

Siemens
EcoTech



SIRIUS soft starter S2 45 A, 22 kW/400 V, 40 °C 200-480 V AC, 110-230 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	No
• motor overload protection	No
• evaluation of thermistor motor protection	No
• external reset	No
• adjustable current limitation	No
• 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	45 A
• at 50 °C rated value	42 A
• at 60 °C rated value	39 A
yielded mechanical performance for 3-phase motors	
• at 230 V	
— at standard circuit at 40 °C rated value	11 kW
• at 400 V	
— at standard circuit at 40 °C rated value	22 kW
yielded mechanical performance [hp] for 3-phase AC motor at 200/208 V at standard circuit at 50 °C rated value	10 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 [%]	10 %
continuous operating current [% of I _e] at 40 °C	115 %
power loss [W] at operational current at 40 °C during operation typical	6 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	110 ... 230 V
control supply voltage 1 at AC at 60 Hz	110 ... 230 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 1 at DC	110 ... 230 V
relative negative tolerance of the control supply voltage at DC	-15 %
relative positive tolerance of the control supply voltage at DC	10 %
display version for fault signal	red
Mechanical data	
size of engine control device	S2
width	55 mm
height	160 mm
depth	170 mm
fastening method	screw and snap-on mounting
mounting position	With vertical mounting surface +/-10° rotatable, with vertical mounting surface +/- 10° tiltable to the front and back
required spacing with side-by-side mounting	
• upwards	60 mm
• at the side	30 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	1
number of CO contacts for auxiliary contacts	0
type of connectable conductor cross-sections for main contacts for box terminal using the front clamping point	
• solid	2x (1.5 ... 16 mm ²)
• finely stranded with core end processing	1.5 ... 25 mm ²
• stranded	1.5 ... 35 mm ²
type of connectable conductor cross-sections for main contacts for box terminal using the back clamping point	
• solid	2x (1.5 ... 16 mm ²)
• finely stranded with core end processing	1.5 ... 25 mm ²
• stranded	1.5 ... 35 mm ²
type of connectable conductor cross-sections for main	

contacts for box terminal using both clamping points	
• solid	2x (1.5 ... 16 mm ²)
• finely stranded with core end processing	2x (1.5 ... 16 mm ²)
• stranded	2x (1.5 ... 25 mm ²)
type of connectable conductor cross-sections for AWG cables for main contacts for box terminal	
• using the back clamping point	16 ... 2
• using the front clamping point	18 ... 2
• using both clamping points	2x (16 ... 2)
type of connectable conductor cross-sections for auxiliary contacts	
• solid	2x (0.5 ... 2.5 mm ²)
• finely stranded with core end processing	2x (0.5 ... 1.5 mm ²)
type of connectable conductor cross-sections for AWG cables	
• for auxiliary contacts	2x (20 ... 14)
• for auxiliary contacts finely stranded with core end processing	2x (20 ... 16)

Ambient conditions

installation altitude at height above sea level	5 000 m
environmental category	
• during transport according to IEC 60721	2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)
• during storage according to IEC 60721	1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4
• during operation according to IEC 60721	3K6 (no formation of ice, no condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6
ambient temperature	
• during operation	-25 ... +60 °C
• during storage	-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	
• at 220/230 V	
— at standard circuit at 50 °C rated value	15 hp
• at 460/480 V	
— at standard circuit at 50 °C rated value	30 hp
contact rating of auxiliary contacts according to UL	B300 / R300

Approvals Certificates

Environmental Product Declaration	
• global warming potential [CO2 eq] / during manufacturing	22 kg
• global warming potential [CO2 eq] / during sales	0.289 kg
• global warming potential [CO2 eq] / during operation	140 kg
• global warming potential [CO2 eq] / after end of life	-3.2 kg
• global warming potential [CO2 eq] / total	159 kg

Environment	General Product Approval
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[Environmental Confirmations](#)



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General Product Approval	EMV	Test Certificates
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[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

other	Railway
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Further information

Simulation Tool for Soft Starters (STS)

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

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

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=3RW3036-1BB14>

Cax online generator

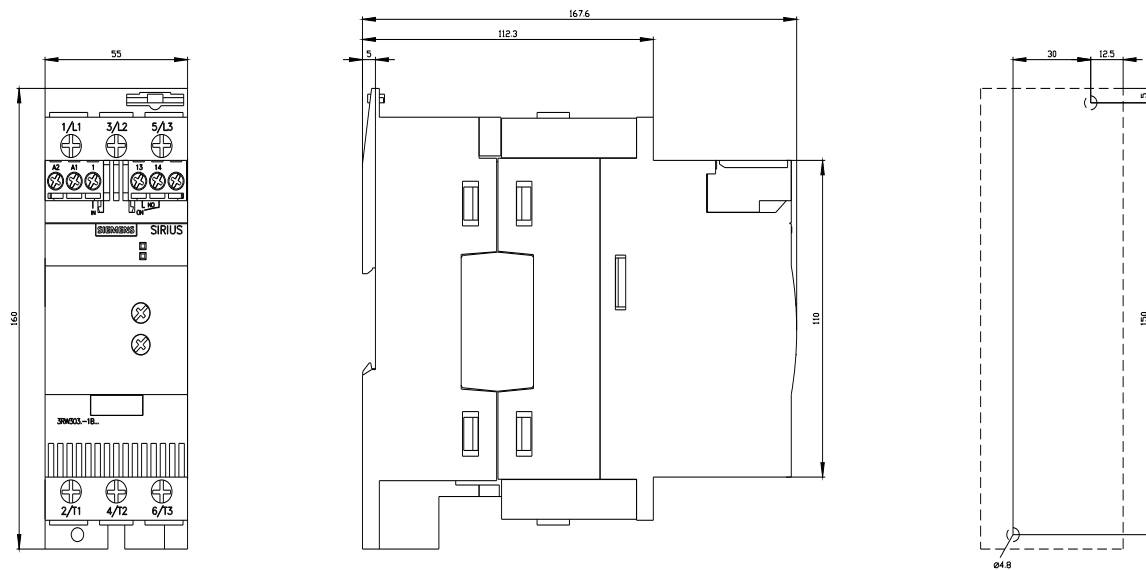
<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW3036-1BB14>

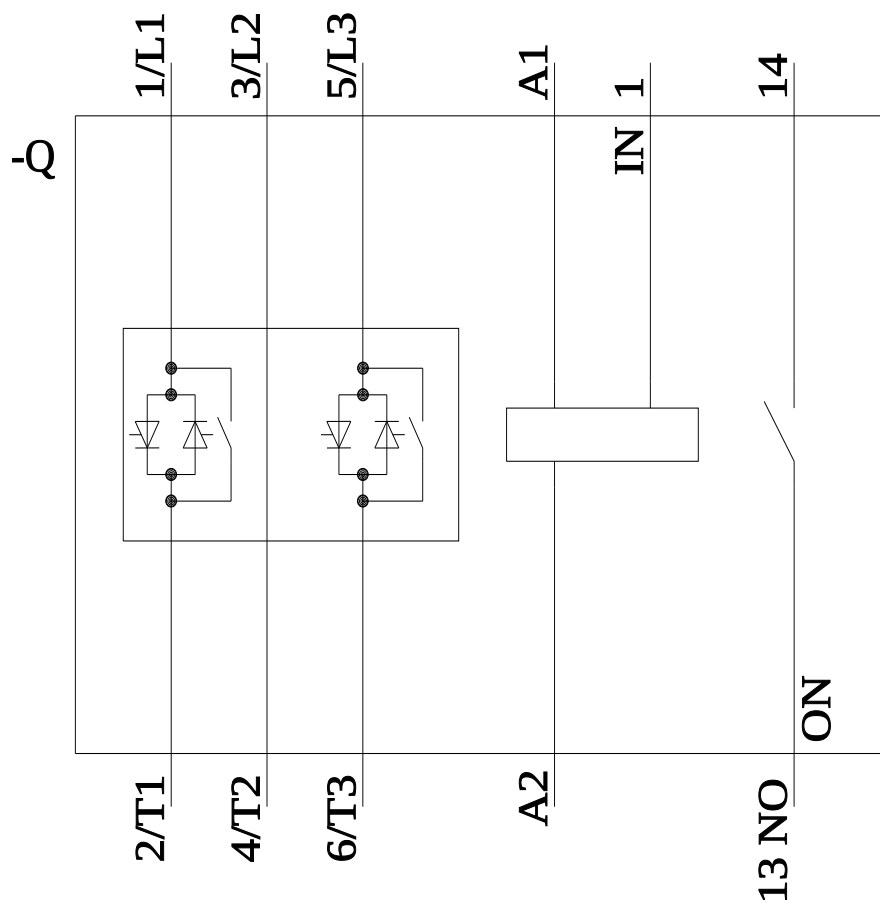
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RW3036-1BB14>

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

https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW3036-1BB14&lang=en





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