SIEMENS

Product data sheet 3RM1307-3AA14

MOTORSTARTER SIRIUS 3RM1 REVERSING STARTER SAFETY 500 V;
1.6-7.0 A;
110-230 V AC CONTROL CIRCUIT PUSH-IN MAIN CIRCUIT SCREW TERMINAL

General technical data:		
product brand name		SIRIUS
Product designation		Motor starter
Design of the product		with reversing functionality and electronic overload protection and safety-related shutdown
Trip class		CLASS 10A
Protection class IP		IP20
Suitability for use / 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 conductor-conductor SURGE / acc. to IEC 61000-4-5		2 kV
Conducted interference BURST / acc. to IEC 61000-4-4		3 kV / 5 kHz
Conducted interference as 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
Reference code		
• acc. to DIN 40719 extended according to IEC 204-2 / acc. to IEC 750		Q
• 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	a	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	Hz	50
• 2	Hz	60
Operating current / with AC / at 400 V / Rated value	A	7
Derating temperature	°C	40
Minimum load in % of I_M	%	20

Active power loss / typical	W	3.4
Adjustable response value current		
• of the current-dependent overload release	A	1.6 … 7
Operating power / for three-phase motors / at 400 V		
• at 50 Hz	kW	0.55 … 3
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
• with AC		
• 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
• with AC		
• 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
• at 110 V	mA	1.1
• for DC	mA	1.5
• with signal <0>		
• with AC		
• at 230 V	mA	0.4
• 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	A	3
• at DC-13	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:		
Design of the electrical connection		
• for main current circuit		screw-type terminals
• 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), 2x (0,5 ... 2,5 mm²)
• finely stranded		
• with core end processing		1x (0,5 ... 2,5 mm²), 2x (0,5 ... 1,5 mm²)
• for AWG conductors		1x (20 ... 12), 2x (20 ... 14)

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)
• for AWG conductors		1x (20 ... 16), 2x (20 ... 16)

UL ratings:

Full-load current (FLA) / for three-phase AC motor / at 480 V / Rated value	A	6.1
yielded mechanical performance [hp]		
• for single-phase AC motor		
• at 110/120 V / Rated value	hp	0.25
• at 230 V / Rated value	hp	0.5
• for three-phase AC motor		
• at 200/208 V / Rated value	hp	1
• at 220/230 V / Rated value	hp	1.5
• at 460/480 V / Rated value	hp	3

Certificates/ approvals:

General Product Approval		For use in hazardous locations	Declaration of Conformity	other
CCC	UL	ATEX	EG-Konf.	Confirmation

Further information:

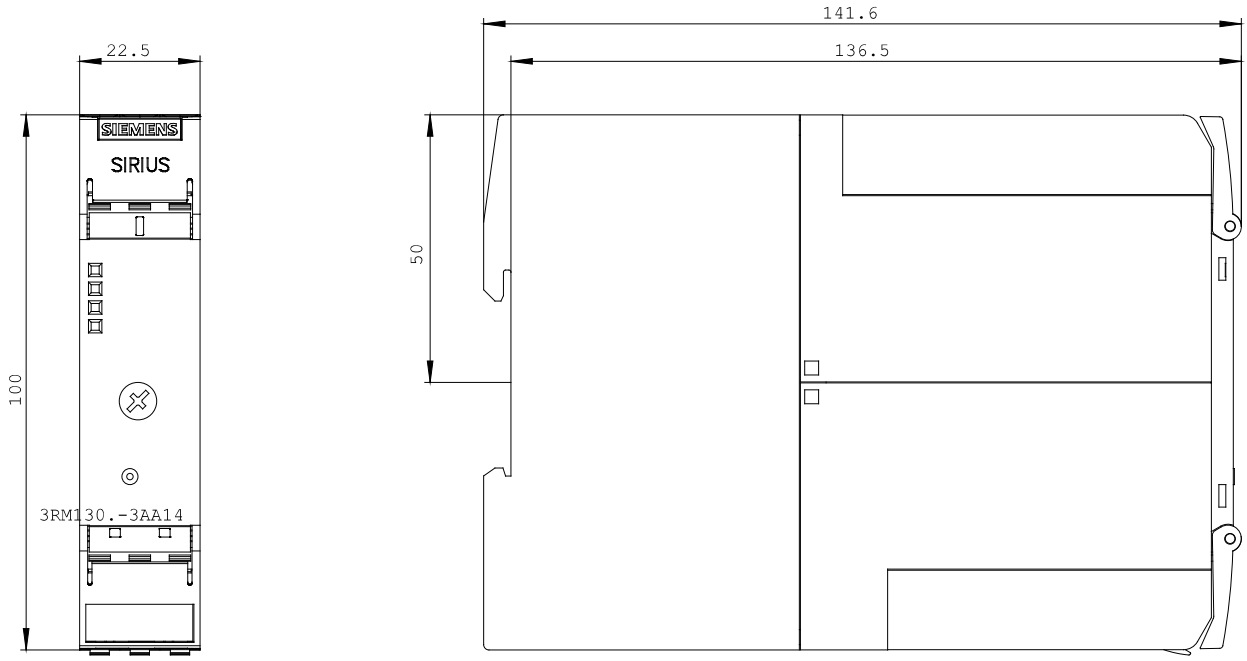
Information- and Downloadcenter (Catalogs, Brochures,…)
http://www.siemens.com/industrial-controls/catalogs

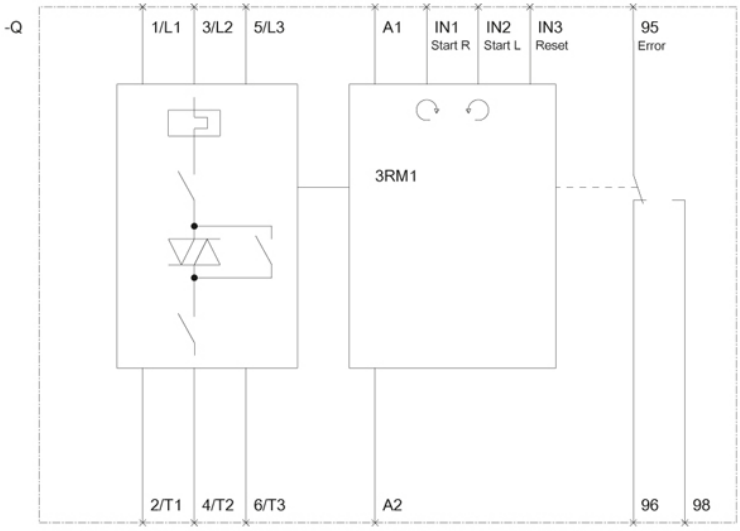
Industry Mall (Online ordering system)
http://www.siemens.com/industrial-controls/mall

Cax online generator
http://www.siemens.com/cax

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
http://support.automation.siemens.com/WW/view/en/3RM1307-3AA14/all

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RM1307-3AA14





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