SIEMENS

Data sheet

3RM1202-1AA04



Reversing 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	Reversing 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	Reversing starter			
 intrinsic device protection 	Yes			
 for power supply reverse polarity protection 	No			
suitability for operation device connector 3ZY12	Yes			
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			
mechanical service life (operating cycles) typical	30 000 000			
reference code according to IEC 81346-2	Q			
Substance Prohibitance (Date)	03/01/2017			
product function				
direct start	No			
 reverse starting 	Yes			
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			

SafeSymbol Protection on the front according to IEC 60623 Import Solution on the front according to IEC 60623 Instruction on the front according to IEC 60623 Import Solution on the front according to IEC 60623 Instruction on the front according to IEC 60623 Import Solution on the front according to IEC 60623 Instruction on the front according to IEC 60623 Import Solution on the front according to IEC 60623 Gesign of the switching context as ND context for signaling function 0.4 2.A Adjustable current response value current of the current-dependent overlaad researce 0.4 2.A Specific the motor protection said-state Operating requency 1 stated value 0.0 V/ Operating requency 1 stated value 0.0 V/ I of CA 100 V rader value 0.0 V/ I of CA 100 V rader value 0.0 V/ I of CA 100 V rader value 0.0 V/ I of CA 100 V rader value 2.A I of CA 100 V rader value 0 6 V I of CA 100 V rader value 0 6 V I of CA 100 V rader value 0 6	field hound UE interference anisation according to OlODD44	Olean D far the demonstrate waite and expression and a submersion of the			
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relative negative tolerance of the control supply voltage at DC 20 % relative positive tolerance of the control supply voltage at DC 25 % control supply voltage 1 at DC rated value 24 V operating range factor control supply voltage rated value at DC 0.8 • initial value 0.8 • full-scale value 1.25 control current at DC	type of voltage of the control supply voltage	DC			
DC Image: Control supply voltage at DC 25 % control supply voltage 1 at DC rated value 24 V operating range factor control supply voltage rated value at DC 0.8 • initial value 0.8 • full-scale value 1.25 control current at DC - • in standby mode of operation 25 mA • during operation 70 mA invush current peak - • at DC at 24 V 300 mA • at DC at 24 V 80 ms • at DC at 24 V 80 ms • at DC at 24 V 80 ms • at DC at 24 V at switching on of motor 80 ms • at DC at 24 V 80 ms • at DC at 24 V 80 ms • at DC at 24 V 80 ms • at DC at 24 V at switching on of motor 80 ms • at DC at 24 V at switching on of motor 80 ms • at DC at 24 V at switching on of motor 80 ms • at DC at 24 V at switching on of motor 80 ms • at DC at 24 V prover loss [W] in auxiliary and control circuit - • in switching state OFF - - with bypass circuit 0.6 W	control supply voltage at DC rated value	19.2 30 V			
DC 24 V control supply voltage 1 at DC rated value 24 V operating range factor control supply voltage rated value at DC 0.8 • initial value 0.8 • full-scale value 1.25 control current at DC 25 mA • in standby mode of operation 25 mA • during operation 70 mA inrush current peak 300 mA • at DC at 24 V 300 mA • at DC at 24 V 80 ms • at DC at 24 V at switching on of motor 80 ms • at DC at 24 V at switching on of motor 80 ms • at DC at 24 V at switching on of motor 80 ms • at DC at 24 V at switching on of motor 80 ms • at DC at 24 V at switching on of motor 80 ms • at DC at 24 V at switching on of motor 80 ms • at DC at 24 V at switching on of motor 80 ms • at DC at 24 V at switching on of motor 80 ms		20 %			
operating range factor control supply voltage rated value at DC0.8• initial value0.8• full-scale value1.25control current at DC25 mA• in standby mode of operation25 mA• during operation70 mAinrush current peak300 mA• at DC at 24 V300 mA• at DC at 24 V at switching on of motor140 mAduration of inrush current peak80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching state OFF		25 %			
DCInitial value0.8• initial value1.25control current at DC25 mA• in standby mode of operation25 mA• during operation70 mAinrush current peak-• at DC at 24 V300 mA• at DC at 24 V at switching on of motor140 mAduration of inrush current peak-• at DC at 24 V80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor0.6 W	control supply voltage 1 at DC rated value	24 V			
• full-scale value1.25control current at DC25 mA• in standby mode of operation25 mA• during operation70 mAinrush current peak300 mA• at DC at 24 V300 mA• at DC at 24 V at switching on of motor140 mAduration of inrush current peak80 ms• at DC at 24 V80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor90 ms• at DC at 24 V at switching on of motor90 ms• at DC at 24 V at switching on of motor90 ms• at DC at 24 V at switching on of motor90 ms• at DC at 24 V at switching on of motor<					
control current at DC25 mA• in standby mode of operation25 mA• during operation70 mAinrush current peak300 mA• at DC at 24 V300 mA• at DC at 24 V at switching on of motor140 mAduration of inrush current peak80 ms• at DC at 24 V80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor90 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor90 ms• at DC at 24 V at 26 ms90 ms• at DC at 26 ms90 ms• at DC at 26 ms90 ms <th>initial value</th> <th>0.8</th>	initial value	0.8			
• in standby mode of operation25 mA• during operation70 mAinrush current peak-• at DC at 24 V300 mA• at DC at 24 V at switching on of motor140 mAduration of inrush current peak-• at DC at 24 V80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor0.6 W	• full-scale value	1.25			
• during operation70 mAinrush current peak70 mA• at DC at 24 V300 mA• at DC at 24 V at switching on of motor140 mAduration of inrush current peak80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor0.6 W	control current at DC				
inrush current peak 300 mA • at DC at 24 V 300 mA • at DC at 24 V at switching on of motor 140 mA duration of inrush current peak 40 mA • at DC at 24 V 80 ms • at DC at 24 V at switching on of motor 80 ms • at DC at 24 V at switching on of motor 80 ms • at DC at 24 V at switching on of motor 80 ms • at DC at 24 V at switching on of motor 80 ms • at DC at 24 V at switching on of motor 80 ms • at DC at 24 V at switching on of motor 80 ms • at DC at 24 V at switching on of motor 80 ms power loss [W] in auxiliary and control circuit 0.6 W - with bypass circuit 0.6 W	 in standby mode of operation 	25 mA			
• at DC at 24 V300 mA• at DC at 24 V at switching on of motor140 mAduration of inrush current peak-• at DC at 24 V80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor80 ms• at DC at 24 V at switching on of motor0.6 W	during operation	70 mA			
• at DC at 24 V at switching on of motor 140 mA duration of inrush current peak - • at DC at 24 V 80 ms • at DC at 24 V at switching on of motor 80 ms • at DC at 24 V at switching on of motor 80 ms • at DC at 24 V at switching on of motor 80 ms • at DC at 24 V at switching on of motor 80 ms • at DC at 24 V at switching on of motor 0.0 ms	inrush current peak				
duration of inrush current peak 6 • at DC at 24 V 80 ms • at DC at 24 V at switching on of motor 80 ms • at DC at 24 V at switching on of motor 80 ms power loss [W] in auxiliary and control circuit • in switching state OFF - with bypass circuit 0.6 W	• at DC at 24 V	300 mA			
• at DC at 24 V 80 ms • at DC at 24 V at switching on of motor 80 ms power loss [W] in auxiliary and control circuit • in switching state OFF - with bypass circuit 0.6 W	 at DC at 24 V at switching on of motor 	140 mA			
at DC at 24 V at switching on of motor 80 ms power loss [W] in auxiliary and control circuit in switching state OFF	duration of inrush current peak				
power loss [W] in auxiliary and control circuit • in switching state OFF — with bypass circuit 0.6 W	• at DC at 24 V	80 ms			
in switching state OFF with bypass circuit 0.6 W	• at DC at 24 V at switching on of motor	80 ms			
— with bypass circuit 0.6 W	power loss [W] in auxiliary and control circuit				
	in switching state OFF				
e in switching state ON	— with bypass circuit	0.6 W			
	in switching state ON				

— with bypass circuit	1.68 W			
Response times				
ON-delay time	60 90 ms			
OFF-delay time	60 90 ms			
Power Electronics				
operational current				
at 40 °C rated value	2 A			
• at 50 °C rated value	2 A			
at 55 °C rated value	2 A			
• at 60 °C rated value	2 A			
Installation/ mounting/ dimensions				
mounting position	vertical, horizontal, standing (observe derating)			
fastening method	screw and snap-on mounting onto 35 mm DIN rail			
height	100 mm			
width	23 mm			
depth	142 mm			
required spacing				
with side-by-side mounting				
— forwards	0 mm			
— backwards	0 mm			
— upwards	50 mm			
— downwards	50 mm			
— at the side	0 mm			
for grounded parts				
— forwards	0 mm			
— backwards	0 mm			
— upwards	50 mm			
— at the side	4 mm			
— downwards	50 mm			
Ambient conditions				
installation altitude at height above sea level maximum	4 000 m; For derating see manual			
ambient temperature				
 during operation 	-25 +60 °C			
during storage	-40 +70 °C			
during transport	-40 +70 °C			
environmental category during operation according to IEC 60721	3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6			
relative humidity during operation	10 95 %			
air pressure according to SN 31205	900 1 060 hPa			
Communication/ Protocol				
protocol is supported				
PROFINET IO protocol	No			
PROFIsafe protocol	No			
product function bus communication	No			
protocol is supported AS-Interface protocol	No			
Connections/ Terminals				
type of electrical connection	screw-type terminals for main circuit, screw-type terminals for control circuit			
 for main current circuit 	screw-type terminals			
for auxiliary and control circuit	screw-type terminals			
wire length for motor unshielded maximum	100 m			
type of connectable conductor cross-sections for main contacts				
• solid	1x (0,5 4 mm²), 2x (0,5 2,5 mm²)			
finely stranded with core end processing	1x (0,5 4 mm²), 2x (0,5 1,5 mm²)			
connectable conductor cross-section for main contacts				
 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 process 	sing	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 conducto section	or cross				
 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			ıp		
— at 220/230 V rated value		0.33 hp			
— at 460/480 V rated value		0.75 h	ıp		
operating voltage at AC rated value		480 V			
operational current at AC at 480 V according t	to UL 508	2 A			
Certificates/ approvals					
General Product Approval					EMC
Confirmation				EHC	RCM
Declaration of Conformity	Test Certificate	es	other	Railway	
CE UK EG-Konf. UK	<u>Type Test Cert</u> ates/Test Rep		<u>Confirmation</u>	Special Test Certific- ate	

Siemens has decided to exit the Russian market (see here).

https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

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)

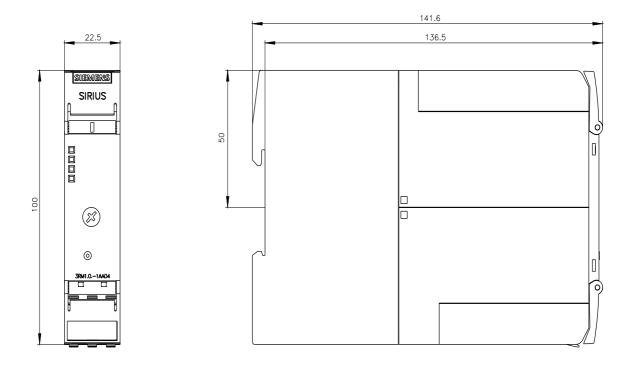
https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RM1202-1AA04

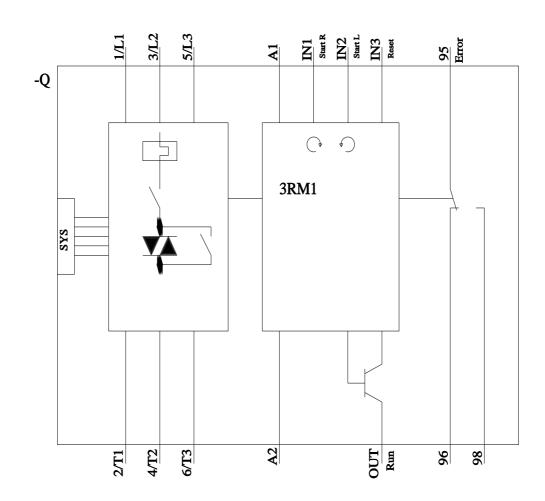
Cax online generator

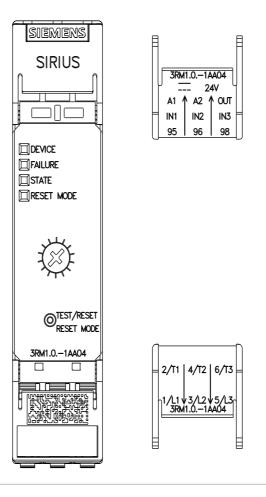
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RM1202-1AA04

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3RM1202-1AA04

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RM1202-1AA04&lang=en







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