SIEMENS

Data sheet 3RM1102-2AA14

Figure similar

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

General technical data:		
product brand name		SIRIUS
Product designation		Motor starter
Design of the product		with electronic overload protection and safety-related shutdown
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	m	2 000
Ambient temperature		
• during operation	°C	-25 ... +60
• during transport	°C	-40 ... +70
• during storage	°C	-40 ... +70
Shock resistance		6g / 11 ms
Vibration resistance		1 ... 6 Hz, 15 mm; 20 m/s², 500 Hz
Surge voltage resistance Rated value	kV	6
Insulation voltage Rated value	V	500
Mechanical service life (switching cycles) typical		30 000 000
Conducted interference due to conductor-conductor surge acc. to IEC 61000-4-5		2 kV
Conducted interference due to burst acc. to IEC 61000-4-4		3 kV / 5 kHz

Conducted interference due to high-frequency radiation acc. to IEC 61000-4-6		10 V
Electrostatic discharge acc. to IEC 61000-4-2		6 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	V	500
• between control and auxiliary circuit	V	250
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:		
Safety Integrity Level (SIL) acc. to IEC 61508		SIL3
Performance level (PL) acc. to EN ISO 13849-1		e
Category acc. to EN ISO 13849-1		4
T1 value for proof test interval or service life acc. to IEC 61508	y	20
PFHD with high demand rate acc. to EN 62061	1/h	0.00000002
Protection against electrical shock		finger-safe
Safety device type acc. to IEC 61508-2		Type B
OFF-delay time with safety-related request when switched off via control inputs maximum	ms	65
OFF-delay time with safety-related request when switched off via supply voltage maximum	ms	120

Main circuit:		
Number of poles for main current circuit		3
Operating voltage Rated value maximum	V	500
Operating frequency		
• 1 Rated value	Hz	50
• 2 Rated value	Hz	60
Operating current with AC at 400 V Rated value	A	2
Minimum load in % of I_M	%	20
Active power loss typical	W	0.3
Adjustable response value current of the current-dependent overload release	A	0.4 ... 2
Operating power for three-phase motors at 400 V at 50 Hz	kW	0.09 ... 0.75
Operating frequency maximum	1/s	1

Control circuit/ Control:		
Type of voltage of the control supply voltage		AC/DC

Control supply voltage 1		
• for DC Rated value	V	110
• with AC		
— at 50 Hz	V	110 ... 230
— at 60 Hz	V	110 ... 230
Operating range factor control supply voltage rated value		
• for DC		0.85 ... 1.1
• with AC		
— at 50 Hz		0.85 ... 1.1
— at 60 Hz		1.1 ... 0.85
Control current		
• with AC		
— at 230 V		
— in standby mode	mA	6
— during operation	mA	14
— when switching on	mA	25
— at 110 V		
— in standby mode	mA	8
— during operation	mA	25
— when switching on	mA	40
• for DC		
— in standby mode	mA	4
— during operation	mA	30
— when switching on	mA	13
Input voltage at digital input		
• for signal <1>		
— for DC	V	79 ... 121
— with AC	V	93 ... 253
• with signal <0>		
— with AC	V	0 ... 40
— for DC	V	0 ... 40
Input current at digital input		
• for signal <1>		
— with AC at 230 V	mA	2.3
— with AC at 110 V	mA	1.1
— for DC	mA	1.5
• with signal <0>		
— with AC at 230 V	mA	0.4
— with AC at 110 V	mA	0.2
— for DC	mA	0.25
Switch-on delay time	ms	90 ... 120

OFF-delay time	ms	60 ... 90
Auxiliary circuit:		
Number of CO contacts for auxiliary contacts		1
Design of the switching contact as NO contact for signaling function		Electronic
Operating current of the auxiliary contacts		
• at AC-15 maximum	A	3
• at DC-13 maximum	A	1
Installation/ mounting/ dimensions:		
mounting position		vertical, horizontal, standing
Mounting type		screw and snap-on mounting onto 35 mm standard mounting rail
Width	mm	22.5
Height	mm	100
Depth	mm	141.6
Connections/ Terminals:		
Type of electrical connection		
• for main current circuit		PUSH-IN connection (spring-loaded connection)
• for auxiliary and control current circuit		PUSH-IN connection (spring-loaded connection)
Type of connectable conductor cross-section for main contacts		
• solid		1x (0.5 ... 4 mm²)
• finely stranded		
— with core end processing		1x (0.5 ... 2.5 mm²)
— without core end processing		1x (0.5 ... 4 mm²)
Type of connectable conductor cross-section for AWG conductors for main contacts		1x (20 ... 12)
Type of connectable conductor cross-section for auxiliary contacts		
• solid		1x (0.5 ... 1.5 mm²), 2x (0.5 ... 1.5 mm²)
• finely stranded		
— with core end processing		1x (0,5 ... 1,0 mm²), 2x (0,5 ... 1,0 mm²)
— without core end processing		1x (0.5 ... 1.5 mm²), 2x (0.5 ... 1.5 mm²)
Type of connectable conductor cross-section for AWG conductors for auxiliary contacts		1x (20 ... 16), 2x (20 ... 16)
UL ratings:		
Full-load current (FLA) for three-phase AC motor at 480 V Rated value	A	2
yielded mechanical performance [hp]		
• for single-phase AC motor		
— at 230 V Rated value	metric hp	0.125

• for three-phase AC motor		
— at 200/208 V Rated value	metric hp	0.333
— at 220/230 V Rated value	metric hp	0.333
— at 460/480 V Rated value	metric hp	0.75

Certificates/ approvals:

General Product Approval			For use in hazardous locations	Functional Safety/Safety of Machinery	Declaration of Conformity
CCC	UL	EAC	ATEX	Type Examination	EG-Konf.

Test Certificates		other	
Type Test Certificates/Test Report	Special Test Certificate	Confirmation	Environmental Confirmations

Further information

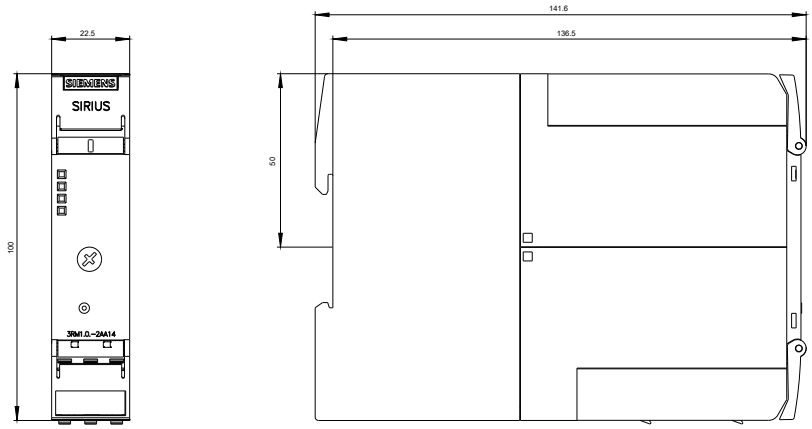
Information- and Downloadcenter (Catalogs, Brochures,…)
http://www.siemens.com/industrial-controls/catalogs

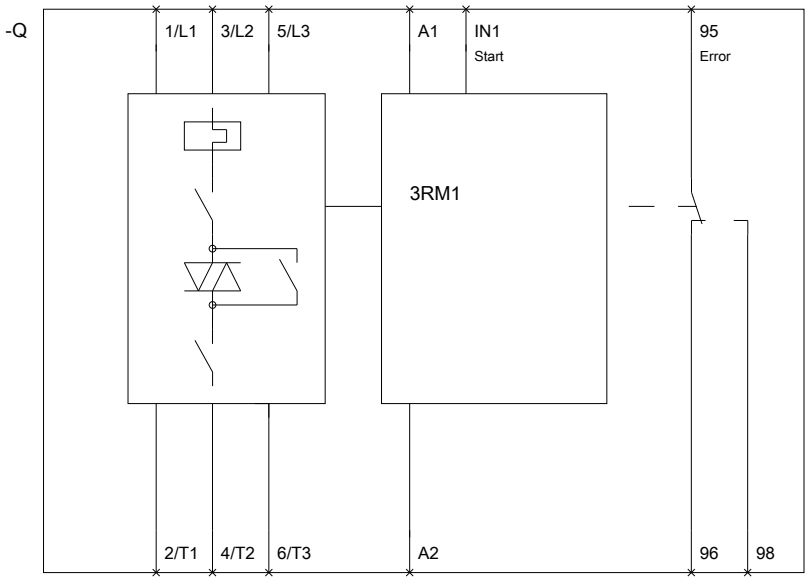
Industry Mall (Online ordering system)
http://www.siemens.com/industrymall

Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RM11022AA14

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
http://support.automation.siemens.com/WW/view/en/3RM11022AA14/all

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/index.aspx?attID9=3RM11022AA14&lang=en





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