



MOTOR STARTER 3RM1 SIRIUS DIRECT STARTER 500 V;
1,6-7,0 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
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 a height over sea level / maximum	m	4,000
Ambient temperature		
• during operating	°C	-25 ... +60
• during transport	°C	-40 ... +70
• during storage	°C	-40 ... +70
Resistance against shock		6g / 11 ms
Resistance against vibration		1 ... 6 Hz, 15 mm; 20 m/s², 500 Hz
Impulse voltage resistance / rated value	kV	6
Insulation voltage / rated value	V	500
Mechanical operating cycles as operating time / typical		30,000,000

Conductor-bound parasitic coupling conductor-conductor SURGE / according to IEC 61000-4-5		1 kV
Conductor-bound parasitic coupling BURST / according to IEC 61000-4-4		3 kV / 5 kHz
Conducted interference as high-frequency radiation according to IEC 61000-4-6		10 V
Electrostatic discharge / according to IEC 61000-4-2		4 kV contact discharge / 8 kV air discharge
Field-bound HF-interference emission / according to CISPR11		Class B for domestic, business and commercial environments; Class A for industrial environments at 110 V DC
Conductor-bound HF-interference emission / according to CISPR11		Class B for domestic, business and commercial environments; Class A for industrial environments at 110 V DC
Maximum permissible voltage for safe disconnection		
• between main circuit and auxiliary circuit	V	500
• between control and auxiliary circuit	V	250
Reference code		
• according to DIN 40719 extended according to IEC 204-2 / according to IEC 750		Q
• according 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	V	500
Operating frequency		
• 1	Hz	50
• 2	Hz	60
Operating current / at 400 V / for AC / rated value	A	7
Derating temperature	°C	40
Minimum load in % of I_M	%	20
Active power loss / typical	W	3.4
Adjustable response current		
• of the current-dependent overload release	A	1.6 ... 7
Service power / for three-phase servomotors / at 400 V		
• at 50 Hz	kW	0.55 ... 3
Operating cycles / maximum	1/s	1

Control circuit/ Control:

Voltage type / of control feed voltage		AC/DC
Control supply voltage / 1		
• for DC / rated value	V	110

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

• at 110 V	mA	0.2
• with DC	mA	0.25
ON-delay time	ms	60 ... 90
OFF-delay time	ms	60 ... 90

Auxiliary circuit:		
Number of changeover contacts / for auxiliary contacts		1
Design of the switching contact / as make contact / for reporting 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		PUSH-IN connection (spring-loaded connection)
• for auxiliary and control current circuit		PUSH-IN connection (spring-loaded connection)
Type of the connectable conductor cross-section		
• for main contacts		
• solid		1x (0.5 ... 4 mm ²)
• finely stranded		
• with conductor end processing		1x (0.5 ... 2.5 mm ²)
• without conductor final cutting		1x (0.5 ... 4 mm ²)
• for AWG conductors		1x (20 ... 12)
Type of the connectable conductor cross-section		
• for auxiliary contacts		
• solid		1x (0.5 ... 1.5 mm ²), 2x (0.5 ... 1.5 mm ²)
• finely stranded		
• with conductor end processing		1x (0.5 ... 1.0 mm ²), 2x (0.5 ... 1.0 mm ²)
• without conductor final cutting		1x (0.5 ... 1.5 mm ²), 2x (0.5 ... 1.5 mm ²)
• for AWG conductors		1x (20 ... 16), 2x (20 ... 16)

UL ratings:

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

Certificates/ approvals:

General Product Approval



[Type Test Certificates/Test Report](#)

other

[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/industrial-controls/mall>

Cax online generator

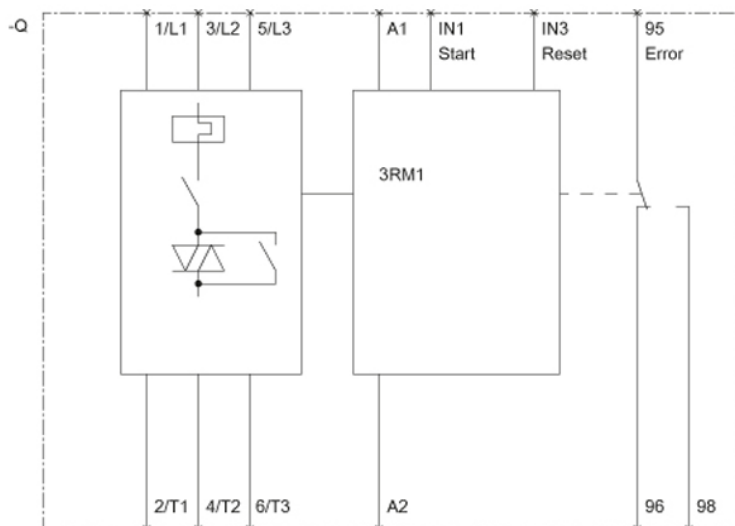
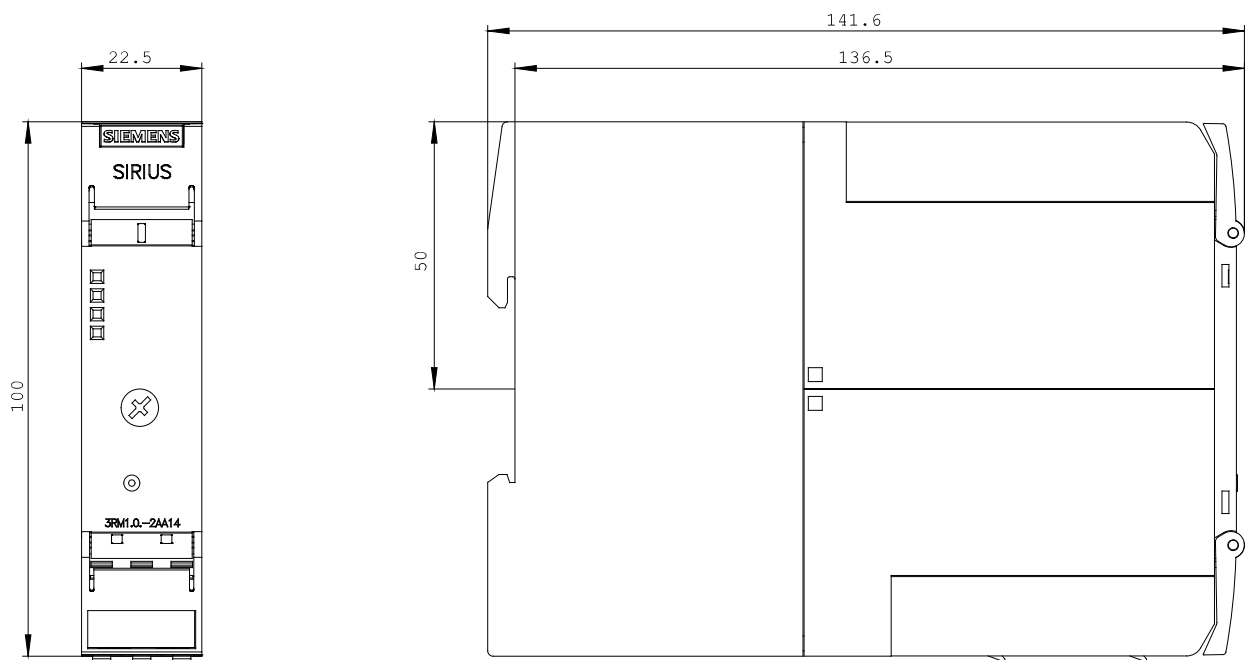
<http://www.siemens.com/cax>

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

<http://support.automation.siemens.com/WW/view/en/3RM1007-2AA14/all>

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RM1007-2AA14



last change:

Jul 28, 2014