

SIRIUS soft starter S12 280 A, 160 kW/400 V, 40 °C
200-460 V AC, 230 V AC Screw terminals



General technical data

Product brand name		SIRIUS
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 		Yes
<ul style="list-style-type: none"> motor overload protection 		Yes
<ul style="list-style-type: none"> Evaluation of thermistor motor protection 		No
<ul style="list-style-type: none"> External reset 		Yes
<ul style="list-style-type: none"> Adjustable current limitation 		Yes
<ul style="list-style-type: none"> inside-delta circuit 		No
Product component Motor brake output		No
Insulation voltage rated value	V	600
Reference code acc. to DIN EN 61346-2		Q
Reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750		G

Power Electronics

Product designation		Soft starter
Operating current		
• at 40 °C rated value	A	280
• at 50 °C rated value	A	248
• at 60 °C rated value	A	215
Mechanical power output for three-phase motors		
• at 230 V		
— at standard circuit at 40 °C rated value	W	90 000
• at 400 V		
— at standard circuit at 40 °C rated value	W	160 000
Yielded mechanical performance [hp] for three-phase AC motor at 200/208 V at standard circuit at 50 °C rated value	hp	75
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 ... 460
Relative negative tolerance of the operating voltage at standard circuit	%	-15
Relative positive tolerance of the operating voltage at standard circuit	%	10
Minimum load [%]	%	20
Adjustable motor current for motor overload protection minimum rated value	A	130
Continuous operating current [% of I_e] at 40 °C	%	115
Power loss [W] at operating current at 40 °C during operation typical	W	90

Control electronics		
Type of voltage of the control supply voltage		AC
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 rated value	V	230
• at 60 Hz rated value	V	230
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
Display version for fault signal		red

Mechanical data

Size of engine control device		S12
Width	mm	160
(height)	mm	230
Depth	mm	278
(mounting type)		screw fixing
(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	mm	100
• at the side	mm	5
• downwards	mm	75
Wire length maximum	m	300
Number of poles for main current circuit		3

Connections/Terminals

Type of electrical connection		
• for main current circuit		busbar connection
• for auxiliary and control current 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		
• finely stranded with core end processing		70 ... 240 mm ²
• finely stranded without core end processing		70 ... 240 mm ²
• stranded		95 ... 300 mm ²
Type of connectable conductor cross-sections for main contacts for box terminal using the back clamping point		
• finely stranded with core end processing		120 ... 185 mm ²
• finely stranded without core end processing		120 ... 185 mm ²
• stranded		120 ... 240 mm ²
Type of connectable conductor cross-sections for main contacts for box terminal using both clamping points		

<ul style="list-style-type: none"> finely stranded with core end processing finely stranded without core end processing stranded 		min. 2x 50 mm ² , max. 2x 185 mm ² min. 2x 50 mm ² , max. 2x 185 mm ² max. 2x 70 mm ² , max. 2x 240 mm ²
Type of connectable conductor cross-sections at AWG conductors 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 		250 ... 500 kcmil 3/0 ... 600 kcmil min. 2x 2/0, max. 2x 500 kcmil
Type of connectable conductor cross-sections for DIN cable lug for main contacts <ul style="list-style-type: none"> finely stranded stranded 		50 ... 240 mm ² 70 ... 240 mm 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 at AWG conductors <ul style="list-style-type: none"> for main contacts for auxiliary contacts for auxiliary contacts finely stranded with core end processing 		2/0 ... 500 kcmil 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 acc. to IEC 60721 during storage acc. to IEC 60721 during operation acc. 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 °C	-25 ... +60 -40 ... +80
(derating temperature)	°C	40
Protection class IP		IP00

Certificates/approvals

General Product Approval	EMC	For use in hazardous locations
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Declaration of Conformity	Test Certificates	Shipping Approval	other
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[Miscellaneous](#)

[Special Test Certificate](#)



[Confirmation](#)

UL/CSA ratings

Yielded mechanical performance [hp] for three-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	100
Contact rating of auxiliary contacts according to UL		B300 / R300

Further information

Simulation Tool for Soft Starters (STS)

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

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

<http://www.siemens.com/industrial-controls/catalogs>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RW4074-6BB44>

Cax online generator

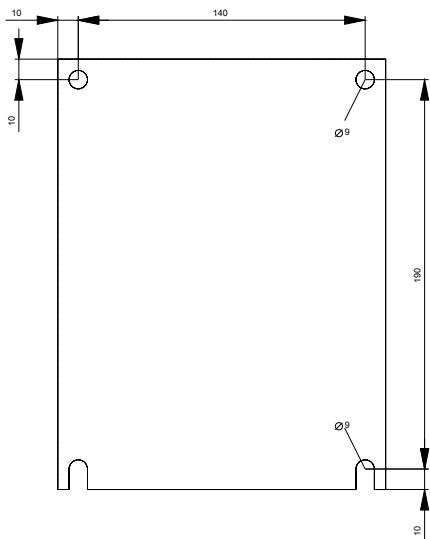
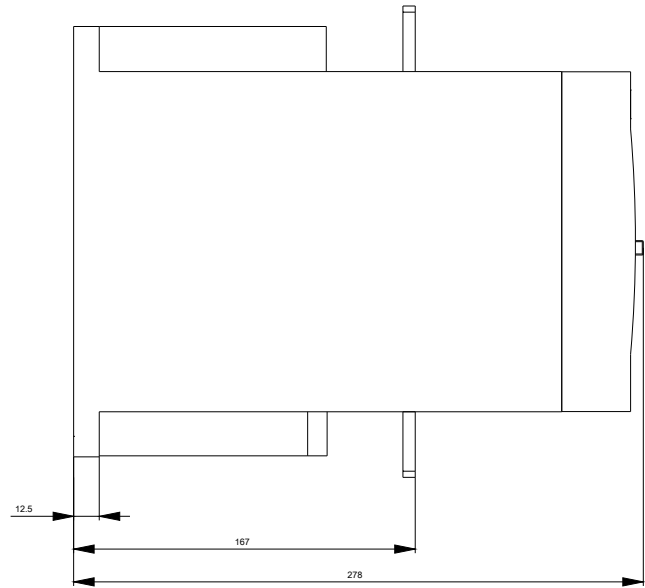
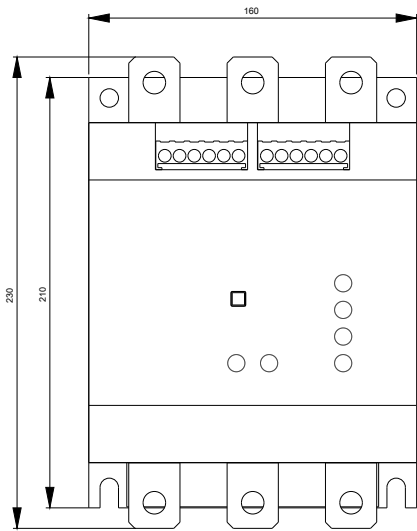
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW4074-6BB44>

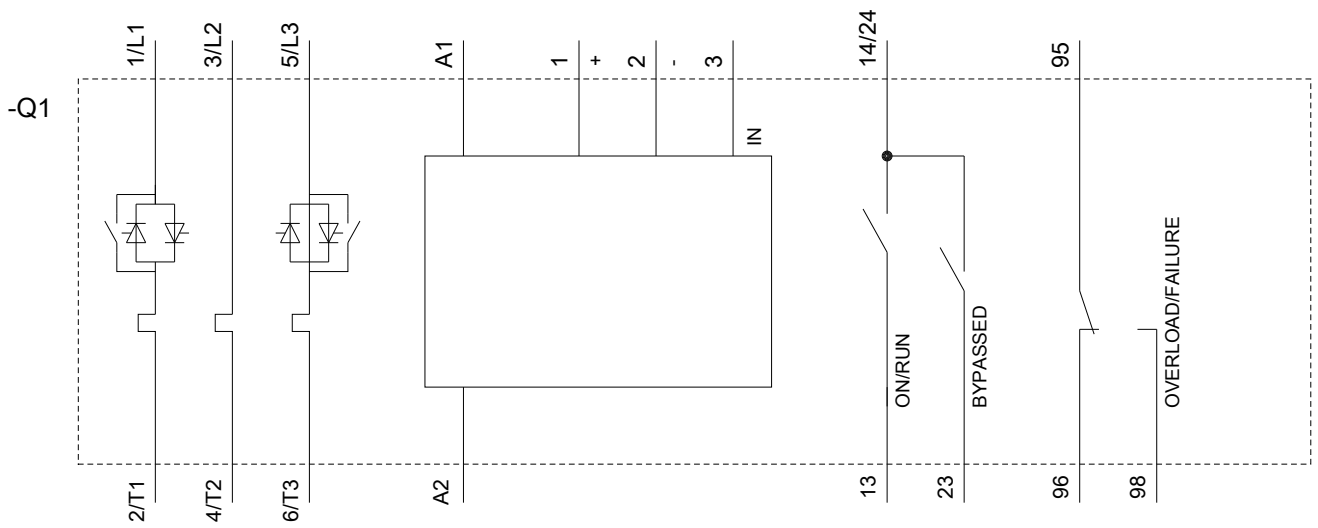
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RW4074-6BB44>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW4074-6BB44&lang=en





last modified:

04/30/2019