



MOTORSTARTER SIRIUS 3RM1 DIRECT STARTER  
SAFETY 500 V; 0.1-0.5 A; 110-230 V AC CONTROL  
CIRCUIT PUSH-IN MAIN CIRCUIT SCREW TERMINAL

Figure similar

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/s <sup>2</sup> , 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	0.5
Minimum load in % of I <sub>M</sub>	%	20
Active power loss typical	W	0.02
Adjustable response value current of the current-dependent overload release	A	0.1 ... 0.5
Operating power for three-phase motors at 400 V at 50 Hz	kW	0 ... 0.12
Operating frequency maximum	1/s	1

#### Control circuit/ Control:

Type of voltage of the control supply voltage		AC/DC
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<b>Control supply voltage 1</b>		
• for DC Rated value	V	110
• with AC		
— at 50 Hz	V	110 ... 230
— at 60 Hz	V	110 ... 230
<b>Operating range factor control supply voltage rated value</b>		
• for DC		0.85 ... 1.1
• with AC		
— at 50 Hz		0.85 ... 1.1
— at 60 Hz		1.1 ... 0.85
<b>Control current</b>		
• 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
<b>Input voltage at digital input</b>		
• 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
<b>Input current at digital input</b>		
• 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
<b>Switch-on delay time</b>	ms	90 ... 120

OFF-delay time	ms	60 ... 90
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#### 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		
<ul style="list-style-type: none"> <li>• at AC-15 maximum</li> </ul>	A	3
<ul style="list-style-type: none"> <li>• at DC-13 maximum</li> </ul>	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		
<ul style="list-style-type: none"> <li>• for main current circuit</li> </ul>		screw-type terminals
<ul style="list-style-type: none"> <li>• for auxiliary and control current circuit</li> </ul>		PUSH-IN connection (spring-loaded connection)
Type of connectable conductor cross-section for main contacts		
<ul style="list-style-type: none"> <li>• solid</li> </ul>		1x (0,5 ... 4 mm <sup>2</sup> ), 2x (0,5 ... 2,5 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>• finely stranded</li> <li>— with core end processing</li> </ul>		1x (0,5 ... 2,5 mm <sup>2</sup> ), 2x (0,5 ... 1,5 mm <sup>2</sup> )
Type of connectable conductor cross-section for AWG conductors for main contacts		1x (20 ... 12), 2x (20 ... 14)
Type of connectable conductor cross-section for auxiliary contacts		
<ul style="list-style-type: none"> <li>• solid</li> </ul>		1x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>• finely stranded</li> <li>— with core end processing</li> </ul>		1x (0,5 ... 1,0 mm <sup>2</sup> ), 2x (0,5 ... 1,0 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>— without core end processing</li> </ul>		1x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> )
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	0.5
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#### Certificates/ approvals:

General Product Approval	For use in hazardous locations	Functional Safety/Safety of Machinery	Declaration of Conformity
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[Type Examination](#)



**other**

[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**

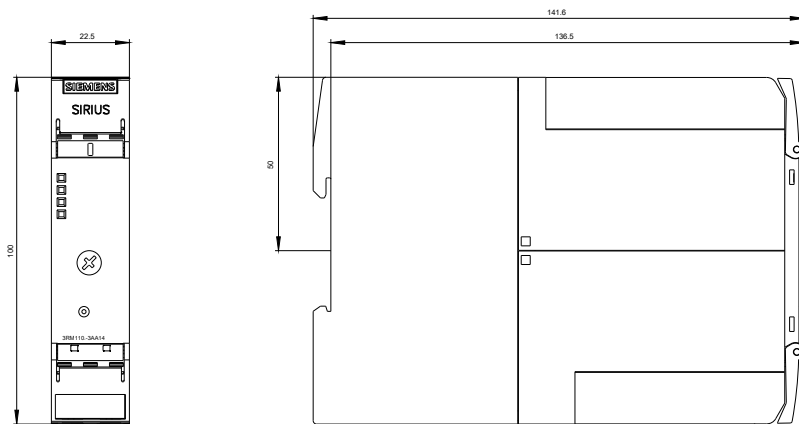
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mf=3RM11013AA14>

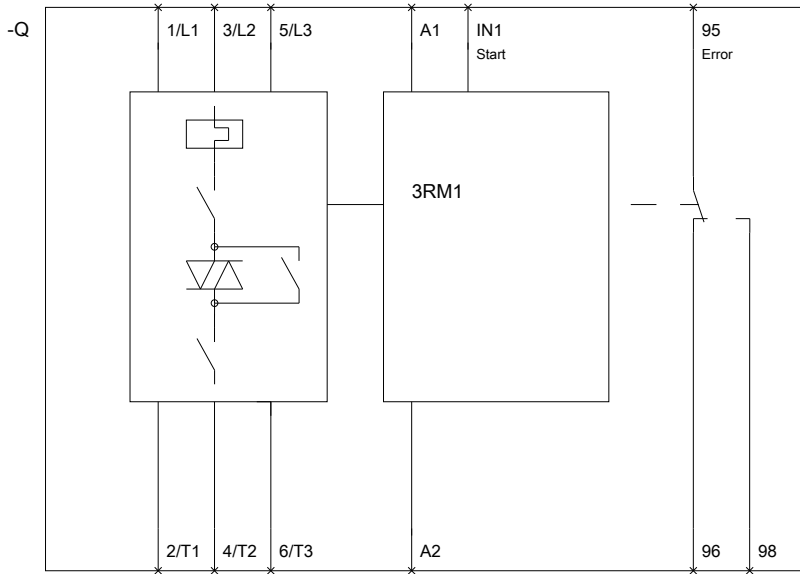
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

<http://support.automation.siemens.com/WW/view/en/3RM11013AA14/all>

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

<http://www.automation.siemens.com/bilddb/index.aspx?attID9=3RM11013AA14&lang=en>





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