



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 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

<b>Mechanical service life (switching cycles) / typical</b>		30,000,000
<b>Conducted interference conductor-conductor SURGE / acc. to IEC 61000-4-5</b>		2 kV
<b>Conducted interference BURST / acc. to IEC 61000-4-4</b>		3 kV / 5 kHz
<b>Conducted interference as high-frequency radiation acc. to IEC 61000-4-6</b>		10 V
<b>Electrostatic discharge / acc. to IEC 61000-4-2</b>		6 kV contact discharge / 8 kV air discharge
<b>Field-bound HF-interference emission / acc. to CISPR11</b>		Class B for domestic, business and commercial environments; Class A for industrial environments at 110 V DC
<b>Conducted HF-interference emissions / acc. to CISPR11</b>		Class B for domestic, business and commercial environments; Class A for industrial environments at 110 V DC
<b>maximum permissible voltage for safe isolation</b>		
• between main and auxiliary circuit	V	500
• between control and auxiliary circuit	V	250
<b>Reference code</b>		
• 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:

<b>Safety Integrity Level (SIL) / acc. to IEC 61508</b>		SIL3
<b>Performance level (PL) / acc. to EN ISO 13849-1</b>		e
<b>Category / acc. to EN ISO 13849-1</b>		4
<b>T1 value / for proof test interval or service life / acc. to IEC 61508</b>	a	20
<b>PFHD / with high demand rate / acc. to EN 62061</b>	1/h	0.00000002
<b>Protection against electrical shock</b>		finger-safe
<b>Safety device type / acc. to IEC 61508-2</b>		Type B
<b>OFF-delay time / with safety-related request / when switched off via control inputs / maximum</b>	ms	65
<b>OFF-delay time / with safety-related request / when switched off via supply voltage / maximum</b>	ms	120

#### Main circuit:

<b>Number of poles / for main current circuit</b>		3
<b>Operating voltage / Rated value / maximum</b>	V	500
<b>Operating frequency</b>		
• 1	Hz	50
• 2	Hz	60
<b>Operating current / with AC / at 400 V / Rated value</b>	A	2
<b>Minimum load in % of I<sub>M</sub></b>	%	20
<b>Active power loss / typical</b>	W	0.3

<b>Adjustable response value current</b> • of the current-dependent overload release	A	0.4 ... 2
<b>Operating power / for three-phase motors / at 400 V</b> • at 50 Hz	kW	0.09 ... 0.75
<b>Operating frequency / maximum</b>	1/s	1
<b>Control circuit/ Control:</b>		
<b>Type of voltage / of the control supply voltage</b>		AC/DC
<b>Control supply voltage / 1</b> • for DC / Rated value • with AC • at 50 Hz • with AC • at 60 Hz	V  V  V	110  110 ... 230  110 ... 230
<b>Operating range factor control supply voltage rated value</b> • for DC • with AC • at 50 Hz • with AC • at 60 Hz		0.85 ... 1.1  0.85 ... 1.1  1.1 ... 0.85
<b>Control current</b> • with AC • at 230 V • in standby mode • during operation • when switching on • at 110 V • in standby mode • during operation • when switching on • for DC • in standby mode • during operation • when switching on	  mA mA mA  mA mA mA  mA mA mA	  6 14 25  8 25 40  4 30 13
<b>Input voltage / at digital input</b> • for signal <1> • for DC • with AC • with signal <0> • with AC	  V V  V	  79 ... 121 93 ... 253  0 ... 40

• for DC	V	0 ... 40
<b>Input current / at digital input</b>		
• 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
<b>Switch-on delay time</b>	ms	90 ... 120
<b>OFF-delay time</b>	ms	60 ... 90

#### Auxiliary circuit:

<b>Number of CO contacts / for auxiliary contacts</b>		1
<b>Design of the switching contact / as NO contact / for signaling function</b>		Electronic
<b>Operating current / of the auxiliary contacts</b>		
• at AC-15	A	3
• at DC-13	A	1

#### Installation/ mounting/ dimensions:

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

#### Connections/ terminals:





<b>Design of the electrical connection</b>		
• for main current circuit		PUSH-IN connection (spring-loaded connection)
• for auxiliary and control current circuit		PUSH-IN connection (spring-loaded connection)
<b>Type of connectable conductor cross-section</b>		
• 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)
• for AWG conductors		1x (20 ... 12)

<b>Type of connectable conductor cross-section</b>		
<ul style="list-style-type: none"> <li>• for auxiliary contacts</li> <li>• solid</li> <li>• finely stranded <ul style="list-style-type: none"> <li>• with core end processing</li> <li>• without core end processing</li> </ul> </li> <li>• for AWG conductors</li> </ul>		1x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> )
		1x (0,5 ... 1,0 mm <sup>2</sup> ), 2x (0,5 ... 1,0 mm <sup>2</sup> )
		1x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> )
		1x (20 ... 16), 2x (20 ... 16)

#### UL ratings:

<b>Full-load current (FLA) / for three-phase AC motor / at 480 V / Rated value</b>	A	2
<b>yielded mechanical performance [hp]</b>		
<ul style="list-style-type: none"> <li>• for single-phase AC motor <ul style="list-style-type: none"> <li>• at 230 V / Rated value</li> </ul> </li> <li>• for three-phase AC motor <ul style="list-style-type: none"> <li>• at 200/208 V / Rated value</li> <li>• at 220/230 V / Rated value</li> <li>• at 460/480 V / Rated value</li> </ul> </li> </ul>	hp	0.125
	hp	0.333
	hp	0.333
	hp	0.75

#### Certificates/ approvals:

General Product Approval	For use in hazardous locations	Declaration of Conformity	Test Certificates	other
 CCC	 UL	 ATEX	 EG-Konf.	<a href="#">Type Test Certificates/Test Report</a> <a href="#">Confirmation</a>

#### 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

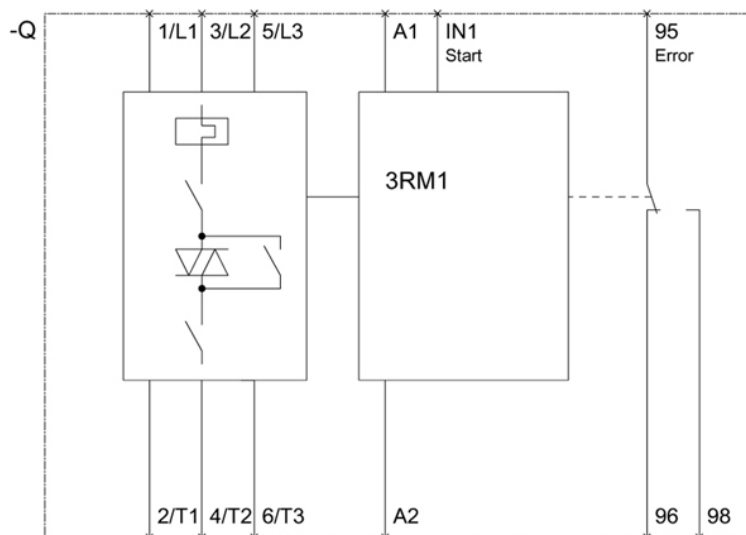
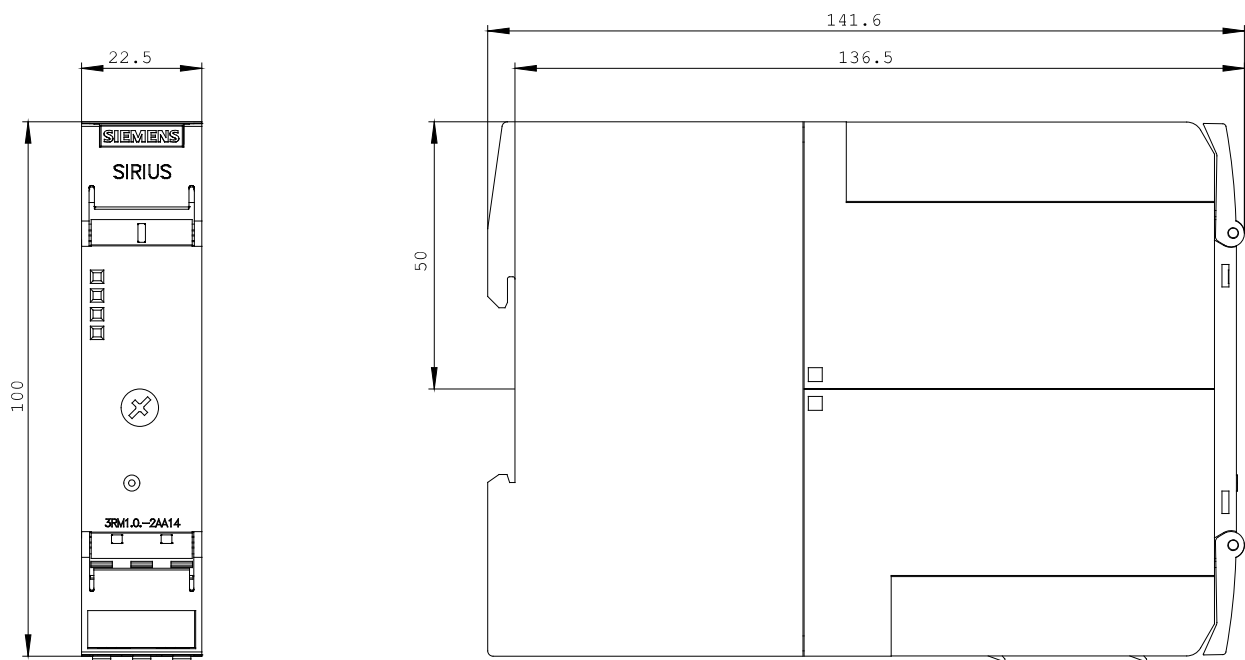
<http://www.siemens.com/cax>

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

<http://support.automation.siemens.com/VW/view/en/3RM1102-2AA14/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3RM1102-2AA14](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RM1102-2AA14)



last change:

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