SIEMENS

3RW30 28-2BB14 Data sheet



SIRIUS SOFT STARTER, SIZE S0, 38A, 18.5KW/400V, 40 DEGREES, 200-480V AC, 110-230V AC/DC, SPRING-LOADED TERMINALS

Seneral technical data	
product brandname	SIRIUS
 Product equipment Integrated bypass contact system 	Yes
Product feature 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
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 starter

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	hp	10
AC motor at 200/208 V at standard circuit at 50 °C		
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 at standard circuit	%	-15
Relative positive tolerance of the operating voltage at standard circuit	%	10
Minimum load [% of IM]	%	10
Continuous operating current [% of le] at 40 °C	%	115
Power loss [W] 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
0 1 1 1 1 6 0 1 1 1		00

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 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 60 Hz	%	-15
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	%	-15
Relative positive tolerance of the control supply voltage at DC	%	10

Size of engine control device Width mm 45 Height mm 150 Depth mm 150 Mounting type Screw and snap-on mounting With vertical mounting surface +/- 10° totatable, with vertical mounting surface +/- 10° tiltable to the front and back Required spacing with side-by-eide mounting • upwards • upwards • at the side • downwards Wire length maximum m 40 Wire length maximum m 300 Number of poles for main current circuit • for auxiliary and control current circuit • for auxiliary and control current circuit • for auxiliary and control current circuit • Spring-loaded terminals 1 Number of NO contacts for auxiliary contacts Number of CO contacts for auxiliary contacts Number of CO contacts for auxiliary contacts 1 Number of CO contacts for auxiliary contacts 1 Number of Co contacts for auxiliary contacts 1 Number of Co contacts for box terminal using the front clamping point • solid • finely stranded with core end processing Type of connectable conductor cross-sections for main contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections at AWG conductors • finely stranded with core end processing Type of connectable conductor cross-sections at AWG conductors • for auxiliary contacts	Display version for fault signal		red
Width Height mm	Mechanical data		
Height mm 150 Mounting type Mounting position Required spacing with side-by-side mounting • upwards • at the side • downwards Wire length maximum Number of poles for main current circuit • for auxiliary and control current circuit Number of NC contacts for auxiliary contacts Number of NC contacts for auxiliary contacts Type of connectable conductor cross-sections of main currents for box terminal • using the front clamping point • solid • finely stranded with core end processing Type of connectable conductor cross-sections for main currents • solid • finely stranded with core end processing Type of connectable conductor cross-sections for main contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for main contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for main contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for main contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for main contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for main contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections at AWG conductors • for main contacts • f	Size of engine control device		S0
Mounting type Screw and snap-on mounting surface +/-10" rotatable, with vertical mounting surface +/-10" titable to the front and back	Width	mm	45
Mounting type Mounting position With vertical mounting surface +/- 10* rotatable, 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 • at the side • downwards mm 60 mm 40 Wire length maximum m 300 Number of poles for main current circuit • for auxiliary and control current circuit Sumber of NC contacts for auxiliary contacts Number of NC contacts for auxiliary contacts Number of OC contacts for auxiliary contacts Number of CO contacts for auxiliary contacts 1 Number of CO contacts for auxiliary contacts 1 Number of CO contacts for auxiliary contacts 1 o 2x (1 2.5 mm²), 2x (2.5 6 mm²) Type of connectable conductor cross-sections at AWG conductors for main contacts for box terminal • using the front clamping point • solid • finely stranded with core end processing Type of connectable conductor cross-sections for main contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections at AWG conductors • for main contacts • for mai	Height	mm	150
Mounting position With vertical mounting surface +/- 10" tiltable to the front and back Required spacing with side-by-side mounting • upwards • at the side • downwards Mire length maximum Number of poles for main current circuit • for auxiliary and control current circuit • for auxiliary contacts for auxiliary contacts Number of NO contacts for auxiliary contacts Number of CO contacts for auxiliary contacts Type of connectable conductor cross-sections for main contacts for box terminal • using the front clamping point Type of connectable conductor cross-sections for main contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for main contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for main contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections at AWG conductors • for main contacts • for main contacts	Depth	mm	150
vertical mounting surface +/- 10° tiltable to the front and back	Mounting type		screw and snap-on mounting
• upwards • at the side • downwards • for each current circuit • for auxiliary and control current circuit • solid • finely stranded with core end processing Type of connectable conductor cross-sections for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections at AWG conductors • for main contacts • for main contacts	Mounting position		vertical mounting surface +/- 10° tiltable to the front
• at the side • downwards Mire length maximum m 300 Number of poles for main current circuit 3 Connections/Terminals Type of electrical connection • for main current circuit spring-loaded terminals spring-	Required spacing with side-by-side mounting		
• downwards • downwards Wire length maximum Number of poles for main current circuit 2000 Connections/Terminals Type of electrical connection • for main current circuit • for auxiliary and control current circuit • for auxiliary and control current circuit • for auxiliary and control current circuit • for contacts for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for main contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for main contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections at AWG conductors • for main contacts • f	• upwards	mm	60
Wire length maximum Number of poles for main current circuit 2000 Connections/Terminals Type of electrical connection	• at the side	mm	15
Number of poles for main current circuit 2	• downwards	mm	40
Type of electrical connection • for main current circuit • for auxiliary and control current circuit Number of NC contacts for auxiliary contacts Number of NC contacts for auxiliary contacts Number of CO contacts for auxiliary contacts 1 Number of CO contacts for auxiliary contacts Type of connectable conductor cross-sections for main contacts for box terminal using the front clamping point • solid • finely stranded with core end processing Type of connectable conductor cross-sections at AWG conductors for main contacts for box terminal • using the front clamping point Type of connectable conductor cross-sections for main contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for main contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections at AWG conductors • for main contacts • finely stranded with core end processing Type of connectable conductor cross-sections at AWG conductors • for main contacts	Wire 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 Number of CO contacts for auxiliary contacts Type of connectable conductor cross-sections for main contacts for box terminal using the front clamping point • solid • solid • using the front clamping point 1x 8, 2x (1 2.5 mm²), 2x (2.5 6 mm²) Type of connectable conductor cross-sections at AWG conductors for main contacts for box terminal • using the front clamping point 1x 8, 2x (16 10) Type of connectable conductor cross-sections for main contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections at AWG conductors • finely stranded with core end processing Type of connectable conductor cross-sections at AWG conductors • for main contacts	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 Number of CO contacts for auxiliary contacts Type of connectable conductor cross-sections for main contacts for box terminal using the front clamping point • solid • solid • using the front clamping point 1x 8, 2x (1 2.5 mm²), 2x (2.5 6 mm²) Type of connectable conductor cross-sections at AWG conductors for main contacts for box terminal • using the front clamping point 1x 8, 2x (16 10) Type of connectable conductor cross-sections for main contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections at AWG conductors • finely stranded with core end processing Type of connectable conductor cross-sections at AWG conductors • for main contacts	Connections/Terminals		
• 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 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 • finely stranded with core end processing 1 Type of connectable conductor cross-sections at AWG conductors for main contacts for box terminal • using the front clamping point 1 1x 8, 2x (16 10) Type of connectable conductor cross-sections for main contacts • solid • finely stranded with core end processing 1			
Number of NC contacts for auxiliary contacts Number of NO contacts for auxiliary contacts 1 Number of CO contacts for auxiliary contacts Type of connectable conductor cross-sections for main contacts for box terminal using the front clamping point • solid • finely stranded with core end processing Type of connectable conductor cross-sections at AWG conductors for main contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for main contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for main contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for auxillary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections at AWG conductors • finely stranded with core end processing Type of connectable conductor cross-sections at AWG conductors • finely stranded with core end processing Type of connectable conductor cross-sections at AWG conductors • for main contacts • for main contacts 16 8	for main current circuit		spring-loaded terminals
Number of NO contacts for auxiliary contacts Number of CO contacts for auxiliary contacts Type of connectable conductor cross-sections for main contacts for box terminal using the front clamping point • solid • finely stranded with core end processing Type of connectable conductor cross-sections at AWG conductors for main contacts for box terminal • using the front clamping point Type of connectable conductor cross-sections for main contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for main contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections at AWG conductors • for main contacts • for main contacts 1 8	 for auxiliary and control current circuit 		spring-loaded terminals
Number of CO contacts for auxiliary contacts Type of connectable conductor cross-sections for main contacts for box terminal using the front clamping point • solid • finely stranded with core end processing Type of connectable conductor cross-sections at AWG conductors for main contacts for box terminal • using the front clamping point Type of connectable conductor cross-sections for main contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for main contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections at AWG conductors • for main contacts • for main contacts • for main contacts 10 2x (1 2.5 mm²), 2x (2.5 6 mm²) 1x 8, 2x (16 10) 1x 8, 2x (16 10) 1x 8, 2x (16 10) 2x (0.25 10 mm² 2x (0.25 2.5 mm²) 2x (0.25 2.5 mm²) 2x (0.25 1.5 mm²) 1x 8, 2x (16 10)	Number of NC contacts for auxiliary contacts		0
Type of connectable conductor cross-sections for main contacts for box terminal using the front clamping point • solid • finely stranded with core end processing Type of connectable conductor cross-sections at AWG conductors for main contacts for box terminal • using the front clamping point Type of connectable conductor cross-sections for main contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections at AWG conductors • finely stranded with core end processing Type of connectable conductor cross-sections at AWG conductors • for main contacts • for main contacts 1 2.5 mm²) 2x (1 2.5 mm²) 1 x 8, 2x (16 10)	Number of NO contacts for auxiliary contacts		1
main contacts for box terminal using the front clamping point • solid • finely stranded with core end processing Type of connectable conductor cross-sections at AWG conductors for main contacts for box terminal • using the front clamping point Type of connectable conductor cross-sections for main contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections at AWG conductors • for main contacts • for main contacts 16 8	Number of CO contacts for auxiliary contacts		0
 finely stranded with core end processing Type of connectable conductor cross-sections at AWG conductors for main contacts for box terminal using the front clamping point Type of connectable conductor cross-sections for main contacts solid finely stranded with core end processing Type of connectable conductor cross-sections for auxiliary contacts solid finely stranded with core end processing 2x (0.25 2.5 mm²) 2x (0.25 1.5 mm²) Type of connectable conductor cross-sections at AWG conductors for main contacts for main contacts 	main contacts for box terminal using the front		
Type of connectable conductor cross-sections at AWG conductors for main contacts for box terminal • using the front clamping point Type of connectable conductor cross-sections for main contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections at AWG conductors • for main contacts 16 8	• solid		2x (1 2.5 mm²), 2x (2.5 6 mm²)
AWG conductors for main contacts for box terminal • using the front clamping point Type of connectable conductor cross-sections for main contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for auxiliary contacts • solid • solid 2x (0.25 2.5 mm²) • finely stranded with core end processing Type of connectable conductor cross-sections at AWG conductors • for main contacts • for main contacts	 finely stranded with core end processing 		2x (1 2.5 mm²), 2x (2.5 6 mm²)
Type of connectable conductor cross-sections for main contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for auxiliary contacts • solid • finely stranded with core end processing 2x (0.25 2.5 mm²) • finely stranded with core end processing Type of connectable conductor cross-sections at AWG conductors • for main contacts 16 8			
main contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections for auxiliary contacts • solid • finely stranded with core end processing 2x (0.25 2.5 mm²) 2x (0.25 1.5 mm²) Type of connectable conductor cross-sections at AWG conductors • for main contacts 16 8	· • ·		1x 8, 2x (16 10)
 finely stranded with core end processing Type of connectable conductor cross-sections for auxiliary contacts solid finely stranded with core end processing Type of connectable conductor cross-sections at AWG conductors for main contacts 1 6 mm² 2x (0.25 2.5 mm²) 2x (0.25 1.5 mm²) 16 8 			
Type of connectable conductor cross-sections for auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections at AWG conductors • for main contacts 16 8	• solid		1 10 mm²
auxiliary contacts • solid • finely stranded with core end processing Type of connectable conductor cross-sections at AWG conductors • for main contacts 16 8	 finely stranded with core end processing 		1 6 mm²
 finely stranded with core end processing Type of connectable conductor cross-sections at AWG conductors for main contacts 16 8 			
Type of connectable conductor cross-sections at AWG conductors • for main contacts 16 8	• solid		2x (0.25 2.5 mm²)
AWG conductors ● for main contacts 16 8	 finely stranded with core end processing 		2x (0.25 1.5 mm²)
• for auxiliary contacts 2x (24 14)	• for main contacts		16 8
	• for auxiliary contacts		2x (24 14)

ambient conditions			
Installation altitude at height above sea level	m	5 000	
Environmental category			
 during transport acc. to IEC 60721 		3K6 (no formation of ice, no condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6	
 during storage acc. to IEC 60721 		3K6 (no formation of ice, no condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6	
 during operation acc. 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	°C	-25 + 60	
during storage	°C	-40 + 80	
Derating temperature	°C	40	
Protection class IP		IP20	

Certificates/approvals

General Product Approval	EMC	Declaration of
		Conformity













Test	other		
Certificates			
Type Test	Miscellaneous	Environmental	Confirmation
Certificates/Test		Confirmations	
Report			

UL/CSA ratings		
Yielded mechanical performance [hp] for three-phase		
AC motor		
● at 220/230 V		
— at standard circuit at 50 °C rated value	hp	10
● at 460/480 V		
— at standard circuit at 50 °C rated value	hp	25
Contact rating of auxiliary contacts according to UL		B300 / R300

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=3RW3028-2BB14

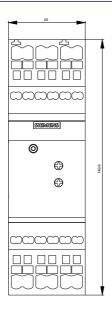
Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW3028-2BB14

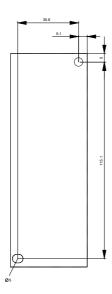
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

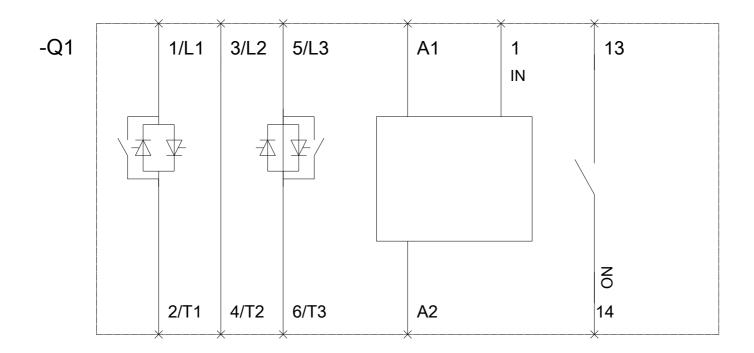
https://support.industry.siemens.com/cs/ww/en/ps/3RW3028-2BB14

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW3028-2BB14&lang=en









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