



Reversing starter, 3RM1, 500 V, 0 - 0.12 kW, 0.1 - 0.5 A, 24 V DC, screw terminals

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| 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 | Yes |
| 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 the domestic, business and commercial environments |
| field-bound HF interference emission acc. to CISPR11 | Class B for the domestic, business and commercial environments |

| 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 |
| <ul style="list-style-type: none"> 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 | |
| <ul style="list-style-type: none"> at AC at 400 V rated value | 0.5 A |
| <ul style="list-style-type: none"> 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 | |
| <ul style="list-style-type: none"> at DC rated value | 24 V |
| <ul style="list-style-type: none"> with signal <0> at DC | 0 ... 5 V |
| <ul style="list-style-type: none"> for signal <1> at DC | 15 ... 30 |
| input current at digital input | |
| <ul style="list-style-type: none"> for signal <1> at DC | 11 mA |
| <ul style="list-style-type: none"> 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 | 1 A |
| Control circuit/ Control | |
| type of voltage of the control supply voltage | DC |
| <ul style="list-style-type: none"> control supply voltage 1 at DC rated value | 24 V |
| operating range factor control supply voltage rated value at DC | |
| <ul style="list-style-type: none"> initial value | 0.8 |
| <ul style="list-style-type: none"> full-scale value | 1.25 |
| control current at DC | |
| <ul style="list-style-type: none"> in standby mode of operation | 25 mA |
| <ul style="list-style-type: none"> when switching on | 150 mA |
| <ul style="list-style-type: none"> during operation | 70 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 | |
| <ul style="list-style-type: none"> with side-by-side mounting | |
| <ul style="list-style-type: none"> — forwards | 0 mm |
| <ul style="list-style-type: none"> — backwards | 0 mm |
| <ul style="list-style-type: none"> — upwards | 50 mm |

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|----------------------|--------|
| — downwards | 50 mm |
| — at the side | 0 mm |
| • for grounded parts | |
| — forwards | 0 mm |
| — backwards | 0 mm |
| — upwards | 50 mm |
| — at the side | 3.5 mm |
| — downwards | 50 mm |

Ambient conditions

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| 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

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|------------------------------------|----|
| product function bus communication | No |
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Connections/ Terminals

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| 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 |

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| type of electrical wiring | |
| • for main current circuit | 1 or 2 conductors |
| • for auxiliary and control circuit | 1 or 2 conductors |

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| type of connectable conductor cross-sections | |
| • 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 ... 4 mm ²), 2x (0,5 ... 1,5 mm ²) |
| • at AWG cables for main contacts | 1x (20 ... 12), 2x (20 ... 14) |

| | |
|---|---------------------------|
| connectable conductor cross-section for main contacts | |
| • solid or stranded | 0.5 ... 4 mm ² |
| • finely stranded with core end processing | 0.5 ... 4 mm ² |

| | |
|--|-----------------------------|
| connectable conductor cross-section for auxiliary contacts | |
| • solid or stranded | 0.5 ... 2.5 mm ² |
| • finely stranded with core end processing | 0.5 ... 2.5 mm ² |

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| type of connectable conductor cross-sections | |
| • 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) |
| • at AWG cables for auxiliary contacts | 1x (20 ... 14), 2x (18 ... 16) |

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| • AWG number as coded connectable conductor cross section for main contacts | 20 ... 12 |
| • AWG number as coded connectable conductor cross section for auxiliary contacts | 20 ... 14 |

Certificates/ approvals

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|--------------------------|-----|---------------------------|
| General Product Approval | EMC | Declaration of Conformity |
|--------------------------|-----|---------------------------|



[Miscellaneous](#)

| | | | |
|---------------------------|-------------------|-------|---------|
| Declaration of Conformity | Test Certificates | other | Railway |
|---------------------------|-------------------|-------|---------|



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=3RM1201-1AA04>

Cax online generator

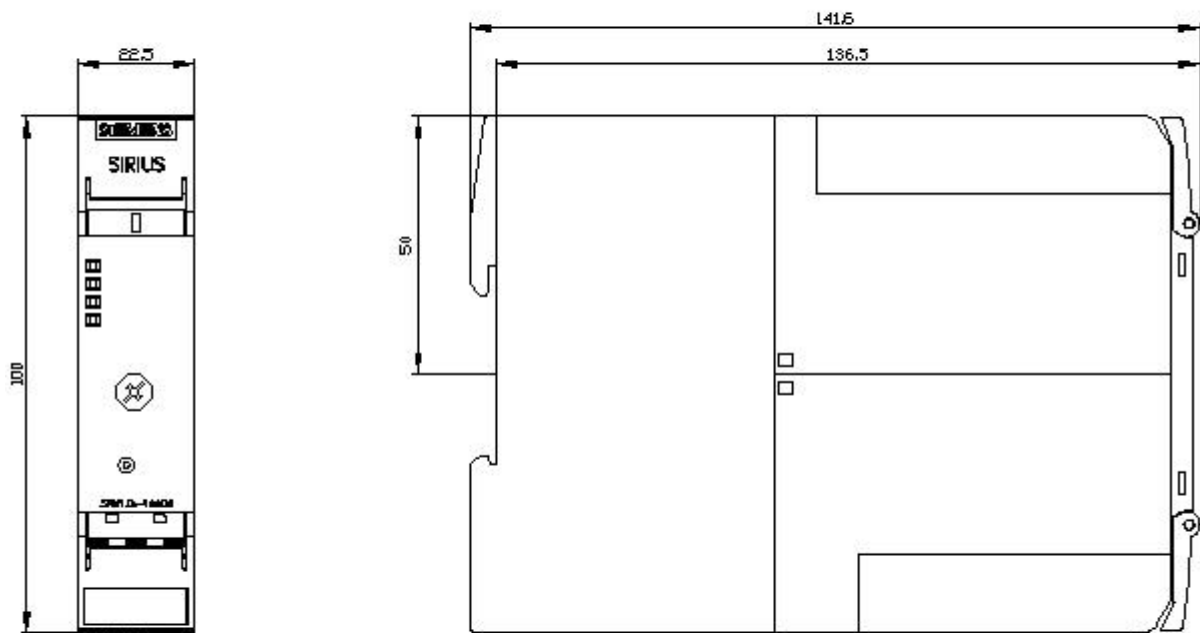
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RM1201-1AA04>

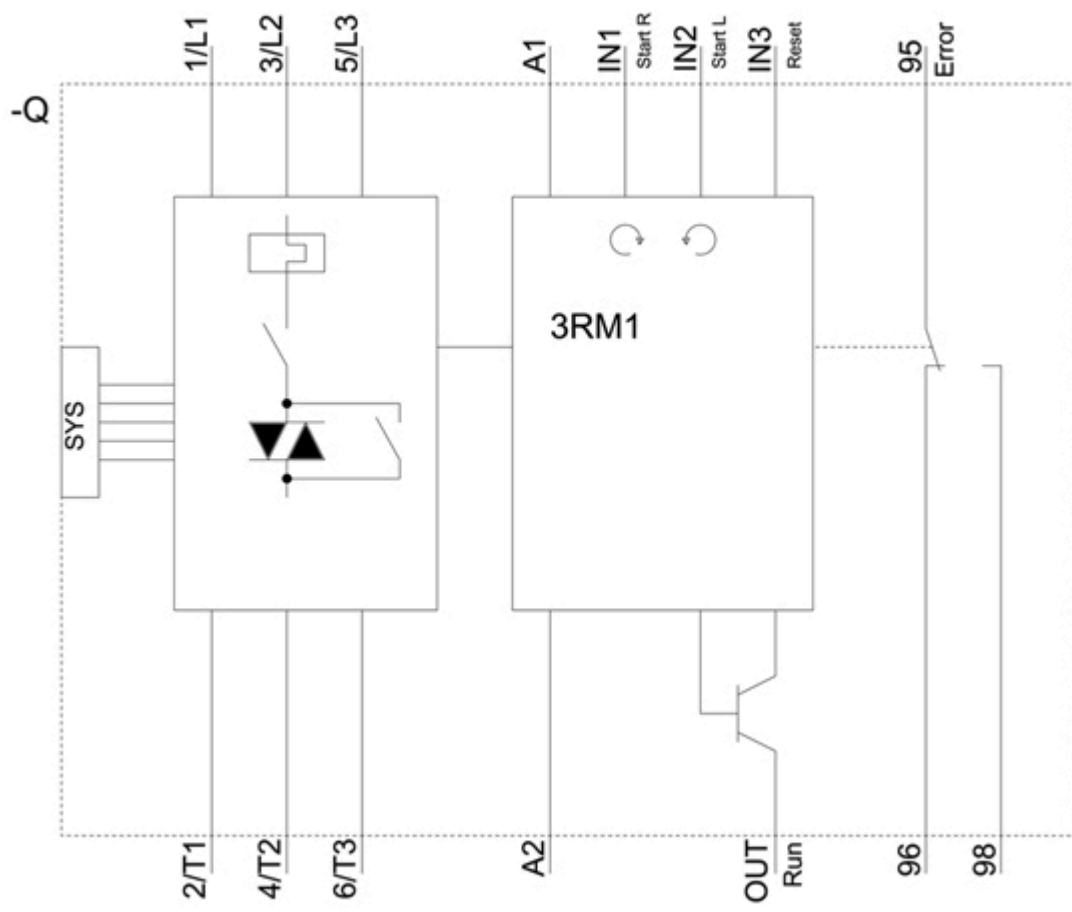
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

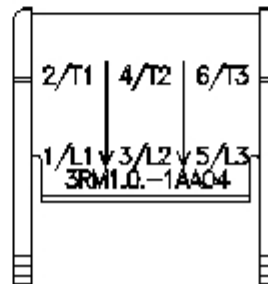
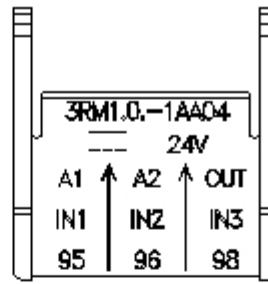
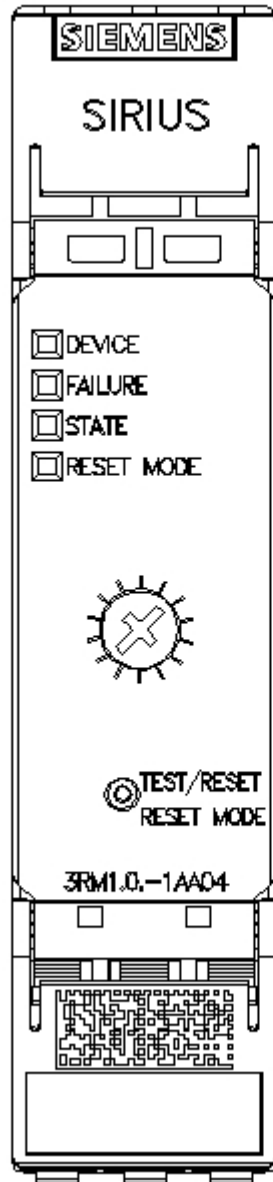
<https://support.industry.siemens.com/cs/ww/en/ps/3RM1201-1AA04>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RM1201-1AA04&lang=en







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12/23/2020