



Reversing starter, 3RM1, 500 V, 0 - 0.12 kW, 0.1 - 0.5 A, 110-230 V AC, 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	
trip class	CLASS 10A
product function	
• intrinsic device protection	Yes
suitability for operation device connector 3ZY12	No
power loss [W] for rated value of the current at AC in hot operating state per pole	0.01 W
insulation voltage rated value	500 V
surge voltage resistance rated value	6 kV
maximum permissible voltage for safe isolation	
• 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/s ² , 500 Hz
operating frequency maximum	1 1/s
mechanical service life (switching cycles) typical	30 000 000
reference code acc. to IEC 81346-2	Q
Substance Prohibitance (Date)	01.03.2017 00:00:00
product function	
• direct start	No
• reverse starting	Yes
product function short circuit protection	No
Electromagnetic compatibility	
conducted interference	
• due to burst acc. to IEC 61000-4-4	3 kV / 5 kHz
• due to conductor-earth surge acc. to IEC 61000-4-5	2 kV
• due to conductor-conductor surge acc. to IEC 61000-4-5	1 kV
• 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
conducted HF interference emissions acc. to CISPR11	Class B for domestic, business and commercial environments; Class A for industrial environments at 110 V DC
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
Main circuit	
number of poles for main current circuit	3
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	0.1 ... 0.5 A
minimum load [%]	20 %
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	0.5 A
at AC-53a at 400 V at ambient temperature 40 °C rated value	0.5 A
ampacity when starting maximum	4 A
operating power for 3-phase motors at 400 V at 50 Hz	0 ... 0.12 kW
Inputs/ Outputs	
input voltage at digital input	
at DC rated value	110 V
with signal <0> at DC	0 ... 40 V
for signal <1> at DC	79 ... 121
input voltage at digital input	
at AC rated value	110 V
with signal <0> at AC	0 ... 40 V
for signal <1> at AC	93 ... 253 V
input current at digital input	
for signal <1> at DC	1.5 mA
with signal <0> at DC	0.25 mA
input current at digital input with signal <0> at AC	
at 110 V	0.2 mA
at 230 V	0.4 mA
input current at digital input for signal <1> at AC	
at 110 V	1.1 mA
at 230 V	2.3 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	1 A
Control circuit/ Control	
type of voltage of the control supply voltage	AC/DC
control supply voltage 1 at AC	
at 50 Hz	110 ... 230 V
at 60 Hz	110 ... 230 V
control supply voltage frequency	
1 rated value	50 Hz
2 rated value	60 Hz
control supply voltage 1 at DC rated value	110 V
operating range factor control supply voltage rated value at DC	
initial value	0.85
full-scale value	1.1
operating range factor control supply voltage rated value at AC at 50 Hz	

• initial value • full-scale value	0.85 1.1
operating range factor control supply voltage rated value at AC at 60 Hz	
• initial value • full-scale value	1.1 0.85
control current at AC	
• at 110 V in standby mode of operation • at 230 V in standby mode of operation • at 110 V when switching on • at 230 V when switching on • at 110 V during operation • at 230 V during operation	16 mA 9 mA 55 mA 33 mA 36 mA 22 mA
control current at DC	
• in standby mode of operation • when switching on • during operation	6 mA 15 mA 30 mA
Response times	
switch ON delay time	60 ... 90 ms
OFF delay time	60 ... 90 ms
Installation/ mounting/ dimensions	
mounting position	vertical, horizontal, standing (observe derating)
fastening method	screw and snap-on mounting onto 35 mm standard mounting rail
height	100 mm
width	22.5 mm
depth	141.6 mm
required spacing	
• with side-by-side mounting — forwards — backwards — upwards — downwards — at the side • for grounded parts — forwards — backwards — upwards — at the side — downwards	0 mm 0 mm 50 mm 50 mm 0 mm 0 mm 0 mm 50 mm 3.5 mm 50 mm
Ambient conditions	
installation altitude at height above sea level maximum	4 000 m
relative humidity during operation	10 ... 95 %
• air pressure acc. to SN 31205	900 ... 1 060 hPa
Communication/ Protocol	
product function bus communication	No
Connections/ Terminals	
type of electrical connection	screw-type terminals for main circuit, screw-type terminals for control circuit
• for main current circuit • for auxiliary and control circuit	screw-type terminals screw-type terminals
type of electrical wiring	
• for main current circuit • for auxiliary and control circuit	1 or 2 conductors 1 or 2 conductors
type of connectable conductor cross-sections	
• for main contacts — solid — finely stranded with core end processing • at AWG cables for main contacts	1x (0,5 ... 4 mm ²), 2x (0,5 ... 2,5 mm ²) 1x (0,5 ... 4 mm ²), 2x (0,5 ... 1,5 mm ²) 1x (20 ... 12), 2x (20 ... 14)

connectable conductor cross-section for main contacts • solid or stranded • finely stranded with core end processing	0.5 ... 4 mm ² 0.5 ... 4 mm ²
connectable conductor cross-section for auxiliary contacts • solid or stranded • finely stranded with core end processing	0.5 ... 2.5 mm ² 0.5 ... 2.5 mm ²
type of connectable conductor cross-sections • for auxiliary contacts — solid — finely stranded with core end processing • at AWG cables for auxiliary contacts	1x (0,5 ... 2,5 mm ²), 2x (1,0 ... 1,5 mm ²) 1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1 mm ²) 1x (20 ... 14), 2x (18 ... 16)
• AWG number as coded connectable conductor cross section for main contacts • AWG number as coded connectable conductor cross section for auxiliary contacts	20 ... 12 20 ... 14

Certificates/ approvals

General Product Approval	EMC	Declaration of Conformity
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Declaration of Conformity	Test Certificates	other	Railway
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Further information

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=3RM1201-1AA14>

Cax online generator

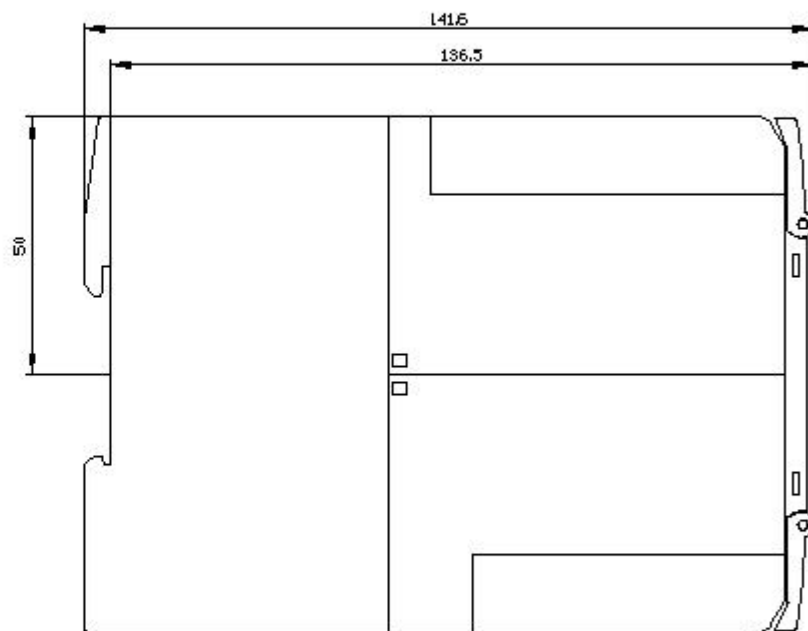
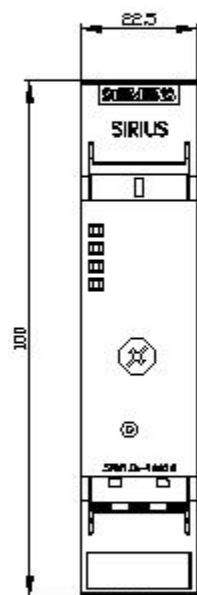
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RM1201-1AA14>

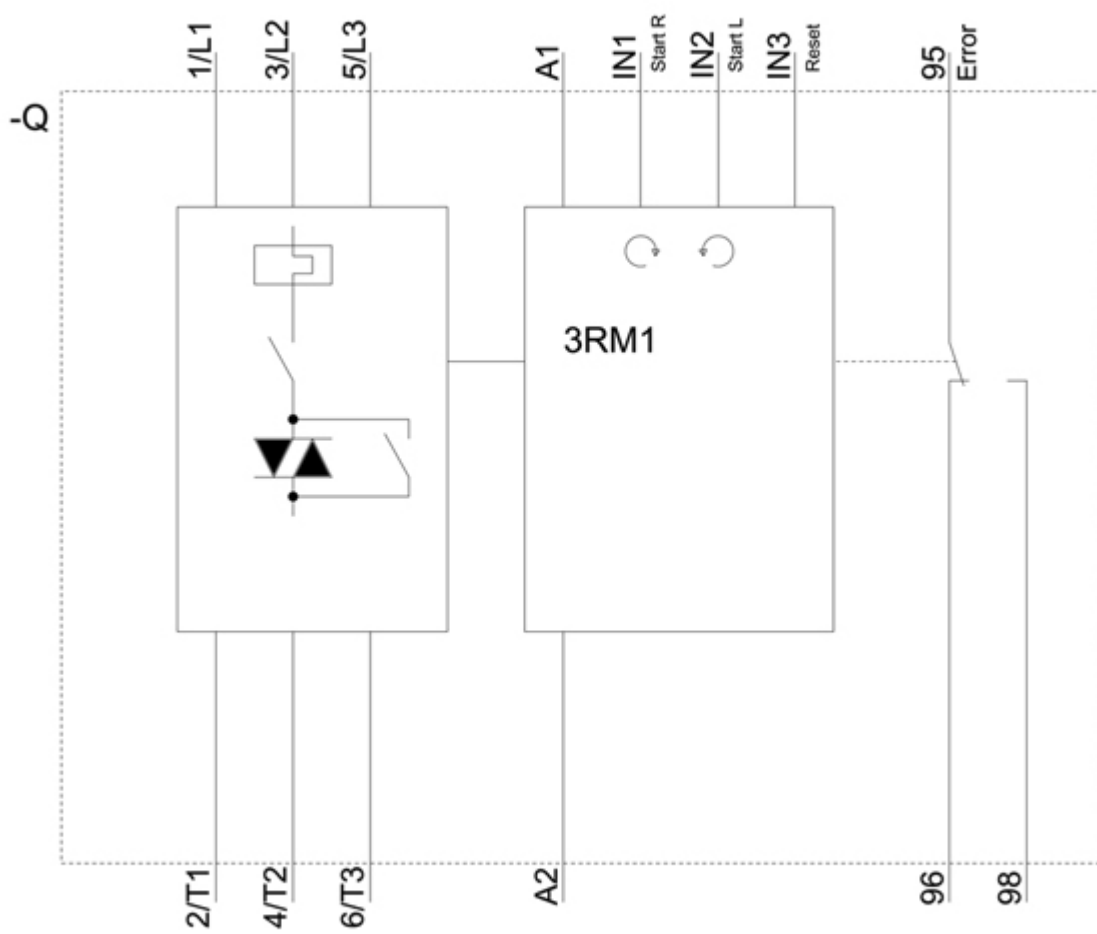
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

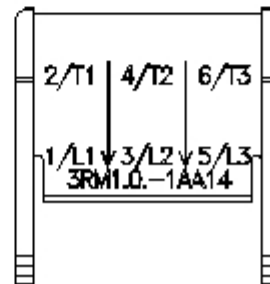
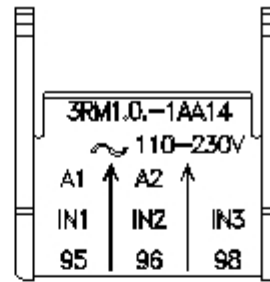
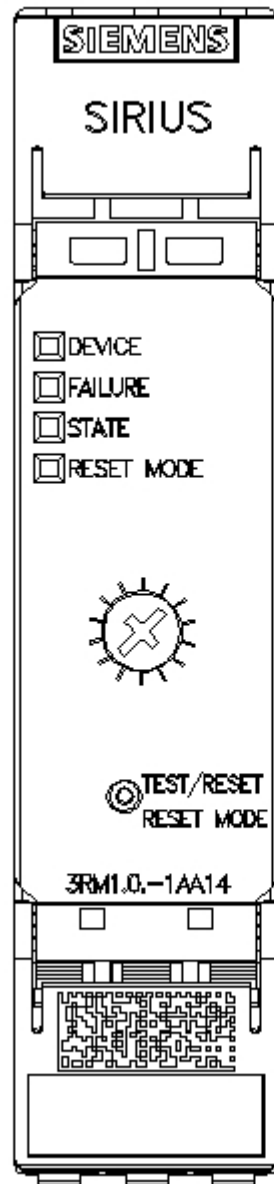
<https://support.industry.siemens.com/cs/ww/en/ps/3RM1201-1AA14>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RM1201-1AA14&lang=en







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12/21/2020