value	3 hp
operating frequency rated value	50 ... 60 Hz
relative negative tolerance of the operating frequency	-10 %
relative positive tolerance of the operating frequency	10 %
operating voltage at standard circuit rated value	200 ... 480 V
relative negative tolerance of the operating voltage at	-15 %

standard circuit	
relative positive tolerance of the operating voltage at standard circuit	10 %
minimum load [%]	20 %
adjustable motor current for motor overload protection minimum rated value	5 A
continuous operating current [% of I_e] at 40 °C	115 %
power loss [W] at operational current at 40 °C during operation typical	2 W
Control circuit/ Control	
type of voltage of the control supply voltage	AC/DC
control supply voltage frequency 1 rated value	50 Hz
control supply voltage frequency 2 rated value	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 1 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 1 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 %
display version for fault signal	red
Mechanical data	
size of engine control device	S0
width	45 mm
height	125 mm
depth	155 mm
fastening method	screw and snap-on mounting
mounting position	With additional fan: With vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back Without additional fan: With vertical mounting surface +/-10° rotatable, with vertical mounting surface +/- 10° t
required spacing with side-by-side mounting	
• upwards	60 mm
• at the side	15 mm
• downwards	40 mm
wire length maximum	300 m
number of poles for main current circuit	3
Connections/ Terminals	
type of electrical connection	
• for main current circuit	screw-type terminals
• for auxiliary and control circuit	screw-type terminals
number of NC contacts for auxiliary contacts	0
number of NO contacts for auxiliary contacts	2
number of CO contacts for auxiliary contacts	1
type of connectable conductor cross-sections for main contacts for box terminal using the front clamping point	
• solid	2x (1 ... 2.5 mm²), 2x (2.5 ... 6 mm²), max. 1x 10 mm²
• finely stranded with core end processing	2x (1 ... 2.5 mm²), 2x (2.5 ... 6 mm²)
type of connectable conductor cross-sections for AWG cables for main contacts for box terminal	

<ul style="list-style-type: none">• using the front clamping point	1x 8, 2x (16 ... 10)				
type of connectable conductor cross-sections for auxiliary contacts <ul style="list-style-type: none">• solid• finely stranded with core end processing	2x (0.5 ... 2.5 mm²) 2x (0.5 ... 1.5 mm²)				
type of connectable conductor cross-sections for AWG cables <ul style="list-style-type: none">• for auxiliary contacts• for auxiliary contacts finely stranded with core end processing	2x (20 ... 14) 2x (20 ... 16)				
Ambient conditions					
installation altitude at height above sea level	5 000 m				
environmental category <ul style="list-style-type: none">• during transport according to IEC 60721• during storage according to IEC 60721• during operation according to IEC 60721	2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m) 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4 3K6 (no formation of ice, no condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6				
ambient temperature <ul style="list-style-type: none">• during operation• during storage	-25 ... +60 °C -40 ... +80 °C				
derating temperature	40 °C				
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				
UL/CSA ratings					
yielded mechanical performance [hp] for 3-phase AC motor <ul style="list-style-type: none">• at 220/230 V<ul style="list-style-type: none">— at standard circuit at 50 °C rated value• at 460/480 V<ul style="list-style-type: none">— at standard circuit at 50 °C rated value	3 hp 7.5 hp				
contact rating of auxiliary contacts according to UL	B300 / R300				
Approvals Certificates					
Environmental Product Declaration <ul style="list-style-type: none">• global warming potential [CO2 eq] / during manufacturing• global warming potential [CO2 eq] / during sales• global warming potential [CO2 eq] / during operation• global warming potential [CO2 eq] / after end of life• global warming potential [CO2 eq] / total					
4.24 kg 0.207 kg 117 kg -0.229 kg 121 kg					
Environment	General Product Approval				
<div><div>Environmental Confirmations</div><div></div></div>					
General Product Approval	EMV	For use in hazardous locations			
 EG-Konf.			 RCM	 IECEx	 ATEX
Test Certificates	Maritime application	other			
Type Test Certificates/Test Report	Special Test Certificate	 DNV	 LRS	 PRS	Confirmation
other	Railway				

[Confirmation](#)



[Confirmation](#)

Further information

Simulation Tool for Soft Starters (STS)

<https://www.modulplc.com/?s=3RW4024-1BB04>

Information on the packaging

<https://www.modulplc.com/?s=3RW4024-1BB04>

Information for data generation and storage

<https://www.modulplc.com/?s=3RW4024-1BB04>

Information- and Downloadcenter (Catalogs, Brochures,...)

<https://www.modulplc.com/?s=3RW4024-1BB04>

Industry Mall (Online ordering system)

<https://www.modulplc.com/?s=3RW4024-1BB04>

Cax online generator

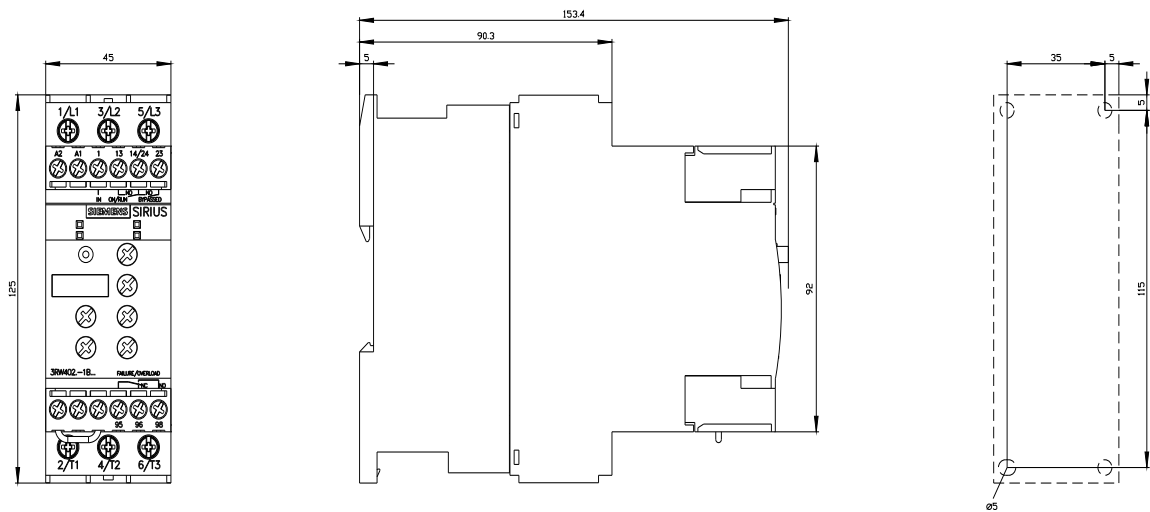
<https://www.modulplc.com/?s=3RW4024-1BB04>

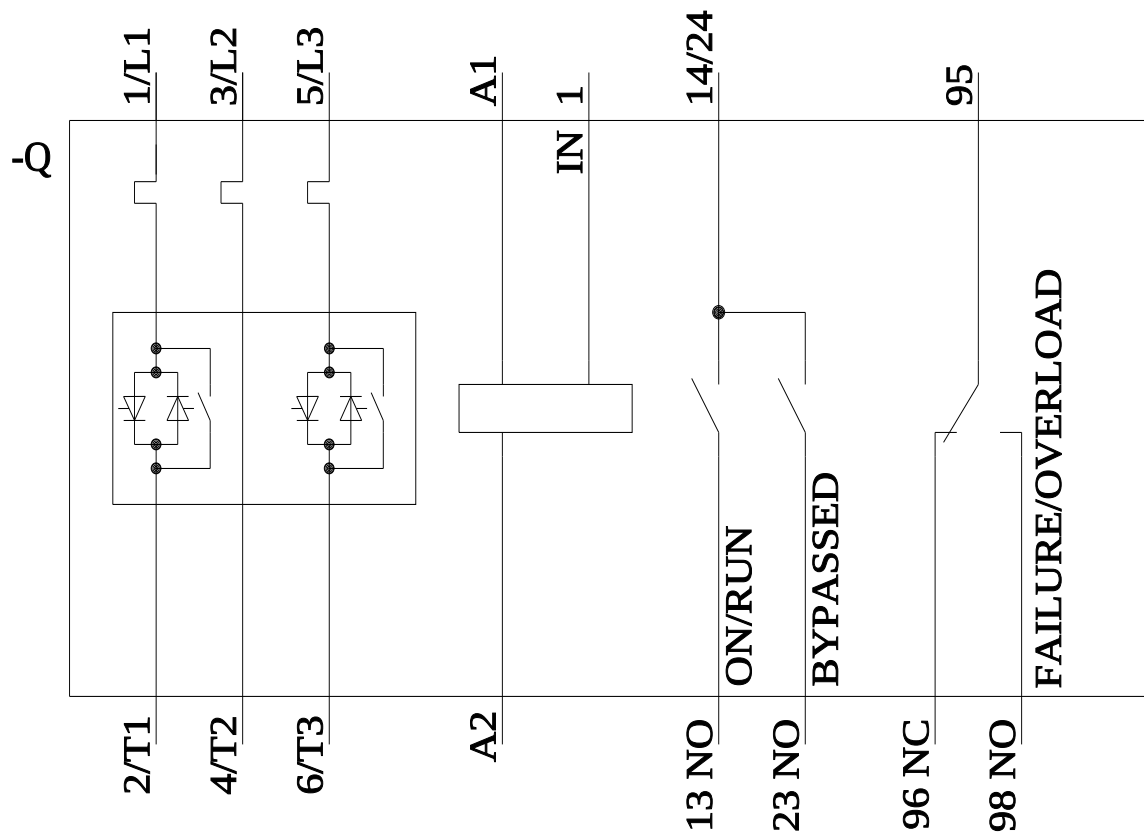
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://www.modulplc.com/?s=3RW4024-1BB04>

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

<https://www.modulplc.com/?s=3RW4024-1BB04>





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