



MOTOR STARTER SIRIUS 3RM1 REVERSING STARTER
SAFETY 500 V;
0,4-2,0 A;
110-230 V AC PUSH-IN-TYPE CONNECTION SYSTEM

General technical data:

| | | |
|---|----|---|
| product brand name | | SIRIUS |
| Product designation | | Motor starter |
| Design of the product | | with reversing functionality and electronic overload protection and safety-related shutdown |
| Trip class | | CLASS 10A |
| Protection class IP | | IP20 |
| Suitability for use / 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 | m | 2,000 |
| Ambient temperature | | |
| • during operation | °C | -25 ... +60 |
| • during transport | °C | -40 ... +70 |
| • during storage | °C | -40 ... +70 |
| Shock resistance | | 6g / 11 ms |
| Vibration resistance | | 1 ... 6 Hz, 15 mm; 20 m/s², 500 Hz |
| Surge voltage resistance / Rated value | kV | 6 |
| Insulation voltage / Rated value | V | 500 |

| | | |
|---|---|---|
| Mechanical service life (switching cycles) / typical | | 30,000,000 |
| Conducted interference conductor-conductor SURGE / acc. to IEC 61000-4-5 | | 2 kV |
| Conducted interference BURST / acc. to IEC 61000-4-4 | | 3 kV / 5 kHz |
| Conducted interference as 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 | V | 500 |
| • between control and auxiliary circuit | V | 250 |
| Reference code | | |
| • acc. to DIN 40719 extended according to IEC 204-2 / acc. to IEC 750 | | Q |
| • 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 | a | 20 |
| PFHD / with high demand rate / acc. to EN 62061 | 1/h | 0.00000002 |
| 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 | ms | 65 |
| OFF-delay time / with safety-related request / when switched off via supply voltage / maximum | ms | 120 |

Main circuit:

| | | |
|---|----|-----|
| Number of poles / for main current circuit | | 3 |
| Operating voltage / Rated value / maximum | V | 500 |
| Operating frequency | | |
| • 1 | Hz | 50 |
| • 2 | Hz | 60 |
| Operating current / with AC / at 400 V / Rated value | A | 2 |
| Minimum load in % of I_M | % | 20 |
| Active power loss / typical | W | 0.3 |

| | | |
|---|--|---|
| Adjustable response value current • of the current-dependent overload release | A | 0.4 ... 2 |
| Operating power / for three-phase motors / at 400 V • at 50 Hz | kW | 0.09 ... 0.75 |
| Operating frequency / maximum | 1/s | 1 |
| Control circuit/ Control: | | |
| Type of voltage / of the control supply voltage | | AC/DC |
| Control supply voltage / 1 • for DC / Rated value • with AC • at 50 Hz • with AC • at 60 Hz | V V V | 110 110 ... 230 110 ... 230 |
| Operating range factor control supply voltage rated value • for DC • with AC • at 50 Hz • with AC • at 60 Hz | | 0.85 ... 1.1 0.85 ... 1.1 1.1 ... 0.85 |
| Control current • with AC • at 230 V • in standby mode • during operation • when switching on • at 110 V • in standby mode • during operation • when switching on • for DC • in standby mode • during operation • when switching on | mA mA mA mA mA mA mA mA mA | 6 14 25 8 25 40 4 30 13 |
| Input voltage / at digital input • for signal <1> • for DC • with AC • with signal <0> • with AC | V V V | 79 ... 121 93 ... 253 0 ... 40 |

| | | |
|---|----|------------|
| • for DC | V | 0 ... 40 |
| Input current / at digital input | | |
| • for signal <1> | | |
| • with AC | | |
| • at 230 V | mA | 2.3 |
| • at 110 V | mA | 1.1 |
| • for DC | mA | 1.5 |
| • with signal <0> | | |
| • with AC | | |
| • at 230 V | mA | 0.4 |
| • at 110 V | mA | 0.2 |
| • for DC | mA | 0.25 |
| Switch-on delay time | ms | 90 ... 120 |
| OFF-delay time | ms | 60 ... 90 |

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 | A | 3 |
| • at DC-13 | A | 1 |

Installation/ mounting/ dimensions:

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

Connections/ terminals:





| | | |
|--|--|---|
| Design of the electrical connection | | |
| • for main current circuit | | PUSH-IN connection (spring-loaded connection) |
| • for auxiliary and control current circuit | | PUSH-IN connection (spring-loaded connection) |
| Type of connectable conductor cross-section | | |
| • for main contacts | | |
| • solid | | 1x (0.5 ... 4 mm²) |
| • finely stranded | | |
| • with core end processing | | 1x (0.5 ... 2.5 mm²) |
| • without core end processing | | 1x (0.5 ... 4 mm²) |
| • for AWG conductors | | 1x (20 ... 12) |

| | | |
|---|--|--|
| Type of connectable conductor cross-section | | |
| <ul style="list-style-type: none"> • for auxiliary contacts • solid • finely stranded <ul style="list-style-type: none"> • with core end processing • without core end processing • for AWG conductors | | 1x (0.5 ... 1.5 mm ²), 2x (0.5 ... 1.5 mm ²) |
| | | 1x (0,5 ... 1,0 mm ²), 2x (0,5 ... 1,0 mm ²) |
| | | 1x (0.5 ... 1.5 mm ²), 2x (0.5 ... 1.5 mm ²) |
| | | 1x (20 ... 16), 2x (20 ... 16) |
| | | |

UL ratings:

| | | |
|---|----|-------|
| Full-load current (FLA) / for three-phase AC motor / at 480 V / Rated value | A | 2 |
| yielded mechanical performance [hp] | | |
| <ul style="list-style-type: none"> • for single-phase AC motor <ul style="list-style-type: none"> • at 230 V / Rated value • for three-phase AC motor <ul style="list-style-type: none"> • at 200/208 V / Rated value • at 220/230 V / Rated value • at 460/480 V / Rated value | hp | 0.125 |
| | hp | 0.333 |
| | hp | 0.333 |
| | hp | 0.75 |

Certificates/ approvals:

| General Product Approval | For use in hazardous locations | Declaration of Conformity | Test Certificates | other |
|--|---|---|---|--|
|  CCC |  UL |  ATEX |  EG-Konf. | Type Test Certificates/Test Report Confirmation |

Further information:

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

<http://www.siemens.com/industrial-controls/catalogs>

Industry Mall (Online ordering system)

<http://www.siemens.com/industrial-controls/mall>

Cax online generator

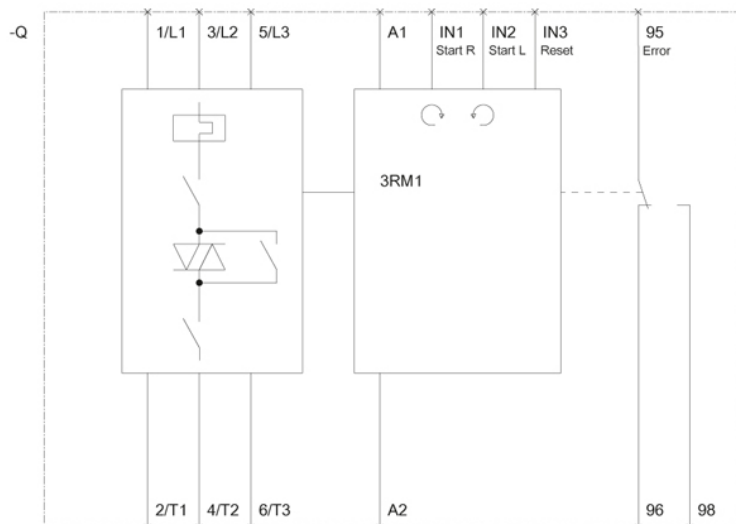
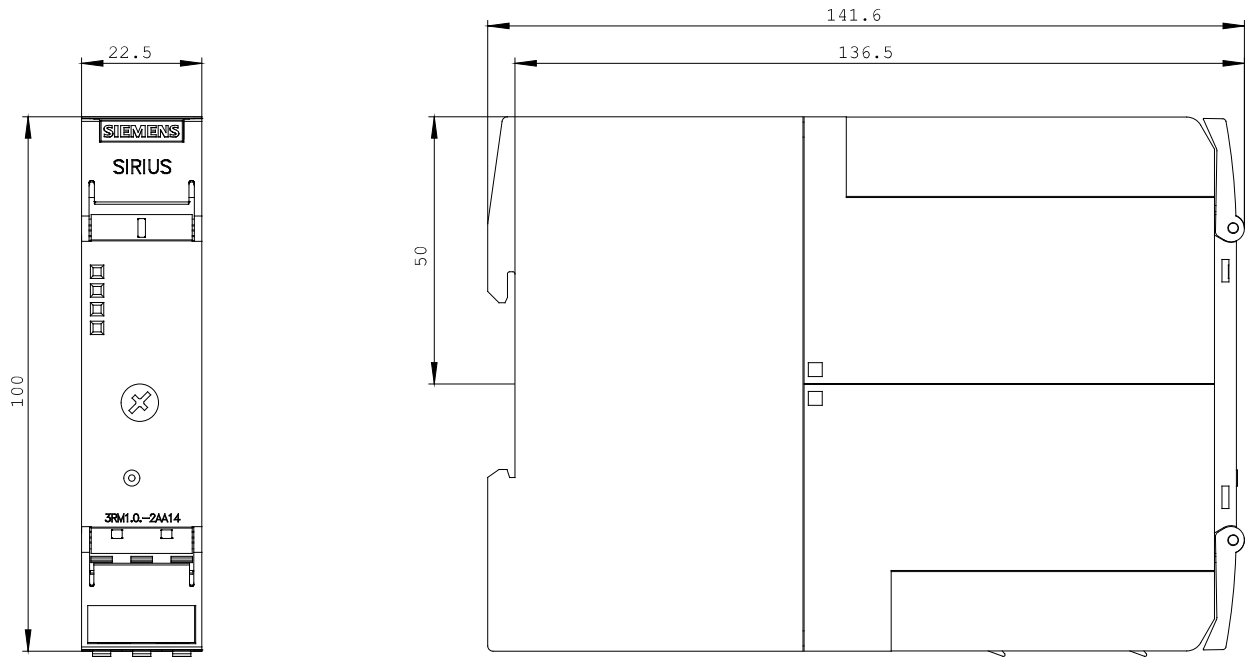
<http://www.siemens.com/cax>

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

<http://support.automation.siemens.com/VW/view/en/3RM1302-2AA14/all>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RM1302-2AA14



last change:

Nov 17, 2014