SIEMENS

Data sheet 3RW40 28-1BB14



SIRIUS SOFT STARTER, S0, 38A, 18.5KW/400V, 40 DEGR., AC 200-480V, AC/DC 110-230V, SCREW TERMINALS

General technical data:			
product brand name		SIRIUS	
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	
Equipment marking acc. to DIN EN 61346-2		Q	
Equipment marking acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750		G	

Power Electronics:			
Product designation		soft starters for standard applications	
Operating current			
• at 40 °C Rated value	Α	38	
• at 50 °C Rated value	Α	34	
● at 60 °C Rated value	Α	31	
Mechanical power output for three-phase motors			
● at 230 V			

— at standard circuit at 40 °C Rated value	W	11 000
● at 400 V		
— at standard circuit at 40 °C Rated value	W	18 500
yielded mechanical performance [hp] for three-phase	metric	10
AC motor at 200/208 V at standard circuit at 50 °C	hp	
Rated value		
Operating frequency Rated value	Hz	50 60
Relative negative tolerance of the operating	%	-10
frequency		
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	%	-15
at standard circuit		
Relative positive tolerance of the operating voltage at	%	10
standard circuit		
Minimum load in % of I_M	%	20
Adjustable motor current for motor overload	Α	23
protection minimum rated value		
Continuous operating current [% of le] at 40 °C	%	115
Active power loss at operating current at 40 °C during	W	19
operation typical		

Control electronics:		
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 with AC at 50 Hz	V	110 230
Control supply voltage 1 with AC at 60 Hz	V	110 230
Relative negative tolerance of the control supply voltage with AC at 60 Hz	%	-15
Relative positive tolerance of the control supply voltage with AC at 60 Hz	%	10
Control supply voltage 1 for DC	V	110 230
Relative negative tolerance of the control supply voltage for DC	%	-15
Relative positive tolerance of the control supply voltage for DC	%	10
Display version for fault signal		red

Mechanical data:		
Size of engine control device		S0
Width	mm	45

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 • upwards • at the side • downwards mm 40 Installation altitude at height above sea level m 5 000 Cable length maximum m 300 Number of poles for main current circuit 3	Mounting type mounting position	mm	screw and snap-on mounting With additional fan: With vertical mounting surface +/- 90° rotatable, with vertical mounting surface +/- 22.5°
mounting position With additional fan: With vertical mounting surface +/- 20.5° tiltable to the front and back Without additional fan: With vertical mounting surface +/- 20.5° tiltable to the front and back Without additional fan: With vertical mounting surface +/- 10° t Required spacing with side-by-side mounting • upwards • at the side • downwards mm 60 Installation altitude at height above sea level cable length maximum m 300 Cable length maximum and current circuit • for main current circuit • for main current circuit • for main current circuit • for auxiliary and control current circuit • for auxiliary and control current circuit • for auxiliary ontacts for auxiliary contacts Type of connectable conductor cross-section for main contacts for box terminal using the front clamping point • finely stranded with core end processing Type of connectable conductor cross-section for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-section for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-section for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-section for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-section for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-section for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-section for AWG conductors • for auxiliary contacts • for auxiliary contacts finely stranded with core	mounting position		With additional fan: With vertical mounting surface +/- 90° rotatable, with vertical mounting surface +/- 22.5°
90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back Without additional fan: With vertical mounting surface +/- 10° to tatable, with vertical mounting surface +/- 10° to to the vertical mounting surface +/- 10° to to to the vertical mounting surface +/- 10° to to to the vertical mounting surface +/- 10° to to to the vertical mounting surface +/- 10° to to to to to to to the vertical mounting surface +/- 10° to			90° rotatable, with vertical mounting surface +/- 22.5°
• upwards • at the side • downwards Installation altitude at height above sea level Cable length maximum Number of poles for main current circuit • for main current circuit • for auxiliary and control current circuit Number of NC contacts for auxiliary contacts Type of connectable conductor cross-section for main contacts for box terminal using the front clamping point • solid • finely stranded with core end processing Type of connectable conductor cross-section for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-section for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-section for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-section for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-section for auxiliary contacts • for auxiliary contacts finely stranded with core	Required spacing with side-by-side mounting		With vertical mounting surface +/-10° rotatable, with
at the side downwards mm d0 Installation altitude at height above sea level mm d0 Cable length maximum Number of poles for main current circuit 3 Connections/ Terminals: Type of electrical connection for main current circuit for auxiliary and control current circuit Number of NC contacts for auxiliary contacts 1 Type of connectable conductor cross-section for main contacts for box terminal using the front clamping point finely stranded with core end processing Type of connectable conductor cross-section for auxiliary contacts solid finely stranded with core end processing Type of connectable conductor cross-section for auxiliary contacts solid finely stranded with core end processing Type of connectable conductor cross-section for auxiliary contacts solid finely stranded with core end processing Type of connectable conductor cross-section for auxiliary contacts for auxiliary contacts			
o downwards	• upwards	mm	60
Installation altitude at height above sea level Cable length maximum Number of poles for main current circuit 3 Connections/ Terminals: Type of electrical connection • for main current circuit • for auxiliary and control current circuit Sumber of NC contacts for auxiliary contacts Number of NO contacts for auxiliary contacts Type of connectable conductor cross-section for main contacts for box terminal using the front clamping point • finely stranded with core end processing Type of connectable conductor cross-section for auxiliary contacts • solid • solid • finely stranded with core end processing Type of connectable conductor cross-section for auxiliary contacts • solid • solid • finely stranded with core end processing Type of connectable conductor cross-section for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-section for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-section for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-section for AWG conductors • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts finely stranded with core	• at the side	mm	15
Cable length maximum m 300 Number of poles for main current circuit 3 Type of electrical connection • for main current circuit screw-type terminals • for auxiliary and control current circuit screw-type terminals Number of NC contacts for auxiliary contacts Number of NO contacts for auxiliary contacts Type of connectable conductor cross-section for main contacts for box terminal using the front clamping point • solid • finely stranded with core end processing Type of connectable conductor cross-section for auxiliary contacts • solid • using the front clamping point • solid • solid • finely stranded with core end processing Type of connectable conductor cross-section for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-section for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-section for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-section for AWG conductors • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts finely stranded with core	• downwards	mm	40
Number of poles for main current circuit Sometions/ Terminals: Type of electrical connection For main current circuit Screw-type terminals For auxiliary and control current circuit Screw-type terminals For auxiliary and control current circuit Screw-type terminals Number of NC contacts for auxiliary contacts Number of NO contacts for auxiliary contacts Number of CO contacts for auxiliary contacts Type of Connectable conductor cross-section for main contacts for box terminal using the front clamping point Solid Screw-type terminals 1	Installation altitude at height above sea level	m	5 000
Type of electrical connection • for main current circuit • for auxiliary and control current circuit Number of NC contacts for auxiliary contacts Number of NO contacts for auxiliary contacts Number of CO contacts for auxiliary contacts Type of connectable conductor cross-section for main contacts for box terminal using the front clamping point • solid • finely stranded with core end processing Type of connectable conductor cross-section for AWG conductors for main contacts for box terminal • using the front clamping point 1x 8, 2x (16 10) Type of connectable conductor cross-section for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-section for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-section for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-section for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts finely stranded with core 2x (20 14) 2x (20 16)	Cable length maximum	m	300
Type of electrical connection • for main current circuit • for auxiliary and control current circuit Number of NC contacts for auxiliary contacts Number of NO contacts for auxiliary contacts Number of CO contacts for auxiliary contacts 1 Type of connectable conductor cross-section for main contacts for box terminal using the front clamping point • solid • finely stranded with core end processing Type of connectable conductor cross-section for AWG conductors for main contacts for box terminal • using the front clamping point Type of connectable conductor cross-section for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-section for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-section for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-section for AWG conductors • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts finely stranded with core • for auxiliary contacts finely stranded with core	Number of poles for main current circuit		3
Type of electrical connection • for main current circuit • for auxiliary and control current circuit Number of NC contacts for auxiliary contacts Number of NO contacts for auxiliary contacts Number of CO contacts for auxiliary contacts 1 Type of connectable conductor cross-section for main contacts for box terminal using the front clamping point • solid • finely stranded with core end processing Type of connectable conductor cross-section for AWG conductors for main contacts for box terminal • using the front clamping point Type of connectable conductor cross-section for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-section for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-section for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-section for AWG conductors • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts finely stranded with core • for auxiliary contacts finely stranded with core	Connections/ Terminals:		
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Number of NC contacts for auxiliary contacts Number of NO contacts for auxiliary contacts 1 Type of connectable conductor cross-section for main contacts for box terminal using the front clamping point • solid • finely stranded with core end processing Type of connectable conductor cross-section for AWG conductors for main contacts for box terminal • using the front clamping point 1 x 8, 2x (15 2.5 mm²), 2x (2.5 6 mm²), max. 1x 10 mm² 2 x (1.5 2.5 mm²), 2x (2.5 6 mm²) 1 x 8, 2x (16 10) Type of connectable conductor cross-section for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-section for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts finely stranded with core	for main current circuit		screw-type terminals
Number of NO contacts for auxiliary contacts Number of CO contacts for auxiliary contacts Type of connectable conductor cross-section for main contacts for box terminal using the front clamping point • solid • finely stranded with core end processing Type of connectable conductor cross-section for AWG conductors for main contacts for box terminal • using the front clamping point 1x 8, 2x (15 2.5 mm²), 2x (2.5 6 mm²), max. 1x 10 mm² 2x (1.5 2.5 mm²), 2x (2.5 6 mm²) 1x 8, 2x (16 10) Type of connectable conductor cross-section for auxiliary contacts • solid 2x (0.5 2.5 mm²) 2x (0.5 2.5 mm²) 2x (0.5 2.5 mm²) 2x (0.5 2.5 mm²) 2x (0.5 1.5 mm²)	for auxiliary and control current circuit		screw-type terminals
Number of CO contacts for auxiliary contacts Type of connectable conductor cross-section for main contacts for box terminal using the front clamping point • solid • finely stranded with core end processing Type of connectable conductor cross-section for AWG conductors for main contacts for box terminal • using the front clamping point Type of connectable conductor cross-section for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-section for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-section for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts finely stranded with core 2x (1.5 2.5 mm²), 2x (2.5 6 mm²) 1x 8, 2x (16 10) 2x (0.5 2.5 mm²) 2x (0.5 2.5 mm²) 2x (0.5 2.5 mm²) 2x (0.5 1.5 mm²)	Number of NC contacts for auxiliary contacts		0
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 ◆ solid 2x (1.5 2.5 mm²), 2x (2.5 6 mm²), max. 1x 10 mm² ◆ finely stranded with core end processing 2x (1.5 2.5 mm²), 2x (2.5 6 mm²) Type of connectable conductor cross-section for AWG conductors for main contacts for box terminal ◆ using the front clamping point 1x 8, 2x (16 10) Type of connectable conductor cross-section for auxiliary contacts ◆ solid ◆ finely stranded with core end processing 2x (0.5 2.5 mm²) 2x (0.5 2.5 mm²) 2x (0.5 1.5 mm²) Type of connectable conductor cross-section for AWG conductors ◆ for auxiliary contacts ◆ for auxiliary contacts finely stranded with core 2x (20 14) 2x (20 16) 	main contacts for box terminal using the front		
Type of connectable conductor cross-section for AWG conductors for main contacts for box terminal • using the front clamping point Type of connectable conductor cross-section for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-section for AWG conductors • for auxiliary contacts • for auxiliary contacts finely stranded with core 2x (20 14) 2x (20 16)			
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 finely stranded with core end processing Type of connectable conductor cross-section for AWG conductors for auxiliary contacts for auxiliary contacts finely stranded with core 2x (20 14) 2x (20 16) 	••		
Type of connectable conductor cross-section for AWG conductors • for auxiliary contacts • for auxiliary contacts finely stranded with core 2x (20 14) 2x (20 16)	• solid		2x (0.5 2.5 mm²)
AWG conductors ● for auxiliary contacts • for auxiliary contacts finely stranded with core 2x (20 14) 2x (20 16)	• finely stranded with core end processing		2x (0.5 1.5 mm²)
• for auxiliary contacts finely stranded with core	••		
	• for auxiliary contacts		2x (20 14)
			2x (20 16)

125

mm

• during operation

Height

-25 ... +60

°C

during storage	°C	-40 + 80
Derating temperature	°C	40
Protection class IP		IP20

Certificates/ approvals:

General Product Approval	EMC	For use in
		hazardous
		locations













Test Certificates

Shipping Approval

Special Test Certificate

Type Test Certificates/Test Report









GL

other

Declaration of Environmental Conformity Confirmations

UL/CSA ratings:		
yielded mechanical performance [hp] for three-phase		
AC motor		
● at 220/230 V		
 — at standard circuit at 50 °C Rated value 	metric	10
	hp	
● at 460/480 V		
 — at standard circuit at 50 °C Rated value 	metric	25
	hp	
Contact rating of the auxiliary contacts acc. to UL		B300 / R300

Further information

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

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

Industry Mall (Online ordering system) http://www.siemens.com/industrymall

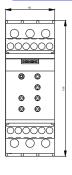
Cax online generator

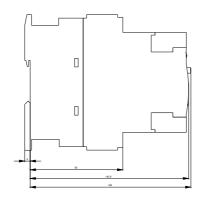
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW40281BB14

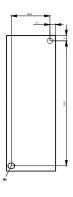
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

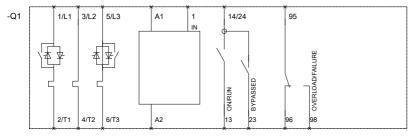
https://support.industry.siemens.com/cs/ww/en/ps/3RW40281BB14

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW40281BB14&lang=en









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