

FUSELESS MOTOR STARTER DIRECT START 600V AC SZ S0 17-22A 24V DC  
SCREW CONNECTION FOR SCREW MOUNTING OR 35 MM RAIL-MOUNTING  
TYPE OF COORDINATION 2 IQ = 50 KA ALSO FULFILLS TYPE OF  
COORDINATION 1 1NO+1NC (MSP) 1NO+1NC (CONTACTOR)

|                                                                                     |                               |
|-------------------------------------------------------------------------------------|-------------------------------|
| product brand name                                                                  | SIRIUS                        |
| product designation                                                                 | non-fused motor starter 3RA2  |
| design of the product                                                               | direct starter                |
| manufacturer's article number                                                       |                               |
| • of the supplied contactor                                                         | <a href="#">3RT2027-1BB40</a> |
| • of the supplied circuit-breakers                                                  | <a href="#">3RV2021-4CA15</a> |
| • of the supplied link module                                                       | <a href="#">3RA2921-1BA00</a> |
| <b>General technical data</b>                                                       |                               |
| 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 (operating cycles) of contactor typical                     | 10 000 000                    |
| type of coordination                                                                | 2                             |
| Weight                                                                              | 0.95 kg                       |
| <b>Ambient conditions</b>                                                           |                               |
| ambient temperature                                                                 |                               |
| • during operation                                                                  | -20 ... +60 °C                |
| • during storage                                                                    | -50 ... +80 °C                |
| • during transport                                                                  | -55 ... +80 °C                |
| <b>Main circuit</b>                                                                 |                               |
| 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 | 17 ... 22 A                   |
| operating voltage                                                                   |                               |
| • rated value                                                                       | 690 V                         |
| • at AC-3 rated value maximum                                                       | 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                                                             |                               |
| • at 400 V rated value                                                              | 11 000 W                      |
| • at 500 V rated value                                                              | 11 000 W                      |
| <b>Control circuit/ Control</b>                                                     |                               |
| control supply voltage at DC rated value                                            | 24 V                          |
| holding power of magnet coil at DC                                                  | 5.9 W                         |
| <b>Auxiliary circuit</b>                                                            |                               |
| number of NC contacts for auxiliary contacts                                        | 2                             |
| number of NO contacts for auxiliary contacts                                        | 2                             |
| <b>Protective and monitoring functions</b>                                          |                               |
| trip class                                                                          | CLASS 10                      |
| design of the overload release                                                      | thermal (bimetallic)          |
| response value current of instantaneous short-circuit trip unit                     | 286 A                         |
| <b>UL/CSA ratings</b>                                                               |                               |
| full-load current (FLA) for 3-phase AC motor                                        |                               |
| • at 480 V rated value                                                              | 22 A                          |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                        |                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|-------------------|
| <ul style="list-style-type: none"><li>• at 600 V rated value</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 21.9 A                                                                                 |                   |
| <b>yielded mechanical performance [hp]</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                        |                   |
| <ul style="list-style-type: none"><li>• for single-phase AC motor<ul style="list-style-type: none"><li>— at 110/120 V rated value</li><li>— at 230 V rated value</li></ul></li><li>• for 3-phase AC motor<ul style="list-style-type: none"><li>— at 200/208 V rated value</li><li>— at 220/230 V rated value</li><li>— at 460/480 V rated value</li><li>— at 575/600 V rated value</li></ul></li></ul>                                                                                                                                                                                        | 1.5 hp<br>3 hp<br><br>5 hp<br>7.5 hp<br>15 hp<br>20 hp                                 |                   |
| <b>Short-circuit protection</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                        |                   |
| <b>product function short circuit protection</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Yes                                                                                    |                   |
| <b>design of the short-circuit trip</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | magnetic                                                                               |                   |
| <b>conditional short-circuit current (I<sub>q</sub>)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                        |                   |
| <ul style="list-style-type: none"><li>• at 400 V according to IEC 60947-4-1 rated value</li><li>• at 500 V according to IEC 60947-4-1 rated value</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                   | 153 000 A<br>100 000 A                                                                 |                   |
| <b>Installation/ mounting/ dimensions</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                        |                   |
| <b>mounting position</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | vertical                                                                               |                   |
| <b>fastening method</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Snap-mounted to DIN rail or screw-mounted with additional push-in lug                  |                   |
| <b>height</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 193.1 mm                                                                               |                   |
| <b>width</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 45 mm                                                                                  |                   |
| <b>depth</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 107 mm                                                                                 |                   |
| <b>required spacing</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                        |                   |
| <ul style="list-style-type: none"><li>• for grounded parts<ul style="list-style-type: none"><li>— forwards</li><li>— backwards</li><li>— upwards</li><li>— at the side</li><li>— downwards</li></ul></li><li>• for live parts<ul style="list-style-type: none"><li>— forwards</li><li>— backwards</li><li>— upwards</li><li>— downwards</li><li>— at the side</li></ul></li></ul>                                                                                                                                                                                                             | 10 mm<br>0 mm<br>30 mm<br>9 mm<br>10 mm<br><br>10 mm<br>0 mm<br>30 mm<br>10 mm<br>9 mm |                   |
| <b>Connections/ Terminals</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                        |                   |
| type of electrical connection for main current circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | screw-type terminals                                                                   |                   |
| type of connectable conductor cross-sections for main contacts stranded                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 1 ... 10 mm², 2x (2.5 ... 6 mm²)                                                       |                   |
| connectable conductor cross-section for main contacts finely stranded with core end processing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1 ... 6 mm²                                                                            |                   |
| <b>Safety related data</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                        |                   |
| proportion of dangerous failures with high demand rate according to SN 31920                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 73 %                                                                                   |                   |
| <b>B10 value with high demand rate according to SN 31920</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 1 000 000                                                                              |                   |
| <b>Electrical Safety</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                        |                   |
| <b>protection class IP on the front according to IEC 60529</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | IP20                                                                                   |                   |
| <b>touch protection on the front according to IEC 60529</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | finger-safe, for vertical contact from the front                                       |                   |
| <b>Approvals Certificates</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                        |                   |
| General Product Approval                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | For use in hazardous locations                                                         | Test Certificates |
| <div><div><br/>EG-Konf.</div><div></div><div><br/>UL</div><div></div><div><br/>ATEX</div><div><a href="#">Type Test Certificates/Test Report</a></div></div> |                                                                                        |                   |
| Test Certificates                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Maritime application                                                                   |                   |

[Special Test Certificate](#)



| Maritime application                                                              | other                                                                                                                                                                  | Railway                      | Dangerous goods                                                                   |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|-----------------------------------------------------------------------------------|
|  | <br> | <a href="#">Confirmation</a> | <a href="#">Special Test Certificate</a><br><a href="#">Transport Information</a> |

## Environment

[Environmental Confirmations](#)

## Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

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=3RA2125-4CA27-0BB4>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA2125-4CA27-0BB4>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2125-4CA27-0BB4>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RA2125-4CA27-0BB4&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA2125-4CA27-0BB4&lang=en)

Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2125-4CA27-0BB4/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RA2125-4CA27-0BB4&objecttype=14&gridview=view1>

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