



MOTOR STARTER 3RM1 SIRIUS DIRECT STARTER  
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 electronic overload protection
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	4 000
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		1 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		4 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:

Protection against electrical shock		finger-safe
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#### 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		
• for DC Rated value	V	24
Operating range factor control supply voltage rated value		
• for DC		0.8 ... 1.25
Control current		
• for DC		
— in standby mode	mA	25
— during operation	mA	70
— when switching on	mA	150
Input voltage at digital input		
• for signal <1>		

— for DC	V	15 ... 30
• with signal <0>		
— for DC	V	0 ... 5
<b>Input current at digital input</b>		
• for signal <1>		
— for DC	mA	11
• with signal <0>		
— for DC	mA	1
<b>Switch-on delay time</b>	ms	60 ... 90
<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 maximum	A	3
• at DC-13 maximum	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>		
• for main current circuit		screw-type terminals
• for auxiliary and control current circuit		screw-type terminals
<b>Type of connectable conductor cross-section for main contacts</b>		
• solid		1x (0,5 ... 4 mm <sup>2</sup> ), 2x (0,5 ... 2,5 mm <sup>2</sup> )
• finely stranded		
— with core end processing		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>		
• solid		1x (0,5 ... 2,5 mm <sup>2</sup> ), 2x (1,0 ... 1,5 mm <sup>2</sup> )
• finely stranded		
— with core end processing		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:

Full-load current (FLA) for three-phase AC motor at 480 V Rated value	A	2
yielded mechanical performance [hp]		
<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>	metric hp	0.125
	metric hp	0.333
	metric hp	0.333
	metric hp	0.75

## Certificates/ approvals:

General Product Approval	Declaration of Conformity	Test Certificates
 CCC	 GOST	 UL
 EAC	 EG-Konf.	<a href="#">Type Test Certificates/Test Report</a>

Test Certificates	other
<a href="#">Special Test Certificate</a>	<a href="#">Environmental Confirmations</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/industrymall>

### Cax online generator

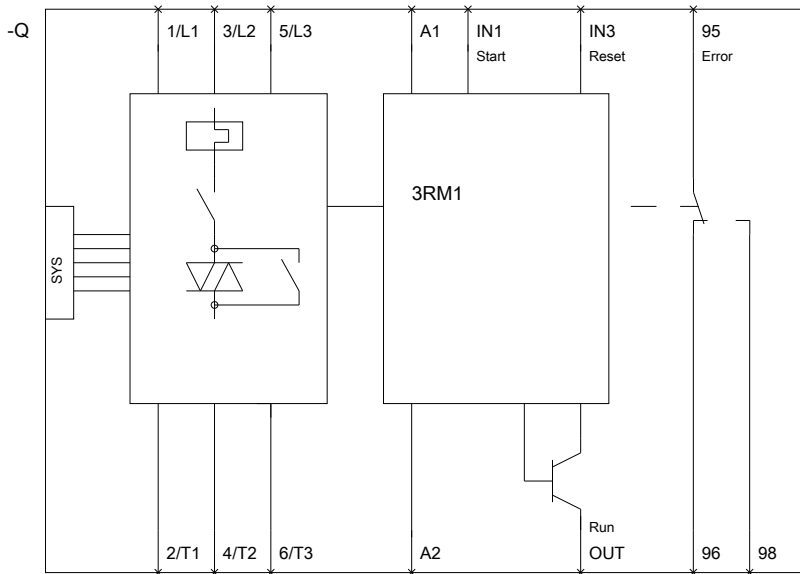
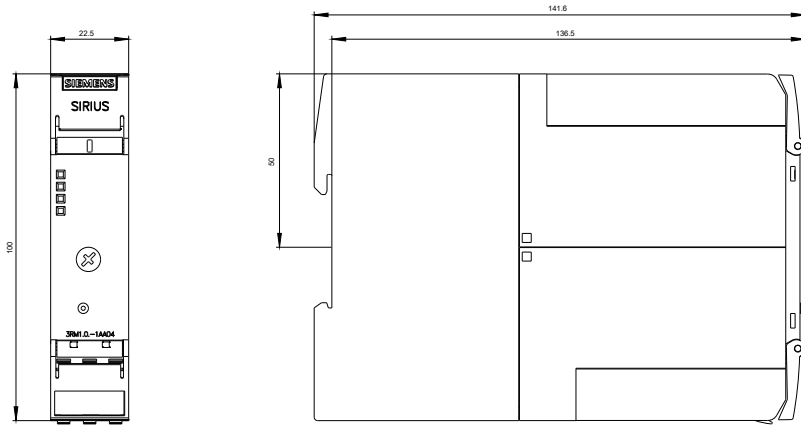
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RM10021AA04>

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

<http://support.automation.siemens.com/WW/view/en/3RM10021AA04/all>

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

<http://www.automation.siemens.com/bilddb/index.aspx?attID9=3RM10021AA04&lang=en>



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