



Fuseless motor starter Direct start 600VAC Size S0 20-25A 220/240VAC 50/60HZ screw connection For screw mounting Or 35 mm rail-mounting Type of coordination 2 IQ = 150 KA Also full fills type Of coordination 1 1NO+1NC (contactor)

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| product brand name | SIRIUS |
| product designation | non-fused motor starter 3RA2 |
| design of the product | direct starter |
| manufacturer's article number | |
| <ul style="list-style-type: none"> • of the supplied contactor • of the supplied circuit-breakers • of the supplied link module | 3RT2027-1AP60 3RV2021-4DA10 3RA2921-1AA00 |
| General technical data | |
| size of the circuit-breaker | S0 |
| size of load feeder | S0 |
| product extension auxiliary switch | Yes |
| insulation voltage with degree of pollution 3 at AC rated value | 690 V |
| degree of pollution | 3 |
| surge voltage resistance rated value | 6 kV |
| shock resistance according to IEC 60068-2-27 | 6g / 11 ms |
| mechanical service life (switching cycles) of contactor typical | 10 000 000 |
| type of assignment | 2 |
| Ambient conditions | |
| ambient temperature | |
| <ul style="list-style-type: none"> • during operation • during storage • during transport | -20 ... +60 °C -50 ... +80 °C -55 ... +80 °C |
| Main circuit | |
| number of poles for main current circuit | 3 |
| design of the switching contact | electromechanical |
| adjustable current response value current of the current-dependent overload release | 20 ... 25 A |
| operating voltage | |
| <ul style="list-style-type: none"> • rated value • at AC-3 rated value maximum | 690 V 690 V |
| operating frequency rated value | 50 ... 60 Hz |
| operational current at AC-3 at 400 V rated value | 22 A |
| operating power at AC-3 | |
| <ul style="list-style-type: none"> • at 400 V rated value • at 500 V rated value | 11 000 W 15 000 W |
| Control circuit/ Control | |
| control supply voltage at AC | |
| <ul style="list-style-type: none"> • at 50 Hz rated value | 220 V |

| | |
|---|---|
| <ul style="list-style-type: none"> • at 50 Hz rated value • at 60 Hz rated value • at 60 Hz rated value | 176 ... 242 V 240 V 192 ... 264 V |
| apparent holding power of magnet coil at AC | 9.4 VA |
| inductive power factor with the holding power of the coil | 0.28 |
| Auxiliary circuit | |
| number of NC contacts for auxiliary contacts | 1 |
| number of NO contacts for auxiliary contacts | 1 |
| Protective and monitoring functions | |
| trip class | CLASS 10 |
| design of the overload release | thermal (bimetallic) |
| response value current of instantaneous short-circuit trip unit | 325 A |
| UL/CSA ratings | |
| full-load current (FLA) for 3-phase AC motor | |
| <ul style="list-style-type: none"> • at 480 V rated value • at 600 V rated value | 22.2 A 21.9 A |
| yielded mechanical performance [hp] | |
| <ul style="list-style-type: none"> • for single-phase AC motor <ul style="list-style-type: none"> — at 110/120 V rated value — at 230 V rated value • for 3-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 — at 575/600 V rated value | 2 hp 3 hp 5 hp 7.5 hp 15 hp 20 hp |
| Short-circuit protection | |
| product function short circuit protection | Yes |
| design of the short-circuit trip | magnetic |
| conditional short-circuit current (I_q) | |
| <ul style="list-style-type: none"> • at 400 V according to IEC 60947-4-1 rated value • at 500 V according to IEC 60947-4-1 rated value | 153 000 A 100 000 A |
| Installation/ mounting/ dimensions | |
| mounting position | vertical |
| fastening method | Snap-mounted to DIN rail or screw-mounted with additional push-in lug |
| height | 193.1 mm |
| width | 45 mm |
| depth | 97.1 mm |
| required spacing | |
| <ul style="list-style-type: none"> • for grounded parts <ul style="list-style-type: none"> — forwards — backwards — upwards — at the side — downwards • for live parts <ul style="list-style-type: none"> — forwards — backwards — upwards — downwards — at the side | 10 mm 0 mm 30 mm 9 mm 10 mm 10 mm 0 mm 30 mm 10 mm 9 mm |
| Connections/ Terminals | |
| type of electrical connection for main current circuit | screw-type terminals |
| type of connectable conductor cross-sections | |
| <ul style="list-style-type: none"> • for main contacts stranded • at AWG cables for main contacts | 1 ... 10 mm ² , 2x (2.5 ... 6 mm ²) 2x (16 ... 12), 2x (14 ... 8) |
| connectable conductor cross-section for main contacts finely stranded with core end processing | 1 ... 6 mm ² |
| Safety related data | |

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| B10 value with high demand rate according to SN 31920 | 1 000 000 |
| proportion of dangerous failures with high demand rate according to SN 31920 | 73 % |
| protection class IP on the front according to IEC 60529 | IP20 |
| touch protection on the front according to IEC 60529 | finger-safe, for vertical contact from the front |

Certificates/ approvals

| | | |
|--------------------------|--------------------------------|---------------------------|
| General Product Approval | For use in hazardous locations | Declaration of Conformity |
|--------------------------|--------------------------------|---------------------------|



[Confirmation](#)



| | | |
|---------------------------|-------------------|-------------------|
| Declaration of Conformity | Test Certificates | Marine / Shipping |
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EG-Konf.

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



ABS



BUREAU VERITAS



LRS

| | | |
|-------------------|-------|---------|
| Marine / Shipping | other | Railway |
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PRS



RINA



RMRS



DNV-GL

[Confirmation](#)

[Vibration and Shock](#)

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=3RA2120-4DA27-0AP6>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA2120-4DA27-0AP6>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2120-4DA27-0AP6>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA2120-4DA27-0AP6&lang=en

Characteristic: Tripping characteristics, I_t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2120-4DA27-0AP6/char>

Further characteristics (e.g. electrical endurance, switching frequency)

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RA2120-4DA27-0AP6&objecttype=14&gridview=view1>

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