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Data sheet 3RM1002-1AA14

MOTOR STARTER 3RM1 SIRIUS DIRECT STARTER 500 V; 0,4-2,0 A; 110-230 V AC SCREW-TYPE CONNECTION SYSTEM



Figure similar

General technical data:	
product brand name	SIRIUS
Product designation	Motor starter
Design of the product	with electronic overload protection
Trip class	CLASS 10A
Protection class IP	IP20
Suitability for operation Device connector 3ZY12	No
Product function Intrinsic device protection	Yes
Type of the motor protection	solid-state
Product function Adjustable current limitation	Yes
Installation altitude at height above sea level maximum	4 000 m
Ambient temperature	
• during operation	-25 ... +60 °C
• during transport	-40 ... +70 °C
• during storage	-40 ... +70 °C
Relative humidity during operation	10 ... 95 %
Air pressure acc. to SN 31205	900 ... 1 060 hPa
Shock resistance	6g / 11 ms

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Vibration resistance	1 ... 6 Hz, 15 mm; 20 m/s², 500 Hz
Surge voltage resistance rated value	6 kV
Insulation voltage rated value	500 V
Mechanical service life (switching cycles) typical	30 000 000
Conducted interference	
• due to conductor-conductor surge acc. to IEC 61000-4-5	1 kV
• due to conductor-earth surge acc. to IEC 61000-4-5	2 kV
• due to burst acc. to IEC 61000-4-4	3 kV / 5 kHz
• due to high-frequency radiation acc. to IEC 61000-4-6	10 V
Electrostatic discharge acc. to IEC 61000-4-2	4 kV contact discharge / 8 kV air discharge
Field-bound HF-interference emission acc. to CISPR11	Class B for domestic, business and commercial environments; Class A for industrial environments at 110 V DC
Conducted HF-interference emissions acc. to CISPR11	Class B for domestic, business and commercial environments; Class A for industrial environments at 110 V DC
maximum permissible voltage for safe isolation	
• between main and auxiliary circuit	500 V
• between control and auxiliary circuit	250 V
Equipment marking acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750	Q
Equipment marking acc. to DIN EN 61346-2	Q

Safety related data:	
Protection against electrical shock	finger-safe

Main circuit:	
Number of poles for main current circuit	3
Operating voltage rated value maximum	500 V
Relative symmetrical tolerance of the operating voltage	10 %
Operating frequency	
• 1 rated value	50 Hz
• 2 rated value	60 Hz
Relative symmetrical tolerance of the operating frequency	10 %
Operating current at AC-53a at 400 V at ambient temperature 40 °C rated value	2 A
Minimum load [% of IM]	20 %
Power loss [W] typical	0.3 W
Adjustable response value current of the current-dependent overload release	0.4 ... 2 A
Operating power for three-phase motors at 400 V at 50 Hz	0.09 ... 0.75 kW
Operating frequency maximum	1 1/s

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Control circuit/ Control:	
Type of voltage of the control supply voltage	AC/DC
Control supply voltage 1	
• at DC rated value	110 V
• at AC	
— at 50 Hz	110 ... 230 V
— at 60 Hz	110 ... 230 V
Operating range factor control supply voltage rated value	
• at DC	0.85 ... 1.1
• at AC	
— at 50 Hz	0.85 ... 1.1
— at 60 Hz	1.1 ... 0.85
Control current	
• at AC	
— at 230 V	
— in standby mode	9 mA
— during operation	22 mA
— when switching on	33 mA
— at 110 V	
— in standby mode	16 mA
— during operation	36 mA
— when switching on	55 mA
• at DC	
— in standby mode	6 mA
— during operation	30 mA
— when switching on	15 mA
Input voltage at digital input	
• for signal <1>	
— at DC	79 ... 121 V
— at AC	93 ... 253 V
• with signal <0>	
— at AC	0 ... 40 V
— at DC	0 ... 40 V
Input current at digital input	
• for signal <1>	
— at AC at 230 V	2.3 mA
— at AC at 110 V	1.1 mA
— at DC	1.5 mA
• with signal <0>	
— at AC at 230 V	0.4 mA

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— at AC at 110 V	0.2 mA
— at DC	0.25 mA
Switch-on delay time	60 ... 90 ms
Off-delay time	60 ... 90 ms

Auxiliary circuit:	
Number of CO contacts for auxiliary contacts	1
Operating current of auxiliary contacts	
• at AC-15 at 230 V maximum	3 A
• at DC-13 at 24 V maximum	1 A

Installation/ mounting/ dimensions:	
Mounting position	vertical, horizontal, standing
Mounting type	screw and snap-on mounting onto 35 mm standard mounting rail
Width	22.5 mm
Height	100 mm
Depth	141.6 mm

Connections/ Terminals:	
Type of electrical connection	
• for main current circuit	screw-type terminals
• for auxiliary and control current circuit	screw-type terminals
Type of connectable conductor cross-sections for main contacts	
• solid	1x (0,5 ... 4 mm²), 2x (0,5 ... 2,5 mm²)
• finely stranded	
— with core end processing	1x (0,5 ... 2,5 mm²), 2x (0,5 ... 1,5 mm²)
Type of connectable conductor cross-sections at AWG conductors for main contacts	1x (20 ... 12), 2x (20 ... 14)
Type of connectable conductor cross-sections for auxiliary contacts	
• solid	1x (0,5 ... 2,5 mm²), 2x (1,0 ... 1,5 mm²)
• finely stranded	
— with core end processing	1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1 mm²)
Type of connectable conductor cross-sections at AWG conductors for auxiliary contacts	1x (20 ... 14), 2x (18 ... 16)

UL ratings:	
Full-load current (FLA) for three-phase AC motor at 480 V rated value	2 A
yielded mechanical performance [hp]	
• for single-phase AC motor	
— at 230 V rated value	0.125 hp
• for three-phase AC motor	
— at 200/208 V rated value	0.333 hp

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— at 220/230 V rated value	0.333 hp
— at 460/480 V rated value	0.75 hp

Certificates/approvals

General Product Approval					Declaration of Conformity
CCC	CSA	GOST	UL	EAC	EG-Konf.

Test Certificates		other	
Typprüfbescheinigung/Werkszeugnis	spezielle Prüfbescheinigungen	Umweltbestätigung	Bestätigungen

Further information

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=3RM10021AA14

Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RM10021AA14

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3RM10021AA14

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RM10021AA14&lang=en

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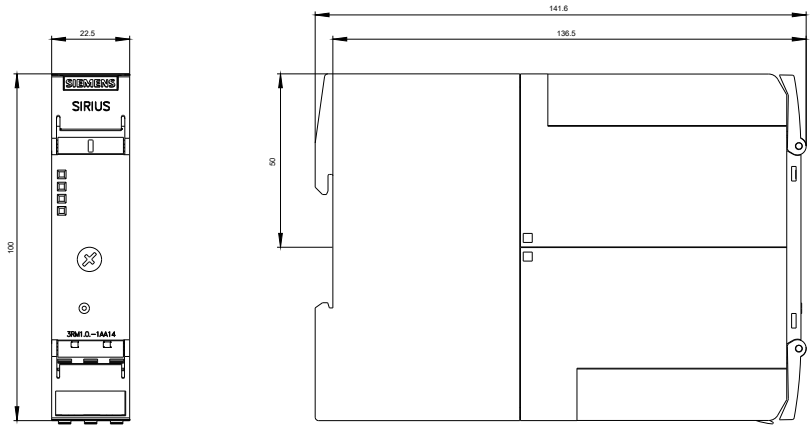

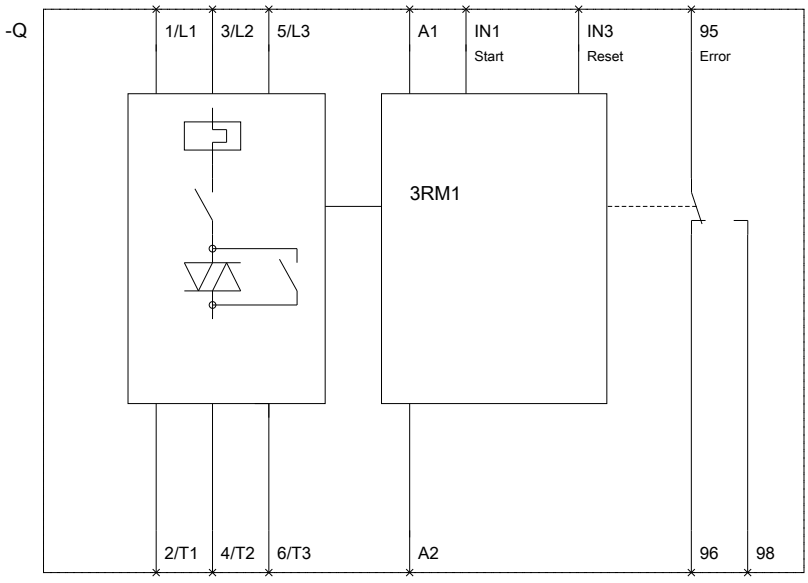

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