



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		
<ul style="list-style-type: none"> integrated bypass contact system 		Yes
<ul style="list-style-type: none"> thyristors 		Yes
product function		
<ul style="list-style-type: none"> intrinsic device protection 		No
<ul style="list-style-type: none"> motor overload protection 		No
<ul style="list-style-type: none"> evaluation of thermistor motor protection 		No
<ul style="list-style-type: none"> external reset 		No
<ul style="list-style-type: none"> adjustable current limitation 		No
<ul style="list-style-type: none"> inside-delta circuit 		No
product component motor brake output		No
insulation voltage rated value	V	600
degree of pollution		3, acc. to IEC 60947-4-2
blocking voltage of the thyristor maximum	V	1 600
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		
<ul style="list-style-type: none"> at 40 °C rated value 	A	45
<ul style="list-style-type: none"> at 50 °C rated value 	A	42
<ul style="list-style-type: none"> at 60 °C rated value 	A	39
yielded mechanical performance for 3-phase motors		
<ul style="list-style-type: none"> at 230 V <ul style="list-style-type: none"> at standard circuit at 40 °C rated value 	kW	11
<ul style="list-style-type: none"> at 400 V <ul style="list-style-type: none"> at standard circuit at 40 °C rated value 	kW	22
yielded mechanical performance [hp] for 3-phase AC motor at 200/208 V at standard circuit at 50 °C rated value	hp	10
operating frequency rated value	Hz	50 ... 60
relative negative tolerance of the operating frequency	%	-10
relative positive tolerance of the operating frequency	%	10
operating voltage at standard circuit rated value	V	200 ... 480
relative negative tolerance of the operating voltage at standard circuit	%	-15
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	W	6

Control circuit/ Control

type of voltage of the control supply voltage		AC/DC
control supply voltage frequency 1 rated value	Hz	50
control supply voltage frequency 2 rated value	Hz	60
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	V	110 ... 230
control supply voltage 1 at AC at 60 Hz	V	110 ... 230
relative negative tolerance of the control supply voltage at AC at 50 Hz	%	-10
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	%	-10
relative positive tolerance of the control supply voltage at AC at 60 Hz	%	10
control supply voltage 1 at DC	V	110 ... 230
relative negative tolerance of the control supply voltage at DC	%	-10
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	mm	55
height	mm	160
depth	mm	170
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	mm	60
• at the side	mm	30
• downwards	mm	40
wire length maximum	m	300
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)

<ul style="list-style-type: none"> • stranded 		2x (1.5 ... 25 mm ²)
type of connectable conductor cross-sections for AWG cables for main contacts for box terminal <ul style="list-style-type: none"> • using the back clamping point • using the front clamping point • using both clamping points 		16 ... 2 18 ... 2 2x (16 ... 2)
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 mm ²) 2x (0.5 ... 1.5 mm ²)
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	m	5 000
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 	°C	-25 ... +60 -40 ... +80
derating temperature	°C	40
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

Environmental footprint

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

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 	hp	15 30
contact rating of auxiliary contacts according to UL		B300 / R300

Approvals Certificates

General Product Approval	EMV
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EMV	Test Certificates	other
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[KC](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



[Miscellaneous](#)

[Confirmation](#)

Railway	Environment
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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

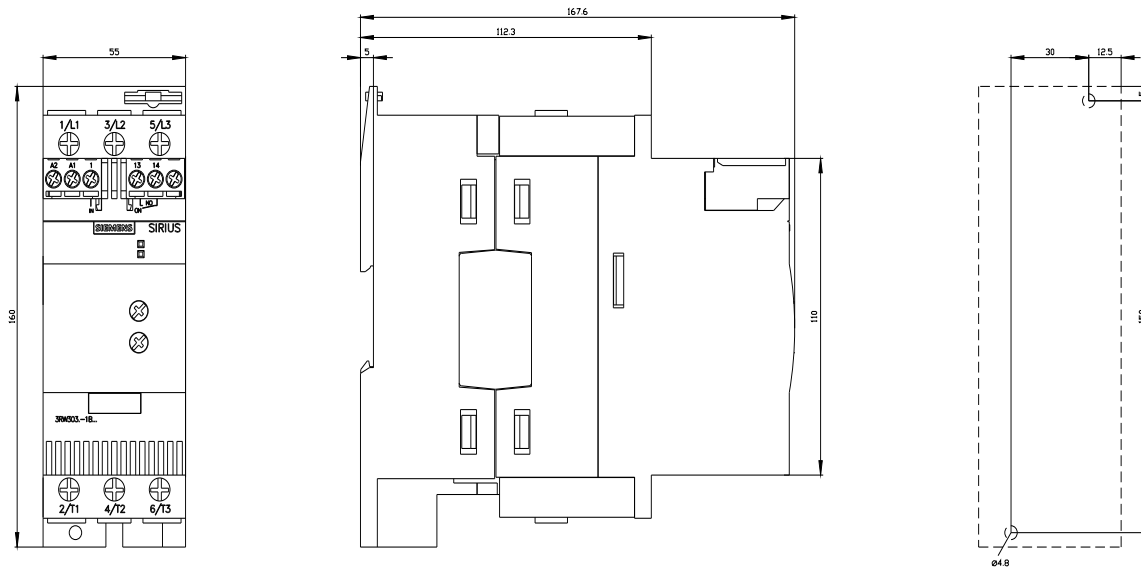
<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW3036-1BB14>

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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