



MOTOR STARTER SIRIUS 3RM1 DIRECT STARTER SAFETY 500 V; 1,6-7,0 A; 110-230 V AC 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 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 ² , 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	7
Derating temperature	°C	40
Minimum load in % of I _M	%	20
Active power loss typical	W	3.4
Adjustable response value current of the current-dependent overload release	A	1.6 ... 7
Operating power for three-phase motors at 400 V at 50 Hz	kW	0.55 ... 3
Operating frequency maximum	1/s	1

Control circuit/ Control:

Type of voltage of the control supply voltage		AC/DC
Control supply voltage 1		
<ul style="list-style-type: none"> • for DC Rated value 	V	110
<ul style="list-style-type: none"> • with AC <ul style="list-style-type: none"> — at 50 Hz — at 60 Hz 	V	110 ... 230
	V	110 ... 230
Operating range factor control supply voltage rated value		
<ul style="list-style-type: none"> • for DC 		0.85 ... 1.1
<ul style="list-style-type: none"> • with AC <ul style="list-style-type: none"> — at 50 Hz — at 60 Hz 		0.85 ... 1.1
		1.1 ... 0.85
Control current		
<ul style="list-style-type: none"> • with AC <ul style="list-style-type: none"> — at 230 V <ul style="list-style-type: none"> — in standby mode — during operation — when switching on — at 110 V <ul style="list-style-type: none"> — in standby mode — during operation — when switching on • for DC <ul style="list-style-type: none"> — in standby mode — during operation — when switching on 	mA	6
	mA	14
	mA	25
	mA	8
	mA	25
	mA	40
	mA	4
	mA	30
	mA	13
Input voltage at digital input		
<ul style="list-style-type: none"> • for signal <1> <ul style="list-style-type: none"> — for DC — with AC • with signal <0> <ul style="list-style-type: none"> — with AC — for DC 	V	79 ... 121
	V	93 ... 253
	V	0 ... 40
	V	0 ... 40
Input current at digital input		
<ul style="list-style-type: none"> • for signal <1> <ul style="list-style-type: none"> — with AC at 230 V — with AC at 110 V — for DC • with signal <0> <ul style="list-style-type: none"> — with AC at 230 V — with AC at 110 V — for DC 	mA	2.3
	mA	1.1
	mA	1.5
	mA	0.4
	mA	0.2
	mA	0.25

Switch-on delay time	ms	90 ... 120
OFF-delay time	ms	60 ... 90

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		
• at AC-15 maximum	A	3
• at DC-13 maximum	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		
• for main current circuit		screw-type terminals
• for auxiliary and control current circuit		screw-type terminals
Type of connectable conductor cross-section for main contacts		
• solid		1x (0,5 ... 4 mm ²), 2x (0,5 ... 2,5 mm ²)
• finely stranded		
— with core end processing		1x (0,5 ... 2,5 mm ²), 2x (0,5 ... 1,5 mm ²)
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		
• solid		1x (0,5 ... 2,5 mm ²), 2x (1,0 ... 1,5 mm ²)
• finely stranded		
— with core end processing		1x (0,5 ... 2,5 mm ²), 2x (0,5 ... 1 mm ²)
Type of connectable conductor cross-section for AWG conductors for auxiliary contacts		1x (20 ... 14), 2x (18 ... 16)






UL ratings:

Full-load current (FLA) for three-phase AC motor at 480 V Rated value	A	6.1
yielded mechanical performance [hp]		
• for single-phase AC motor		
— at 110/120 V Rated value	metric hp	0.25

- at 230 V Rated value
- for three-phase AC motor
 - at 200/208 V Rated value
 - at 220/230 V Rated value
 - at 460/480 V Rated value

metric	0.5
hp	
metric	1
hp	
metric	1.5
hp	
metric	3
hp	

Certificates/ approvals:

General Product Approval		For use in hazardous locations	Functional Safety/Safety of Machinery	Declaration of Conformity
				
CCC	UL		ATEX	EG-Konf.

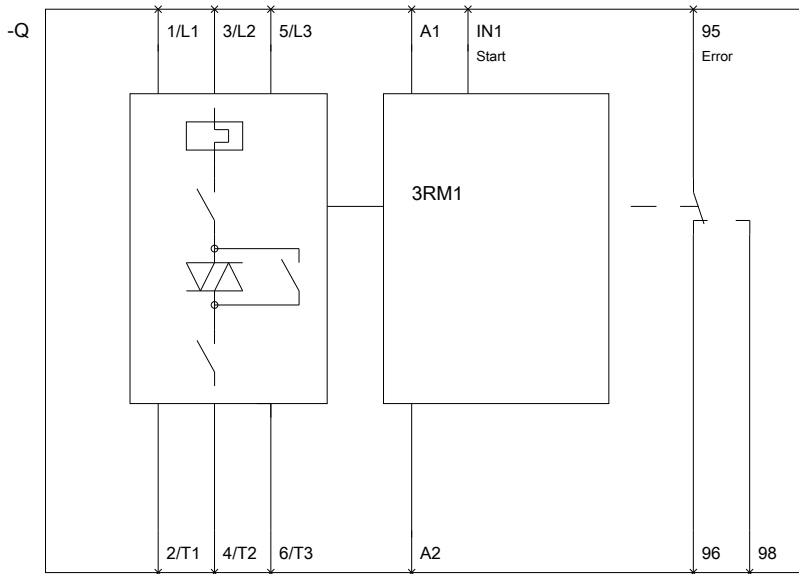
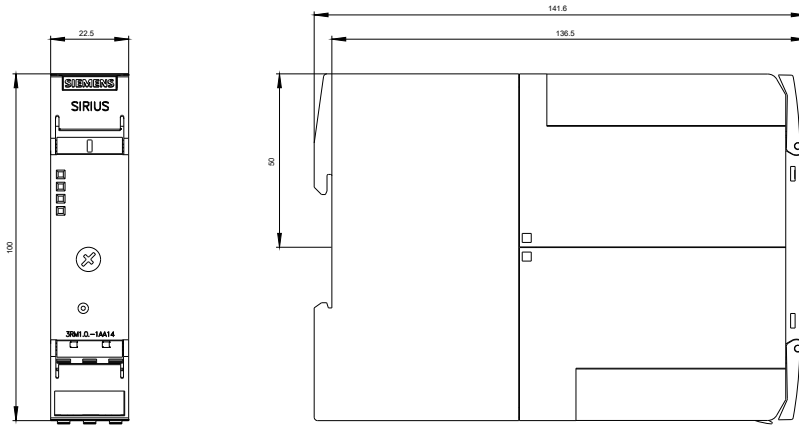
[Type Examination](#)

Test Certificates other

- [Type Test Certificates/Test Report](#)
- [Special Test Certificate](#)
- [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&mlfb=3RM11071AA14>
- Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**
<http://support.automation.siemens.com/WW/view/en/3RM11071AA14/all>
- Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**
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