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Data sheet 3RM1102-1AA14



Figure similar

MOTOR STARTER SIRIUS 3RM1 DIRECT STARTER SAFETY 500 V; 0,4-2,0 A; 110-230 V AC SCREW-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 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	2 000 m
Ambient temperature	
• during operation	-25 ... +60 °C
• during transport	-40 ... +70 °C
• during storage	-40 ... +70 °C
Shock resistance	6g / 11 ms
Vibration resistance	1 ... 6 Hz, 15 mm; 20 m/s², 500 Hz
Surge voltage resistance Rated value	6 kV
Insulation voltage Rated value	500 V
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

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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	500 V
• between control and auxiliary circuit	250 V
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	20 y
PFHD with high demand rate acc. to EN 62061	0.00000002 1/h
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	65 ms
OFF-delay time with safety-related request when switched off via supply voltage maximum	120 ms

Main circuit:	
Number of poles for main current circuit	3
Operating voltage Rated value maximum	500 V
Operating frequency	
• 1 Rated value	50 Hz
• 2 Rated value	60 Hz
Minimum load [% of IM]	20 %
Active power loss typical	0.3 W
Adjustable response value current of the current-dependent overload release	0.4 ... 2 A
Operating power for three-phase motors at 400 V at 50 Hz	0.09 ... 0.75 kW
Operating frequency maximum	1 1/s

Control circuit/ Control:	
Type of voltage of the control supply voltage	AC/DC
Control supply voltage 1	
• for DC Rated value	110 V

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• with AC	
— at 50 Hz	110 ... 230 V
— at 60 Hz	110 ... 230 V
Operating range factor control supply voltage rated value	
• for DC	0.85 ... 1.1
• with AC	
— at 50 Hz	0.85 ... 1.1
— at 60 Hz	1.1 ... 0.85
Control current	
• with AC	
— at 230 V	
— in standby mode	6 mA
— during operation	14 mA
— when switching on	25 mA
— at 110 V	
— in standby mode	8 mA
— during operation	25 mA
— when switching on	40 mA
• for DC	
— in standby mode	4 mA
— during operation	30 mA
— when switching on	13 mA
Input voltage at digital input	
• for signal <1>	
— for DC	79 ... 121 V
— with AC	93 ... 253 V
• with signal <0>	
— with AC	0 ... 40 V
— for DC	0 ... 40 V
Input current at digital input	
• for signal <1>	
— with AC at 230 V	2.3 mA
— with AC at 110 V	1.1 mA
— for DC	1.5 mA
• with signal <0>	
— with AC at 230 V	0.4 mA
— with AC at 110 V	0.2 mA
— for DC	0.25 mA
Switch-on delay time	90 ... 120 ms
OFF-delay time	60 ... 90 ms

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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	
• at AC-15 maximum	3 A
• at DC-13 maximum	1 A

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

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 mm²), 2x (0,5 ... 2,5 mm²)
• finely stranded	
— with core end processing	1x (0,5 ... 2,5 mm²), 2x (0,5 ... 1,5 mm²)
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 mm²), 2x (1,0 ... 1,5 mm²)
• finely stranded	
— with core end processing	1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1 mm²)
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	2 A
yielded mechanical performance [hp]	
• for single-phase AC motor	
— at 230 V Rated value	0.125 hp
• for three-phase AC motor	
— at 200/208 V Rated value	0.333 hp
— at 220/230 V Rated value	0.333 hp
— at 460/480 V Rated value	0.75 hp

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Certificates/ approvals:

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

Test Certificates		other	
Type Test Certificates/Test Report	Special Test Certificate	Confirmation	Environmental Confirmations

Further information

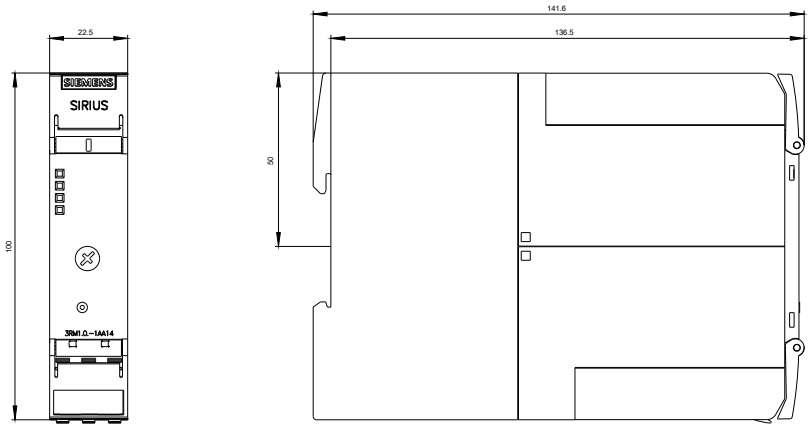
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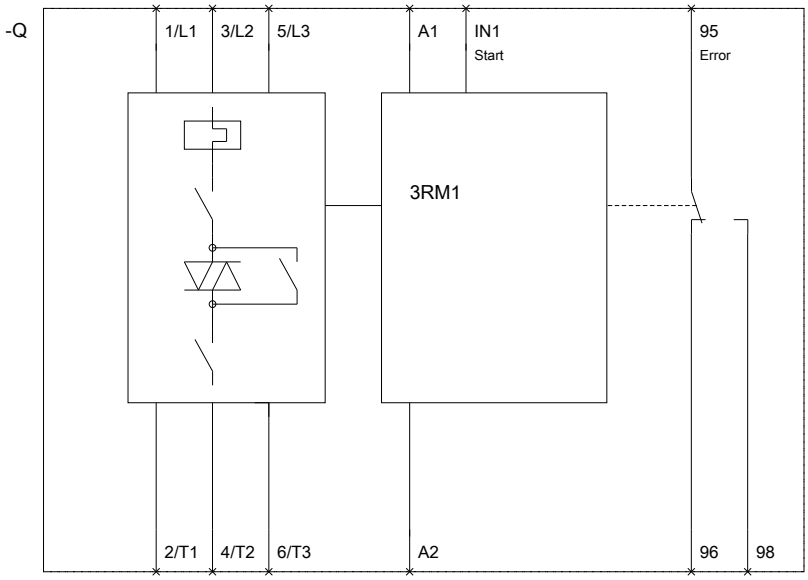
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