SIEMENS

Data sheet 3RM1101-2AA14



Fail-safe direct starter, 3RM1, 500 V, 0 - 0.12 kW, 0.1 - 0.5 A, 110-230 V AC, spring-type terminals

| product brand name | SIRIUS | |
|---|--|--|
| product category | Motor starter | |
| product designation | Fail-safe direct starter | |
| design of the product | With electronic overload protection and safety-related disconnection | |
| product type designation | 3RM1 | |
| General technical data | | |
| trip class | CLASS 10A | |
| equipment variant according to IEC 60947-4-2 | 3 | |
| product function | fail-safe direct starter | |
| intrinsic device protection | Yes | |
| for power supply reverse polarity protection | Yes | |
| suitability for operation device connector 3ZY12 | No | |
| insulation voltage rated value | 500 V | |
| overvoltage category | III | |
| 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/s², 500 Hz | |
| operating frequency maximum | 1 1/s | |
| mechanical service life (switching cycles) typical | 15 000 000 | |
| reference code according to IEC 81346-2 | Q | |
| Substance Prohibitance (Date) | 03/01/2017 | |
| 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 | 4 kV signal lines 2 kV | |
| due to conductor-conductor surge according to IEC 61000-4-5 | 2 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 | 6 kV contact discharge / 8 kV air discharge | |
|--|---|--|
| conducted HF interference emissions according to | · · · · · · · · · · · · · · · · · · · | |
| CISPR11 | Class B for domestic, business and commercial environments; Class A for industrial environments at 110 V DC | |
| field-bound HF interference emission according to CISPR11 | Class B for domestic, business and commercial environments; Class A for industrial environments at 110 V DC | |
| Safety related data | | |
| safety device type according to IEC 61508-2 | Туре В | |
| Safety Integrity Level (SIL) according to IEC 61508 | 3 | |
| SIL Claim Limit (subsystem) according to EN 62061 | SILCL 3 | |
| performance level (PL) according to EN ISO 13849-1 | e | |
| category according to EN ISO 13849-1 | 4 | |
| stop category according to EN 60204-1 | 0 | |
| Safe failure fraction (SFF) | 99.4 % | |
| average diagnostic coverage level (DCavg) | 99 % | |
| diagnostics test interval by internal test function maximum | 600 s | |
| function test interval maximum | 1 y | |
| failure rate [FIT] | | |
| at rate of recognizable hazardous failures (λdd) | 1 400 FIT | |
| at rate of non-recognizable hazardous failures (λdu) | 16 FIT | |
| PFHD with high demand rate according to EN 62061 | 0.00000002 1/h | |
| PFDavg with low demand rate according to IEC 61508 | 0.000018 | |
| MTTFd | 75 y | |
| hardware fault tolerance according to IEC 61508 | 1 | |
| safe state | Load circuit open | |
| protection class IP on the front according to IEC 60529 | IP20 | |
| touch protection on the front according to IEC 60529 | finger-safe | |
| hardware fault tolerance according to IEC 61508 relating to ATEX | 0 | |
| PFDavg with low demand rate according to IEC 61508 relating to ATEX | 0.0005 | |
| PFHD with high demand rate according to EN 62061 relating to ATEX | 0.00000005 1/h | |
| Safety Integrity Level (SIL) according to IEC 61508 relating to ATEX | SIL2 | |
| T1 value for proof test interval or service life according to IEC 61508 relating to ATEX | 3 y | |
| Main circuit | | |
| number of poles for main current circuit | 3 | |
| design of the switching contact | Hybrid | |
| adjustable current response value current of the current-dependent overload release | 0.1 0.5 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 | 0.5 A | |
| at AC-3 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 | |
| nputs/ Outputs | | |
| input voltage at digital input | | |
| | | |
| at DC rated value | 110 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 | 3 A |
| 230 V maximum | |
| 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 at AC | |
| • at 50 Hz rated value | 110 230 V |
| at 60 Hz rated value | 110 230 V |
| relative negative tolerance of the control supply | 15 % |
| voltage at AC at 60 Hz | |
| relative positive tolerance of the control supply voltage at AC at 60 Hz | 10 % |
| 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 |
| relative negative tolerance of the control supply voltage at DC | 15 % |
| relative positive tolerance of the control supply voltage at DC | 10 % |
| 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 | 0.85 |
| • full-scale value | 1.1 |
| operating range factor control supply voltage rated value at AC at 60 Hz | |
| • initial value | 0.85 |
| • full-scale value | 1.1 |
| control current at AC | |
| at 110 V in standby mode of operation | 8 mA |
| • at 230 V in standby mode of operation | 6 mA |
| at 110 V when switching on | 40 mA |
| at 230 V when switching on | 25 mA |
| at 110 V during operation | 25 mA |
| at 230 V during operation | 14 mA |
| control current at DC | |
| in standby mode of operation | 4 mA |
| when switching on | 13 mA |
| during operation | 30 mA |
| • during operation | OO HILL |

| fastening method height width depth required spacing with side-by-side mounting — forwards — backwards — upwards — downwards — at the side — forwards — backwards — backwards — o mm for grounded parts — forwards — backwards — o mm o for grounded parts — forwards — backwards — upwards — backwards — o mm height with side-by-side mounting o mm o | 2 900 mA 1 ms 1 m | at AC at 130 V at AC at 230 V duration of inrush current peak at AC at 230 V at AC at 230 V power loss [W] in auxiliary and control circuit in switching state OFF — with bypass circuit in switching state OFF — with bypass circuit in switching state ON — with bypass circuit in switching state ON — with bypass circuit in switching state ON — with bypass circuit 2.2 W Response times ON-delay time OFF-delay time OFF-d | |
|--|--|--|--|
| at AC at 230 V duration of inrush current peak | 2 900 mA 1 ms 1 ms 1 ms 1 ms 1.4 W 3.22 W 90 120 ms 60 90 ms 0.5 A 0.5 M | • at AC at 230 V duration of inrush current peak • at AC at 110 V • at AC at 230 V power loss [W] in auxiliary and control circuit • in switching state OFF — with bypass circuit • in switching state ON — with bypass circuit • in switching state ON — with bypass circuit • in switching state ON — with bypass circuit • on the symbol of | |
| duration of inrush current peak at AC at 110 V at AC at 230 V power loss [W] in auxiliary and control circuit in switching state OFF — with bypass circuit in switching state ON — with bypass circuit 2.2 W Response times ON-delay time OPF-delay time OFF-delay time OS-5 A at 55 °C rated value at 50 °C rated value bat 50 °C rated value cat 50 °C rated value at 50 °C rated value bat 50 °C rated value cat 50 °C value value cat 60 °C value | 1 ms | duration of inrush current peak at AC at 110 V at AC at 230 V power loss [W] in auxiliary and control circuit in switching state OFF — with bypass circuit in switching state ON — with bypass circuit in switching state ON — with bypass circuit in switching state ON — with bypass circuit ON-delay time OF-delay time OS-delay time OF-delay time OF-delay time OF-delay time OS-A at 40 °C rated value at 50 °C rated value at 60 °C rated value os-5 A installation/ mounting/ dimensions mounting position fastening method height width depth required spacing with side-by-side mounting — forwards — backwards — of ownwards — at the side for grounded parts — forwards — backwards — at the side — downwards — on mm sinstallation altitude at height above sea level maximum ambient temperature — during operation — during transport — environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 communication/ Protocol protocol is supported — PROFINET IO protocol | |
| at AC at 110 V at AC at 230 V power loss [W] in auxiliary and control circuit in switching state OFF — with bypass circuit in switching state ON — with bypass circuit 60 | 1 ms | at AC at 230 V power loss [W] in auxiliary and control circuit in switching state OFF — with bypass circuit in switching state ON — with bypass circuit in switching state ON — with bypass circuit in switching state ON — with bypass circuit 3.22 W Response times ON-delay time OFF-delay time OFF-delay time OFF-delay time 0 0.5 A at 40 °C rated value at 50 °C rated value at 50 °C rated value at 60 °C rated value at 60 °C rated value bircuit on the state of the stat | |
| e at AC at 230 V power loss [W] in auxiliary and control circuit in switching state OFF — with bypass circuit in switching state ON — with bypass circuit 3.22 W Response times ON-delay time OFF-delay time OFF-delay time OFF-delay time OFF-delay time o at 40 °C rated value in the off-crated value in the of | 1 ms | • at AC at 230 V power loss [W] in auxiliary and control circuit • in switching state OFF — with bypass circuit • in switching state ON — with bypass circuit 3.22 W Response times ON-delay time OFF-delay time OFF-delay time OF-delay time 0.5 A • at 50 °C rated value • at 50 °C rated value • at 60 °C rated value • on 50 A Installation/ mounting/ dimensions mounting position fastening method height vidth depth vidth depth 100 mm vidth depth required spacing • with side-by-side mounting • forwards — backwards — backwards — ownwards — at the side • for grounded parts — forwards — at the side • for grounded parts — hownwards — at the side • ownwards — at the side • downwards — at the side — downwards Ambient conditions installation altitude at height above sea level maximum amblent temperature • during operation • during storage • during transport • during transport • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol PROFINET IO protocol | |
| power loss [W] in auxiliary and control circuit in switching state OFF — with bypass circuit in switching state ON — with bypass circuit in switching state ON — with bypass circuit in switching state ON — with bypass circuit in switching state ON — with bypass circuit in switching state ON — with bypass circuit in switching state ON — with bypass circuit in switching state ON — on switching state ON ON-delay time OO-delay time OO-delay time OFF-delay time OFF-delay time OFF-delay time Oo-so on switching — at 50 °C rated value — o.5 A Installation/ mounting/ dimensions mounting position fastening method — screw and snap-o height — of on switching — of on switching — of on switching — of on switching — of on m depth — required spacing — with side-by-side mounting — forwards — backwards — ownwards Ambient conditions installation altitude at height above sea level maximum ambient temperature — ownwards Ambient conditions installation altitude at height above sea level maximum ambient temperature — ownwards — ownwards Ambient conditions installation altitude at height above sea level maximum ambient temperature — ownwards — ownw | 1.4 W 3.22 W | power loss [W] in auxiliary and control circuit in switching state OFF with bypass circuit in switching state ON with bypass circuit 3.22 W Response times ON-delay time OFF-delay time 0.5 A at 40 °C rated value at 50 °C rated value at 60 °C rated value ot 60 °C rated value to 60 °C rated value at 60 °C rated value at 60 °C rated value to 55 A Installation/ mounting/ dimensions mounting position fastening method height frequired spacing with side-by-side mounting forwards backwards upwards at the side for grounded parts for grounded parts for grounded parts forwards backwards upwards at the side dommands at the side dommands at the side downwards backwards upwards backwards backwards backwards dommands at the side downwards backwards backwards backwards dommands at the side downwards backwards backwards backwards backwards backwards dommands at the side downwards backwards backwards backwards backwards backwards backwards backwards dommands at the side downwards backwards backward | |
| • in switching state OFF — with bypass circuit • in switching state ON — with bypass circuit 3.22 W Response times ON-delay time OFF-delay time OFF-delay time 0 0.5 A • at 40 °C rated value • at 50 °C rated value • at 60 °C rated value • on 5 A Installation/ mounting/ dimensions mounting position fastening method height vidth • 22.5 mm depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — on mm • on mm | 1.4 W 3.22 W 90 120 ms 60 90 ms 60 mm 6 | • in switching state OFF — with bypass circuit • in switching state ON — with bypass circuit Response times ON-delay time OFF-delay time OFF-delay time • at 40 °C rated value • at 50 °C rated value • at 60 °C rated value • at 60 °C rated value ot 5 A Installation/ mounting/ dimensions mounting position fastening method height width depth required spacing • with side-by-side mounting — forwards — backwards — upwards — at the side • for grounded parts — forwards — backwards — upwards — at the side — downwards — at the side — downwards — backwards — upwards — at the side — downwards — our side states of the side — downwards — at the side — downwards — our side states of the side — downwards — our side states of the side — downwards — side states of the side — side states of the si | |
| - with bypass circuit • in switching state ON - with bypass circuit ON-delay time ON-delay time ON-delay time ON-delay time OFF-delay time OFF-delay time • at 40 °C rated value • at 50 °C rated value • at 50 °C rated value • at 60 °C | 90 120 ms 60 90 ms 0.5 A 0. | - with bypass circuit • in switching state ON - with bypass circuit ON-delay time OF-delay time OF-delay time • at 40 °C rated value • at 55 °C rated value • at 60 °C rated value • on 5 A Installation/ mounting/ dimensions mounting position screw an height vidth depth required spacing • with side-by-side mounting - forwards - backwards - upwards - at the side • for grounded parts - forwards - at the side • for grounded parts - forwards - backwards - at the side • for grounded parts - downwards - at the side - downwards - So mm Ambient conditions installation altitude at height above sea level maximum - ambient temperature - during operation - during storage - during transport - during transp | |
| • in switching state ON — with bypass circuit Response times ON-delay time OFF-delay time OFF-delay time operational current • at 40 °C rated value • at 55 °C rated value • at 60 °C rated value • o.5 A Installation/ mounting/ dimensions mounting position fastening method height vertical, horizonta fastening method height vertical, horizonta fastening method screw and snap-o height vertical, horizonta fastening method operation height vertical, horizonta fastening method height op mm vertical, horizonta height op mm vertical, horizonta fastening method no mm vertical, horizonta height op mm vertical, horizonta height height op mm vertical, horizonta height op mm vertical, horizonta height op mm vertical, horizonta height op mm vertical, horizonta height op mm vertical, horizonta height op mm vertical, horizonta no mm op mm vertical, horizonta non no mm vertical, horizonta non non non mm vertical, horizonta non non mm vertical, horizonta non non non mm vertical, horizonta non non non non mm vertical, horizonta non non non non non non non mm vertical, horizonta non non non non non non non non non no | 90 120 ms 60 90 ms 0.5 A 0. | • in switching state ON — with bypass circuit Response times ON-delay time OF-delay time OF-delay time • at 40 °C rated value • at 50 °C rated value • at 60 °C rated value • o.5 A Installation/ mounting/ dimensions mounting position fastening method screw ar height vidth 22.5 mm depth required spacing • with side-by-side mounting — forwards — backwards — o mm — upwards — odwnwards — at the side • for grounded parts — forwards — backwards — o mm • for grounded parts — forwards — backwards — o mm Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 900 1 Communication/ Protocol | |
| - with bypass circuit Response times ON-delay time OR-delay time OFF-delay time Power Electronics operational current • at 40 °C rated value • at 50 °C rated value • at 60 °C rated value • at 70 °C rated value • at 60 °C rated | 90 120 ms 60 90 ms 0.5 A 0.5 A 0.5 A 0.5 A 0.5 A 0.5 A 0.5 M 0. | Response times ON-delay time OFF-delay time OFF-de | |
| Response times ON-delay time OF-delay time OF-delay time OF-delay time o at 40 °C rated value o at 50 °C rated value o at 50 °C rated value o tat 60 °C o mm o tat 6 | 90 120 ms 60 90 ms 0.5 A 0.5 A 0.5 A 0.5 A 0.5 A 0.5 A 0.5 M 0. | Response times ON-delay time OFF-delay time OFF-delay time Power Electronics operational current • at 40 °C rated value • at 55 °C rated value • at 60 °C rated value • at 60 °C rated value • at 60 °C rated value • at 60 °C rated value • at 55 °C rated value • at 60 °C rated value • at 60 °C rated value • at 60 °C rated value Installation/ mounting/ dimensions mounting position fastening method height vidth 22.5 mm depth required spacing • with side-by-side mounting — forwards — backwards — upwards — at the side • of mrain operation — at the side • for grounded parts — forwards — backwards — upwards — backwards — on mm • for grounded parts — forwards — backwards — upwards — at the side • of mrain operation — at the side — downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 900 1 Communication/ Protocol | |
| ON-delay time OFF-delay time OFF-del | 0.5 A vertical, horizontal, standing (observe derating) screw and snap-on mounting onto 35 mm standard mounting rail 100 mm 22.5 mm 141.6 mm 0 mm 0 mm 50 mm 50 mm 0 mm 0 mm 50 mm 3.5 mm 50 mm 3.5 mm 50 mm 3.5 mm 50 mm 3.5 mm 50 mm 10 mm 1 | ON-delay time 90 12 OFF-delay time 60 90 Power Electronics operational current • at 40 °C rated value 0.5 A • at 50 °C rated value 0.5 A • at 60 °C rated value 0.5 A Installation/ mounting/ dimensions mounting position vertical, fastening method screw ar height 100 mm width 22.5 mm depth 141.6 m required spacing • with side-by-side mounting 0 mm | |
| OFF-delay time Power Electronics operational current at 40 °C rated value at 50 °C rated value at 55 °C rated value o.5 A at 60 °C rated value o.5 A installation/ mounting/ dimensions mounting position fastening method height width depth required spacing with side-by-side mounting — forwards — backwards — upwards — at the side of or grounded parts — forwards — upwards — at the side of or grounded parts — at the side — downwards — the side — downwards — the side — downwards — the side — downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 protocol is supported • PROFINET IO protocol • PROFISafe protocol PROFISafe protocol Protocol is supported AS-Interface protocol No Connections/ Terminals | 0.5 A vertical, horizontal, standing (observe derating) screw and snap-on mounting onto 35 mm standard mounting rail 100 mm 22.5 mm 141.6 mm 0 mm 0 mm 50 mm 50 mm 0 mm 0 mm 50 mm 3.5 mm 50 mm 3.5 mm 50 mm 3.5 mm 50 mm 3.5 mm 50 mm 10 mm 1 | OFF-delay time Power Electronics operational current • at 40 °C rated value • at 50 °C rated value • at 60 °C rated value • o.5 A Installation/ mounting/ dimensions mounting position fastening method height width 22.5 mm depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side • for grounded parts — forwards — backwards — upwards — at the side • for grounded parts — forwards — at the side • onm Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 communication/ Protocol PROFINET IO protocol | |
| power Electronics operational current | 0.5 A | Power Electronics operational current • at 40 °C rated value • at 50 °C rated value • at 60 °C rated value Installation/ mounting/ dimensions mounting position fastening method height width depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side • for grounded parts — forwards — backwards — upwards — backwards — o mm • for grounded parts — forwards — backwards — upwards — backwards — upwards — backwards — o mm • with side departs — forwards — o mm • for grounded parts — forwards — backwards — upwards — backwards — upwards — at the side — downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 protocol is supported • PROFINET IO protocol | S |
| operational current • at 40 °C rated value • at 50 °C rated value • at 60 °C rated value • o.5 A Installation/ mounting/ dimensions mounting position fastening method height vidth depth 100 mm width depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — of or grounded parts — for grounded parts — for grounded parts — backwards — upwards — at the side • for grounded parts — backwards — upwards — at the side — downwards — the side — on man ### 10 mm | vertical, horizontal, standing (observe derating) vertical, horizontal, standing (observe derating) screw and snap-on mounting onto 35 mm standard mounting rail 100 mm 22.5 mm 141.6 mm 0 mm 0 mm 50 mm 0 mm 0 mm 0 mm 50 mm 3.5 mm 50 mm 3.5 mm 50 mm 10 m | operational current • at 40 °C rated value • at 50 °C rated value • at 55 °C rated value • at 60 °C rated value • o.5 A installation/ mounting/ dimensions mounting position fastening method height width vidth | |
| at 40 °C rated value at 50 °C rated value at 55 °C rated value at 60 °C rated value at 60 °C rated value building of the side | vertical, horizontal, standing (observe derating) vertical, horizontal, standing (observe derating) screw and snap-on mounting onto 35 mm standard mounting rail 100 mm 22.5 mm 141.6 mm 0 mm 0 mm 50 mm 0 mm 0 mm 0 mm 50 mm 3.5 mm 50 mm 3.5 mm 50 mm 10 m | at 40 °C rated value at 50 °C rated value at 55 °C rated value at 60 °C | |
| at 50 °C rated value at 55 °C rated value be at 60 °C rated value contained position surrounting position fastening method height vidth depth required spacing with side-by-side mounting — forwards — backwards — upwards — downwards — at the side of or grounded parts — forwards — backwards — at the side of with side-by-side mounting for grounded parts — for grounded parts — backwards — upwards — backwards — at the side of or grounded parts — the side — downwards — at the side — downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature of uring storage or uring | vertical, horizontal, standing (observe derating) vertical, horizontal, standing (observe derating) screw and snap-on mounting onto 35 mm standard mounting rail 100 mm 22.5 mm 141.6 mm 0 mm 0 mm 50 mm 0 mm 0 mm 0 mm 50 mm 3.5 mm 50 mm 3.5 mm 50 mm 10 m | at 50 °C rated value at 55 °C rated value at 60 °C rated value bat 60 °C rated value constituting position mounting position fastening method height vidth depth required spacing with side-by-side mounting — forwards — backwards — upwards — at the side for grounded parts — forwards — backwards — backwards — at the side for grounded parts — forwards — backwards — backwards — o mm for grounded parts — forwards — backwards — o mm for grounded parts — forwards — backwards — backwards — backwards — o mm for grounded parts — forwards — backwards — backwards — backwards — o mm ambient tenside — downwards — at the side — downwards — side for the side of the side | |
| at 55 °C rated value at 60 °C rated value builded to be at 60 °C rated value constallation/ mounting/ dimensions mounting position fastening method screw and snap-o height width depth required spacing with side-by-side mounting forwards builded | vertical, horizontal, standing (observe derating) screw and snap-on mounting onto 35 mm standard mounting rail 100 mm 22.5 mm 141.6 mm 0 mm 0 mm 50 mm 50 mm 0 mm 0 mm 50 mm 50 mm 50 mm 50 mm 150 m | at 55 °C rated value at 60 °C rated value bat 60 °C rated value nostallation/ mounting/ dimensions mounting position fastening method height vidth 22.5 mm depth required spacing with side-by-side mounting — forwards — backwards — upwards — downwards — at the side for grounded parts — forwards — backwards — backwards — at the side for grounded parts — forwards — backwards — backwards — backwards — o mm for grounded parts — forwards — backwards — backwards — backwards — backwards — o mm for grounded parts — forwards — backwards — backwards — upwards — at the side — downwards — the side — downwards — at the side — downwards — downwards — at the side — downwards — do | |
| at 60 °C rated value Installation/ mounting/ dimensions mounting position fastening method height vidth 22.5 mm depth required spacing at with side-by-side mounting — forwards — backwards — upwards — at the side — for grounded parts — forwards — backwards — backwards — of mm — of m | vertical, horizontal, standing (observe derating) screw and snap-on mounting onto 35 mm standard mounting rail 100 mm 22.5 mm 141.6 mm 0 mm 0 mm 50 mm 0 mm 0 mm 0 mm 50 mm 50 mm 50 mm 50 mm 50 mm 10 mm 50 mm 10 mm 1 | • at 60 °C rated value Installation/ mounting/ dimensions mounting position fastening method height vidth depth required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side • for grounded parts — forwards — backwards — upwards — at the side • for grounded parts — forwards — backwards — upwards — backwards — o mm • for wards — backwards — o mm • for grounded parts — forwards — backwards — upwards — backwards — upwards — at the side — downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 protocol is supported • PROFINET IO protocol Protocol PROFINET IO protocol | |
| mounting position fastening method height width depth required spacing - forwards - backwards - downwards - at the side - downwards - the side - the | vertical, horizontal, standing (observe derating) screw and snap-on mounting onto 35 mm standard mounting rail 100 mm 22.5 mm 141.6 mm 0 mm 0 mm 50 mm 0 mm 0 mm 0 mm 50 mm 3.5 mm 50 mm 3.5 mm 50 mm 140 mm 150 m | mounting position fastening method height width depth required spacing - with side-by-side mounting - forwards - backwards - upwards - downwards - at the side - backwards - upwards - backwards - at the side - backwards - upwards - backwards - at the side - bomm - backwards - upwards - backwards - backwards - backwards - o mm - for grounded parts - for grounded parts - forwards - upwards - at the side - downwards - 50 mm - 50 mm - 40 00 m - 25 +6 - 60721 - environmental category during operation according to IEC 60721 - relative humidity during operation - air pressure according to SN 31205 - good 1 Communication/ Protocol protocol is supported - PROFINET IO protocol | |
| mounting position fastening method height width depth 100 mm required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side — of orgrounded parts — backwards — upwards — backwards — of orm — of orwards — of orm — of orwards — of orwards — of orwards — of orm — of orwards — of orm — of orwards — of orwards — of orwards — of orwards — of ormal — at the side — of orm — of orwards — of ormal — at the side — of ormal | screw and snap-on mounting onto 35 mm standard mounting rail 100 mm 22.5 mm 141.6 mm 0 mm 0 mm 50 mm 0 mm 0 mm 0 mm 50 mm 3.5 mm 50 mm 3.5 mm 50 mm 10 mm 3.5 mm 50 mm 3.6 mm 50 mm 3.7 mm 50 mm 3.8 mm 50 mm 3.8 mm 50 mm 3.9 mm 50 mm 3.9 mm 50 mm 3.5 mm 50 mm 60 mm 60 mm 60 mm 60 mm 70 mm 7 | mounting position fastening method screw ar height 100 mm width 22.5 mm depth 141.6 m required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side • for grounded parts — forwards — backwards — upwards — o mm • for grounded parts — forwards — backwards — upwards — backwards — upwards — backwards — upwards — o mm • for grounded parts — forwards — upwards — at the side — downwards — at the side — downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFINET IO protocol | |
| mounting position fastening method height width depth 100 mm required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side — of orgrounded parts — backwards — upwards — backwards — of orm — of orwards — of orm — of orwards — of orwards — of orm — of orwards — of orm — of ormards — of orm • for grounded parts — forwards — backwards — upwards — backwards — of orm — of orm • downwards — of orm • downwards — of orm — of orm • downwards — of orm — of orm • of or grounded parts — of orwards — of orm • of or grounded parts — of orm • of orm • of or grounded parts — of orm • of orm | screw and snap-on mounting onto 35 mm standard mounting rail 100 mm 22.5 mm 141.6 mm 0 mm 0 mm 50 mm 0 mm 0 mm 0 mm 50 mm 3.5 mm 50 mm 3.5 mm 50 mm 10 mm 3.5 mm 50 mm 3.6 mm 50 mm 3.7 mm 50 mm 3.8 mm 50 mm 3.8 mm 50 mm 3.9 mm 50 mm 3.9 mm 50 mm 3.5 mm 50 mm 60 mm 60 mm 60 mm 60 mm 70 mm 7 | mounting position fastening method screw ar height 100 mm width 22.5 mm depth 141.6 m required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side • for grounded parts — forwards — backwards — upwards — o mm • for grounded parts — forwards — backwards — upwards — backwards — upwards — backwards — upwards — o mm • for grounded parts — forwards — upwards — at the side — downwards — at the side — downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFINET IO protocol | |
| fastening method screw and snap-or 100 mm width 22.5 mm depth 141.6 mm required spacing • with side-by-side mounting • with side-by-side mounting 0 mm — forwards 0 mm — backwards 0 mm — downwards 50 mm — at the side 0 mm • for grounded parts 0 mm — backwards 0 mm — backwards 0 mm — upwards 50 mm — at the side 3.5 mm — downwards 50 mm Ambient conditions installation altitude at height above sea level maximum 4 000 m; For dera ambient temperature • during operation -25 +60 °C • during operation -25 +60 °C • during storage -40 +70 °C • during transport -40 +70 °C • during transport -3 K6 (no ice forma mist), 3S2 (sand relative humidity during operation 10 95 % • air pressure according to SN 31205 900 1 060 hPa Communication/ Protocol No • PROFINET IO protocol No | screw and snap-on mounting onto 35 mm standard mounting rail 100 mm 22.5 mm 141.6 mm 0 mm 0 mm 50 mm 0 mm 0 mm 0 mm 50 mm 3.5 mm 50 mm 3.5 mm 50 mm 10 mm 3.5 mm 50 mm 3.6 mm 50 mm 3.7 mm 50 mm 3.8 mm 50 mm 3.8 mm 50 mm 3.9 mm 50 mm 3.9 mm 50 mm 3.5 mm 50 mm 60 mm 60 mm 60 mm 60 mm 70 mm 7 | fastening method height width 22.5 mm depth 141.6 m required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side — for grounded parts — forwards — backwards — upwards — o mm • for grounded parts — forwards — upwards — backwards — upwards — backwards — upwards — o mm • for grounded parts — forwards — upwards — at the side — downwards — at the side — downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFINET IO protocol | rizontal, standing (observe derating) |
| height 100 mm width 22.5 mm depth 141.6 mm required spacing • with side-by-side mounting • forwards 0 mm — backwards 0 mm — downwards 50 mm — at the side 0 mm • for grounded parts 0 mm — forwards 0 mm — backwards 0 mm — upwards 50 mm — at the side 3.5 mm — downwards 50 mm Ambient conditions 10 mm installation altitude at height above sea level maximum 4 000 m; For dera ambient temperature 4 during operation -25 +60 °C • during storage -40 +70 °C • during transport -40 +70 °C environmental category during operation according to IEC 3K6 (no to forma mist), 3s2 (sand mist), 3s2 | 100 mm 22.5 mm 141.6 mm 0 mm 0 mm 50 mm 50 mm 0 mm 3.5 mm 50 mm 3.5 mm 50 mm 50 mm 50 mm 3.5 mm 50 mm 3.5 mm 50 mm | height 100 mm width 22.5 mm depth 141.6 m required spacing 411.6 m • with side-by-side mounting 0 mm — forwards 0 mm — backwards 0 mm — at the side 0 mm • for grounded parts 0 mm — backwards 0 mm — backwards 0 mm — upwards 50 mm — at the side 3.5 mm — downwards 50 mm Ambient conditions installation altitude at height above sea level maximum 4 000 m ambient temperature • during operation -25 +6 • during transport -40 +7 • during transport -40 +7 environmental category during operation according to IEC 60721 3K6 (no mist), 3S relative humidity during operation 10 95 air pressure according to SN 31205 900 1 Communication/ Protocol protocol is supported • PROFINET IO protocol | |
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| required spacing with side-by-side mounting forwards backwards upwards downwards at the side for grounded parts forwards backwards for grounded parts forwards backwards backwards backwards cat the side downwards backwards cat the side downwards at the side downwards at the side downwards ambient conditions installation altitude at height above sea level maximum ambient temperature during operation during operation during storage during transport environmental category during operation according to IEC environmental category during operation air pressure according to SN 31205 communication/ Protocol protocol is supported PROFINET IO protocol PROFISafe protocol protocol is supported AS-Interface protocol No Connections/ Terminals | 0 mm 0 mm 50 mm 0 mm 0 mm 0 mm 0 mm 0 mm | required spacing • with side-by-side mounting — forwards — backwards — upwards — downwards — at the side • for grounded parts — forwards — backwards — o mm • for grounded parts — forwards — backwards — upwards — upwards — at the side — at the side — at the side — downwards — at the side — at the side — downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFINET IO protocol | |
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| with side-by-side mounting — forwards — backwards — upwards — downwards — at the side • for grounded parts — forwards — backwards — at the side • for grounded parts — forwards — backwards — backwards — upwards — at the side — downwards — at the side — downwards — at the side — downwards — downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 good 1 060 hPa Communication/ Protocol protocol is supported • PROFINET IO protocol • PROFINET IO protocol • PROFIsafe protocol Product function bus communication protocol is supported AS-Interface protocol Connections/ Terminals | 0 mm 50 mm 0 mm 0 mm 0 mm 50 mm 3.5 mm 50 mm 3.5 mm 50 mm 1evel maximum 4 000 m; For derating see manual -25 +60 °C -40 +70 °C -40 +70 °C -40 +70 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 10 95 % 900 1 060 hPa No | with side-by-side mounting — forwards — backwards — upwards — downwards — at the side — for grounded parts — forwards — backwards — backwards — backwards — upwards — at the side — at the side — at the side — downwards — at the side — downwards — at the side — downwards Installation altitude at height above sea level maximum — ambient temperature — during operation — during storage — during transport — forwards — for mm — forwards — for mm < | |
| — backwards — upwards — downwards — at the side • for grounded parts — forwards — backwards — backwards — upwards — 10 mm — the side — of mm — backwards — upwards — at the side — downwards — at the side — downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFISafe protocol PROFISafe protocol product function bus communication protocol is supported AS-Interface protocol Connections/ Terminals | 0 mm 50 mm 0 mm 0 mm 0 mm 50 mm 3.5 mm 50 mm 3.5 mm 50 mm 1evel maximum 4 000 m; For derating see manual -25 +60 °C -40 +70 °C -40 +70 °C -40 +70 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 10 95 % 900 1 060 hPa No | - backwards - upwards - downwards - downwards - at the side • for grounded parts - forwards - backwards - upwards - upwards - upwards - at the side - downwards - at the side - downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFINET IO protocol No | |
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| - downwards - at the side • for grounded parts - forwards - backwards - upwards - at the side - at the side - of mm - backwards - upwards - at the side - downwards - downwards **Mbient conditions** installation altitude at height above sea level maximum • during operation • during storage • during transport • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 **Communication/ Protocol protocol is supported • PROFINET IO protocol • PROFISafe protocol product function bus communication protocol is supported AS-Interface protocol **Connections/ Terminals** | 50 mm 0 mm 0 mm 50 mm 3.5 mm 50 mm 1evel maximum 4 000 m; For derating see manual -25 +60 °C -40 +70 °C -40 +70 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 10 95 % 900 1 060 hPa No No No No Spring-loaded terminals (push-in) for main circuit, spring-loaded terminals (push-in) for control circuit | - downwards - at the side • for grounded parts - forwards - backwards - upwards - at the side - downwards - at the side - downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFINET IO protocol | |
| - at the side • for grounded parts - forwards - backwards - upwards - at the side - at the side - downwards Ambient conditions | 0 mm 0 mm 50 mm 3.5 mm 50 mm 1evel maximum 4 000 m; For derating see manual -25 +60 °C -40 +70 °C -40 +70 °C -40 +70 °C -40 +70 °C -40 95 % 900 1 060 hPa No No No No Spring-loaded terminals (push-in) for main circuit, spring-loaded terminals (push-in) for control circuit | - at the side • for grounded parts - forwards - backwards - upwards - at the side - downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation 10 95 air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFINET IO protocol | |
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| — forwards — backwards — upwards — at the side — downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFINET IO protocol product function bus communication protocol is supported AS-Interface protocol Connections/ Terminals | 0 mm 50 mm 3.5 mm 50 mm level maximum 4 000 m; For derating see manual -25 +60 °C -40 +70 °C -40 +70 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 10 95 % 900 1 060 hPa No No No Spring-loaded terminals (push-in) for main circuit, spring-loaded terminals (push-in) for control circuit | — forwards — backwards — upwards — at the side — downwards So mm Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFINET IO protocol | |
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| — downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFINET IO protocol • PROFIsafe protocol product function bus communication protocol is supported AS-Interface protocol Connections/ Terminals | level maximum 4 000 m; For derating see manual -25 +60 °C -40 +70 °C -40 +70 °C 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 10 95 % 900 1 060 hPa No No No Spring-loaded terminals (push-in) for main circuit, spring-loaded terminals (push-in) for control circuit | — downwards Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport environmental category during operation according to IEC 60721 relative humidity during operation air pressure according to SN 31205 Communication/ Protocol protocol is supported • PROFINET IO protocol | |
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| air pressure according to SN 31205 Communication/ Protocol protocol is supported PROFINET IO protocol PROFIsafe protocol No product function bus communication protocol is supported AS-Interface protocol Connections/ Terminals | No No No No No Spring-loaded terminals (push-in) for main circuit, spring-loaded terminals (push-in) for control circuit | air pressure according to SN 31205 900 1 Communication/ Protocol protocol is supported • PROFINET IO protocol No | remaining or any occasional confidence and the call |
| Communication/ Protocol protocol is supported ● PROFINET IO protocol ● PROFIsafe protocol Product function bus communication protocol is supported AS-Interface protocol Connections/ Terminals | No No No No No Spring-loaded terminals (push-in) for main circuit, spring-loaded terminals (push-in) for control circuit | Communication/ Protocol protocol is supported • PROFINET IO protocol No | (sand must not get into the devices), 3M6 |
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| ● PROFIsafe protocol No product function bus communication No protocol is supported AS-Interface protocol No Connections/ Terminals | No No No Spring-loaded terminals (push-in) for main circuit, spring-loaded terminals (push-in) for control circuit | · | (sand must not get into the devices), 3M6 |
| product function bus communication No protocol is supported AS-Interface protocol No Connections/ Terminals | No Spring-loaded terminals (push-in) for main circuit, spring-loaded terminals (push-in) for control circuit | PROFIsafe protocol No | (sand must not get into the devices), 3M6 |
| protocol is supported AS-Interface protocol No Connections/ Terminals | spring-loaded terminals (push-in) for main circuit, spring-loaded terminals (push-in) for control circuit | | (sand must not get into the devices), 3M6 |
| Connections/ Terminals | spring-loaded terminals (push-in) for main circuit, spring-loaded terminals (push-in) for control circuit | product function bus communication No | (sand must not get into the devices), 3M6 |
| | terminals (push-in) for control circuit | protocol is supported AS-Interface protocol | (sand must not get into the devices), 3M6 |
| type of electrical connection spring-loaded terr | terminals (push-in) for control circuit | Connections/ Terminals | (sand must not get into the devices), 3M6 |
| | | | (sand must not get into the devices), 3M6 |
| • for main current circuit spring-loaded terr | spring-loaded terminals (push-in) | • for main current circuit spring-lo | (sand must not get into the devices), 3M6 60 hPa ded terminals (push-in) for main circuit, spring-loaded |
| | spring-loaded terminals (push-in) | • for auxiliary and control circuit spring-lo | ded terminals (push-in) for main circuit, spring-loaded push-in) for control circuit |
| terminals (push-in | spring-loaded terminals (push-in) | product function bus communication protocol is supported AS-Interface protocol Connections/ Terminals type of electrical connection spring-lot terminals | (sand must not get into the devices), 3M6 |

| wire length for motor unshielded maximum | 100 m | |
|---|------------------------------------|-----|
| type of connectable conductor cross-sections | | |
| for main contacts | | |
| — solid | 1x (0.5 4 mm²) | |
| finely stranded with core end processing | 1x (0.5 2.5 mm²) | |
| finely stranded without core end processing | 1x (0.5 4 mm²) | |
| at AWG cables for main contacts | 1x (20 12) | |
| connectable conductor cross-section for main contacts | | |
| solid or stranded | 0.5 4 mm² | |
| finely stranded with core end processing | 0.5 2.5 mm² | |
| finely stranded without core end processing | 0.5 4 mm² | |
| connectable conductor cross-section for auxiliary contacts | | |
| solid or stranded | 0.5 1.5 mm² | |
| finely stranded with core end processing | 0.5 1 mm² | |
| finely stranded without core end processing | 0.5 1.5 mm² | |
| type of connectable conductor cross-sections | | |
| for auxiliary contacts | | |
| — solid | 1x (0.5 1.5 mm²), 2x (0.5 1.5 mm²) | |
| finely stranded with core end processing | 1x (0,5 1,0 mm²), 2x (0,5 1,0 mm²) | |
| finely stranded without core end processing | 1x (0.5 1.5 mm²), 2x (0.5 1.5 mm²) | |
| at AWG cables for auxiliary contacts | 1x (20 16), 2x (20 16) | |
| AWG number as coded connectable conductor cross section | | |
| for main contacts | 20 12 | |
| for auxiliary contacts | 20 16 | |
| UL/CSA ratings | | |
| operating voltage at AC | | |
| according to UL rated value | 480 V | |
| according to CSA rated value | 400 V | |
| Certificates/ approvals | | |
| General Product Approval | | EMC |



Confirmation



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For use in hazardous locations Functional Safety/Safety of Machinery

Declaration of Conformity

Test Certificates

other

Railway



Type Examination Certificate



Type Test Certificates/Test Report

Confirmation

Special Test Certificate

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=3RM1101-2AA14

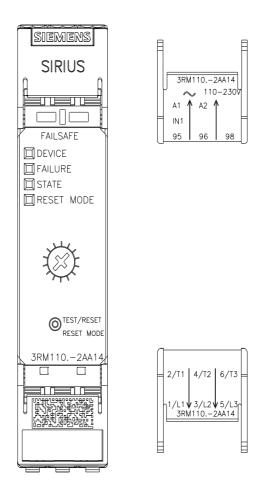
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 $\underline{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RM1101-2AA14}$

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

https://support.industry.siemens.com/cs/ww/en/ps/3RM1101-2AA14

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax de.aspx?mlfb=3RM1101-2AA14&lang=en



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