SIEMENS

Data sheet 3RM1002-1AA04



Direct starter, 3RM1, 500 V, 0.09 - 0.75 kW, 0.4 - 2 A, 24 V DC, screw terminals

product brand name	SIRIUS
product category	Motor starter
product designation	Direct-on-line starter
design of the product	with electronic overload protection
product type designation	3RM1
General technical data	
equipment variant according to IEC 60947-4-2	3
product function	Direct-on-line starter
 intrinsic device protection 	Yes
 for power supply reverse polarity protection 	No
suitability for operation device connector 3ZY12	Yes
power loss [W] for rated value of the current	
 at AC in hot operating state per pole 	0.1 W
without load current share typical	1.68 W
insulation voltage rated value	500 V
overvoltage category	III
surge voltage resistance rated value	6 kV
maximum permissible voltage for protective separation	
 between main and auxiliary circuit 	500 V
between control and auxiliary circuit	250 V
shock resistance	6g / 11 ms
vibration resistance	1 6 Hz, 15 mm; 20 m/s², 500 Hz
operating frequency maximum	1 1/s
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	03/01/2017
SVHC substance name	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one - 71868-10-5
Weight	0.32 kg
product function	
direct start	Yes
reverse starting	No
product function short circuit protection	No
Electromagnetic compatibility	
EMC emitted interference according to IEC 60947-1	class A
EMC immunity according to IEC 60947-1	Class A
conducted interference	
 due to burst according to IEC 61000-4-4 	3 kV / 5 kHz
 due to conductor-earth surge according to IEC 61000-4-5 	2 kV
 due to conductor-conductor surge according to IEC 61000-4-5 	1 kV

• due to high-frequency radiation according to IEC 61000-4-6	10 V
field-based interference according to IEC 61000-4-3	10 V/m
electrostatic discharge according to IEC 61000-4-2	4 kV contact discharge / 8 kV air discharge
conducted HF interference emissions according to CISPR11	Class B for the domestic, business and commercial environments
field-bound HF interference emission according to CISPR11 Electrical Safety	Class B for the domestic, business and commercial environments
protection class IP on the front according to IEC 60529	IP20
touch protection on the front according to IEC 60529	finger-safe
Main circuit	iiigei-saie
number of poles for main current circuit	3
design of the switching contact	Hybrid
design of the switching contact as NO contact for signaling function	OUT, electronic, 24 V DC, 15 mA
adjustable current response value current of the current- dependent overload release	0.4 2 A
minimum load [%]	20 %; from set rated current
type of the motor protection	solid-state
operating voltage rated value	48 500 V
relative symmetrical tolerance of the operating voltage	10 %
operating frequency 1 rated value	50 Hz
operating frequency 2 rated value	60 Hz
relative symmetrical tolerance of the operating frequency	10 %
operational current	
 at AC at 400 V rated value 	2 A
 at AC-3 at 400 V rated value 	2 A
• at AC-53a at 400 V at ambient temperature 40 °C rated value	2 A
ampacity when starting maximum	16 A
operating power for 3-phase motors at 400 V at 50 Hz	0.09 0.75 kW
Inputs/ Outputs	
input voltage at digital input	
at DC rated value	24 V
with signal <0> at DC	0 5 V
• for signal <1> at DC	15 30
input current at digital input	
for signal <1> at DC	11 mA
with signal <0> at DC	1 mA
number of CO contacts for auxiliary contacts	1
operational current of auxiliary contacts at AC-15 at 230 V maximum	3 A
operational current of auxiliary contacts at DC-13 at 24 V maximum Control circuit/ Control	1 A
	DC
type of voltage of the control supply voltage control supply voltage at DC rated value	19.2 30 V
relative negative tolerance of the control supply voltage at	19.2 50 V 20 %
DC relative positive tolerance of the control supply voltage at	25 %
DC	
control supply voltage 1 at DC rated value	24 V
operating range factor control supply voltage rated value at DC	
• initial value	0.8
• full-scale value	1.25
control current at DC	
• in standby mode of operation	25 mA
during operation	70 mA
inrush current peak	
• at 24 V	0.28 A; values at 25 °C
• at DC at 24 V	300 mA
at DC at 24 V at switching on of motor	130 mA
duration of inrush current peak	

* all 24 V at switching and motor of motor 2 alms * all 25 V at switching and control circuit * in switching state OFF		
## DCC at 24 V at switching on of motor power loss [Vi] in auxillary and control circuit ## in switching state OF ## with bypass octoral ## in switching state OF ## with bypass octoral ## in switching state OF ## with bypass octoral ## SEPORT STATE S	• at 24 V	85 ms
power lose (W) in auxiliary and control circuit in switching state OR - with bypass circuit in witching state ON - with bypass circuit in witching state ON - with bypass circuit Response times OFF-daily time OF-daily time OF-DAILY I and OF-Cred Value I and OF		
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- with typass circuit In switching state ON - with typass circuit ON-delay time OF-delay time OF-delay time OF-delay time OF-delay time OR-delay tim		
Instituting state oN	_	
	•	0.6 W
Response limes	_	
ON-fedelay time 66 90 ms Power flictronics operational current • at 40 °C rated value 2A • at 50 °C rated value 2A • at 50 °C rated value 2A • at 60 °C rated value 3A •	• •	1.68 W
Content Electronics		
power Electronics operational current • at 40 °C rated value • at 50 °C rated value • at 50 °C rated value • at 60 °C rated value Installation mounting juitinensions mounting position vertical, horizontal, standing (observe derating) screw and snap-on mounting onto 35 mm DIN rail height 100 mm depth 110 mm required spacing • with side-by-side mounting • one of space of standard stan		
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 solid or stranded 	0.5 4 mm²
 finely stranded with core end processing 	0.5 4 mm²
connectable conductor cross-section for auxiliary contacts	
 solid or stranded 	0.5 2.5 mm²
 finely stranded with core end processing 	0.5 2.5 mm²
type of connectable conductor cross-sections	
 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)
for AWG cables for auxiliary contacts	1x (20 14), 2x (18 16)
AWG number as coded connectable conductor cross section	
 for main contacts 	20 12
 for auxiliary contacts 	20 14
UL/CSA ratings	
yielded mechanical performance [hp]	
 for single-phase AC motor 	
— at 230 V rated value	0.125 hp
• for 3-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
operational current at AC at 480 V according to UL 508	2 A
Approvals Certificates	

General Product Approval







Confirmation





EMV Test Certificates other Railway Environment



Type Test Certificates/Test Report

Confirmation

Special Test Certificate

Environmental Confirmations

Further information

Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

Information- and Downloadcenter (Catalogs, Brochures,...)

https://www.siemens.com/ic10

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RM1002-1AA04

Cax online generator

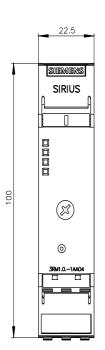
 $\underline{\text{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RM1002-1AA04}$

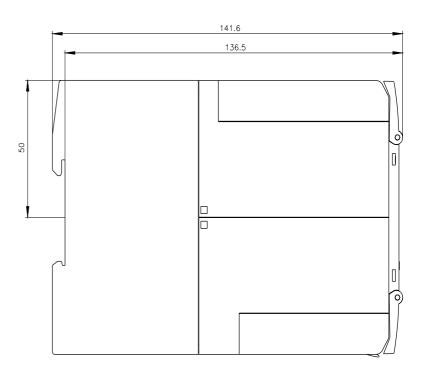
 $Service \& Support \ (Manuals, \ Certificates, \ Characteristics, \ FAQs, ...)$

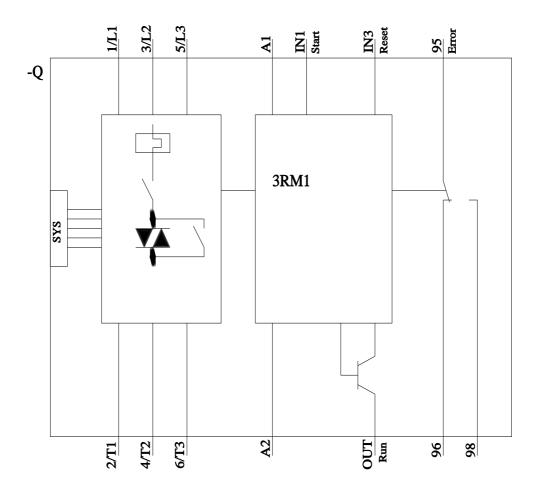
https://support.industry.siemens.com/cs/ww/en/ps/3RM1002-1AA04

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

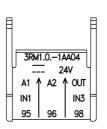
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RM1002-1AA04&lang=en

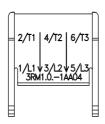












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