



MOTOR STARTER SIRIUS 3RM1 REVERSING  
STARTER SAFETY 500 V; 0,4 - 2,0 A; 24 V DC  
SCREW-TYPE CONNECTION SYSTEM

Figure similar

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 operation Device connector 3ZY12		Yes
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 the domestic, business and commercial environments
Conducted HF-interference emissions acc. to CISPR11		Class B for the domestic, business and commercial environments
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 <sub>M</sub>	%	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		DC
Control supply voltage 1		

<ul style="list-style-type: none"> <li>• for DC Rated value</li> </ul>	V	24
<b>Operating range factor control supply voltage rated value</b>		
<ul style="list-style-type: none"> <li>• for DC</li> </ul>		0.8 ... 1.25
<b>Control current</b>		
<ul style="list-style-type: none"> <li>• for DC <ul style="list-style-type: none"> <li>— in standby mode</li> <li>— during operation</li> <li>— when switching on</li> </ul> </li> </ul>	mA	13
	mA	57
	mA	150
<b>Input voltage at digital input</b>		
<ul style="list-style-type: none"> <li>• for signal &lt;1&gt; <ul style="list-style-type: none"> <li>— for DC</li> </ul> </li> <li>• with signal &lt;0&gt; <ul style="list-style-type: none"> <li>— for DC</li> </ul> </li> </ul>	V	15 ... 30
	V	0 ... 5
<b>Input current at digital input</b>		
<ul style="list-style-type: none"> <li>• for signal &lt;1&gt; <ul style="list-style-type: none"> <li>— for DC</li> </ul> </li> <li>• with signal &lt;0&gt; <ul style="list-style-type: none"> <li>— for DC</li> </ul> </li> </ul>	mA	8
	mA	1
<b>Switch-on delay time</b>	ms	90 ... 120
<b>OFF-delay time</b>	ms	40 ... 55

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>		
<ul style="list-style-type: none"> <li>• at AC-15 maximum</li> <li>• at DC-13 maximum</li> </ul>	A	3
	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>Type of electrical connection</b>		
<ul style="list-style-type: none"> <li>• for main current circuit</li> <li>• for auxiliary and control current circuit</li> </ul>		screw-type terminals
		screw-type terminals
<b>Type of connectable conductor cross-section for main contacts</b>		
<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 <ul style="list-style-type: none"> <li>with core end processing</li> </ul> </li> </ul>		1x (0,5 ... 2,5 mm <sup>2</sup> ), 2x (0,5 ... 1,5 mm <sup>2</sup> )
<b>Type of connectable conductor cross-section for AWG conductors for main contacts</b>		1x (20 ... 12), 2x (20 ... 14)
<b>Type of connectable conductor cross-section for auxiliary contacts</b> <ul style="list-style-type: none"> <li>solid</li> <li>finely stranded <ul style="list-style-type: none"> <li>with core end processing</li> </ul> </li> </ul>		1x (0,5 ... 2,5 mm <sup>2</sup> ), 2x (1,0 ... 1,5 mm <sup>2</sup> )
		1x (0,5 ... 2,5 mm <sup>2</sup> ), 2x (0,5 ... 1 mm <sup>2</sup> )
<b>Type of connectable conductor cross-section for AWG conductors for auxiliary contacts</b>		1x (20 ... 14), 2x (18 ... 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> </ul>	metric hp	0.125
<ul style="list-style-type: none"> <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>	metric hp metric hp metric hp	0.333 0.333 0.75

**Certificates/ approvals:**

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



<b>Test Certificates</b>	<b>other</b>
<a href="#">Type Test Certificates/Test Report</a>	<a href="#">Confirmation</a>
<a href="#">Special Test Certificate</a>	<a href="#">Environmental Confirmations</a>

**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**

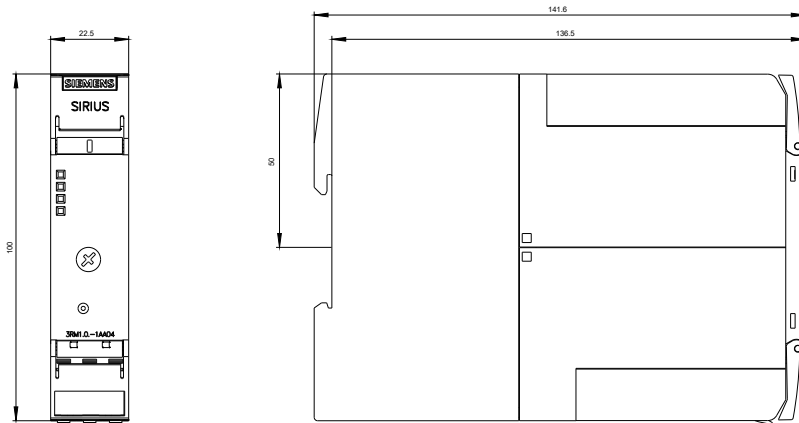
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RM13021AA04>

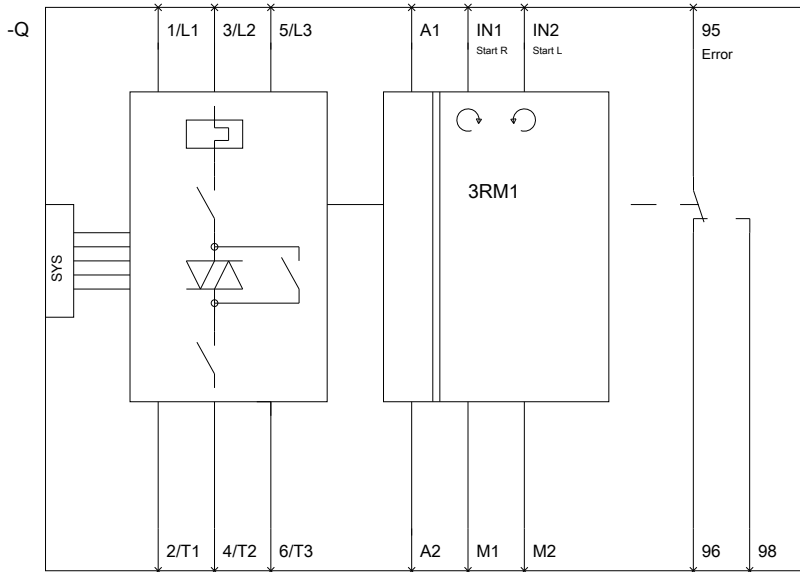
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

<http://support.automation.siemens.com/WW/view/en/3RM13021AA04/all>

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

<http://www.automation.siemens.com/bilddb/index.aspx?attID9=3RM13021AA04&lang=en>





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