SIEMENS

Data sheet 3RW40 46-1TB04



SIRIUS SOFT STARTER, S3, 80A, 45KW/400V, 40 DEGR., AC 200-480V, AC/DC 24V, SCREW TERMINALS, THERMISTOR MOTOR PROTECTION

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		Yes
• 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

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Operating current		
• at 40 °C rated value	A	80
• at 50 °C rated value	A	73
• at 60 °C rated value	A	66
Mechanical power output for three-phase motors		
• at 230 V		
— at standard circuit at 40 °C rated value	W	22 000
• at 400 V		
— at standard circuit at 40 °C rated value	W	45 000
yielded mechanical performance [hp] for three-phase AC motor at 200/208 V at standard circuit at 50 °C Rated value	hp	20
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 [% of IM]	%	20
Adjustable motor current for motor overload protection minimum rated value	A	43
Continuous operating current [% of Ie] at 40 °C	%	115
Active power loss at operating current at 40 °C during operation typical	W	12

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 rated value	V	24
• at 60 Hz rated value	V	24
Relative negative tolerance of the control supply voltage at AC at 60 Hz	%	-20
Relative positive tolerance of the control supply voltage at AC at 60 Hz	%	20
Control supply voltage 1 at DC rated value	V	24

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Relative negative tolerance of the control supply voltage at DC	%	-20
Relative positive tolerance of the control supply voltage at DC	%	20
Display version for fault signal		red

Mechanical data:		
Size of engine control device		S3
Width	mm	70
Height	mm	170
Depth	mm	190
Mounting type		screw and snap-on mounting
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	60
• at the side	mm	30
• 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

Connections/ Terminals:		
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		0
Number of NO contacts for auxiliary contacts		2
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		2x (2.5 ... 16 mm²)
• finely stranded with core end processing		2.5 ... 35 mm²
• stranded		4 ... 70 mm²
Type of connectable conductor cross-section for main contacts for box terminal using the back clamping point		
• solid		2x (2.5 ... 16 mm²)
• finely stranded with core end processing		2.5 ... 50 mm²
• stranded		10 ... 70 mm²

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Type of connectable conductor cross-section for main contacts for box terminal using both clamping points		
• solid		2x (2.5 ... 16 mm²)
• finely stranded with core end processing		2x (2.5 ... 35 mm²)
• stranded		2x (10 ... 50 mm²)
Type of connectable conductor cross-section for AWG conductors for main contacts for box terminal		
• using the back clamping point		2x (10 ... 1/0)
• using the front clamping point		2x (10 ... 1/0)
• using both clamping points		10 ... 2/0
Type of connectable conductor cross-section for DIN cable lug for main contacts		
• finely stranded		2 x (10 ... 50 mm²)
• stranded		2x (10 ... 70 mm²)
Type of connectable conductor cross-sections for auxiliary contacts		
• solid		2x (0.5 ... 2.5 mm²)
• finely stranded with core end processing		2x (0.5 ... 1.5 mm²)
• Type of connectable conductor cross-sections at AWG conductors for main contacts		2x (7 ... 1/0)
• Type of connectable conductor cross-sections at AWG conductors for auxiliary contacts		2x (20 ... 14)
• Type of connectable conductor cross-section for AWG conductors for auxiliary contacts finely stranded with core end processing		2x (20 ... 16)

Ambient conditions:

Ambient temperature		
• during operation	°C	-25 ... +60
• during storage	°C	-40 ... +80
Derating temperature	°C	40
Protection class IP		IP00

Certificates/ approvals:

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General Product Approval				EMC	For use in hazardous locations
CCC	CSA	UL	EAC	C-TICK	ATEX

Declaration of Conformity	Test Certificates		Shipping Approval		
EG-Konf.	Typprüfbescheinigung/Werkszeugnis	spezielle Prüfbescheinigungen	DNV	GL	LRS

Shipping Approval	other
PRS	Umweltbestätigung

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	25
• at 460/480 V		
— at standard circuit at 50 °C Rated value	hp	50
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)
http://www.siemens.com/industrymall

Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW40461TB04

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3RW40461TB04

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW40461TB04&lang=en

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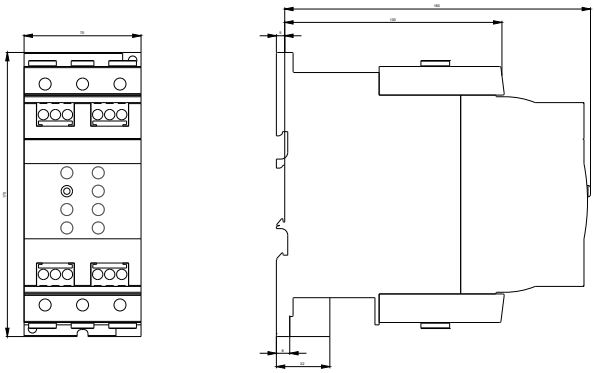

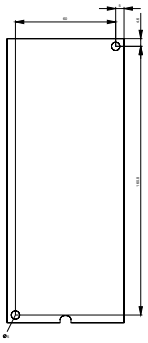

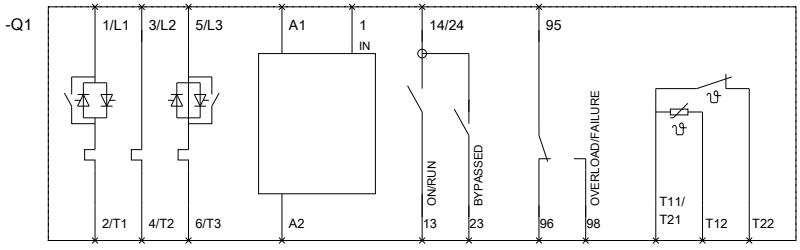

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