

Fuseless motor starter Direct start 600VAC Size S0 1.8-2.5A 24V  
 DC screw connection For snapping onto 60 mm busbar systems  
 Type of coordination 2 IQ = 150 KA Also full fills type Of coordination  
 1 1NO+1NC (contactor)



|                                                                                                                                                                                                            |                                                                                                                                                                                                      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product brand name</b>                                                                                                                                                                                  | SIRIUS                                                                                                                                                                                               |
| <b>Product designation</b>                                                                                                                                                                                 | non-fused motor starter 3RA2                                                                                                                                                                         |
| <b>Design of the product</b>                                                                                                                                                                               | direct starter                                                                                                                                                                                       |
| <b>Manufacturer's article number</b>                                                                                                                                                                       |                                                                                                                                                                                                      |
| <ul style="list-style-type: none"> <li>• of the supplied contactor</li> <li>• of the supplied circuit-breakers</li> <li>• of the supplied busbar adapter</li> <li>• of the supplied link module</li> </ul> | <ul style="list-style-type: none"> <li><a href="#">3RT2023-1BB40</a></li> <li><a href="#">3RV2011-1CA10</a></li> <li><a href="#">8US1251-5NT10</a></li> <li><a href="#">3RA2921-1BA00</a></li> </ul> |

| General technical data                                                                           |       |
|--------------------------------------------------------------------------------------------------|-------|
| <b>Size of the circuit-breaker</b>                                                               | S00   |
| <b>Size of load feeder</b>                                                                       | S0    |
| <b>Product extension</b>                                                                         |       |
| <ul style="list-style-type: none"> <li>• Auxiliary switch</li> </ul>                             | Yes   |
| <b>Insulation voltage</b>                                                                        |       |
| <ul style="list-style-type: none"> <li>• with degree of pollution 3 at AC rated value</li> </ul> | 690 V |
| <b>Degree of pollution</b>                                                                       | 3     |
| <b>Surge voltage resistance rated value</b>                                                      | 6 kV  |
| <b>Protection class IP</b>                                                                       |       |
| <ul style="list-style-type: none"> <li>• on the front</li> </ul>                                 | IP20  |

|                                                   |            |
|---------------------------------------------------|------------|
| • of the terminal                                 | IP00       |
| <b>Shock resistance</b>                           |            |
| • acc. to IEC 60068-2-27                          | 6g / 11 ms |
| <b>Mechanical service life (switching cycles)</b> |            |
| • of contactor typical                            | 10 000 000 |
| <b>Type of assignment</b>                         | 2          |

#### Main circuit

|                                                                                   |                   |
|-----------------------------------------------------------------------------------|-------------------|
| <b>Number of poles for main current circuit</b>                                   | 3                 |
| <b>Design of the switching contact</b>                                            | electromechanical |
| <b>Adjustable pick-up value current of the current-dependent overload release</b> | 1.8 ... 2.5 A     |
| <b>Operating voltage</b>                                                          |                   |
| • rated value                                                                     | 690 V             |
| • at AC-3 rated value maximum                                                     | 690 V             |
| <b>Operating frequency rated value</b>                                            | 50 ... 60 Hz      |
| <b>Operating current</b>                                                          |                   |
| • at AC-3                                                                         |                   |
| — at 400 V rated value                                                            | 1.9 A             |
| <b>Operating power</b>                                                            |                   |
| • at AC-3                                                                         |                   |
| — at 400 V rated value                                                            | 750 W             |
| — at 500 V rated value                                                            | 1 100 W           |

#### Control circuit/ Control

|                                           |       |
|-------------------------------------------|-------|
| <b>Control supply voltage at DC</b>       |       |
| • rated value                             | 24 V  |
| <b>Holding power of magnet coil at DC</b> | 5.9 W |

#### Auxiliary circuit

|                                                     |   |
|-----------------------------------------------------|---|
| <b>Number of NC contacts for auxiliary contacts</b> | 1 |
| <b>Number of NO contacts for auxiliary contacts</b> | 1 |

#### Protective and monitoring functions

|                                            |                      |
|--------------------------------------------|----------------------|
| <b>Trip class</b>                          | CLASS 10             |
| <b>Design of the overload release</b>      | thermal (bimetallic) |
| <b>Response value current</b>              |                      |
| • of instantaneous short-circuit trip unit | 32.5 A               |

#### UL/CSA ratings

|                                                         |        |
|---------------------------------------------------------|--------|
| <b>Full-load current (FLA) for three-phase AC motor</b> |        |
| • at 480 V rated value                                  | 2.15 A |
| • at 600 V rated value                                  | 2.24 A |
| <b>Yielded mechanical performance [hp]</b>              |        |
| • for single-phase AC motor                             |        |

|                            |         |
|----------------------------|---------|
| — at 230 V rated value     | 0.17 hp |
| • for three-phase AC motor |         |
| — at 200/208 V rated value | 0.5 hp  |
| — at 220/230 V rated value | 0.5 hp  |
| — at 460/480 V rated value | 1 hp    |
| — at 575/600 V rated value | 1.5 hp  |

### Short-circuit protection

|                                                          |           |
|----------------------------------------------------------|-----------|
| <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> |           |
| • at 400 V acc. to IEC 60947-4-1 rated value             | 153 000 A |

### Installation/ mounting/ dimensions

|                          |                                        |
|--------------------------|----------------------------------------|
| <b>Mounting position</b> | vertical                               |
| <b>Mounting type</b>     | for snapping onto 60 mm busbar systems |
| <b>Height</b>            | 260 mm                                 |
| <b>Width</b>             | 45 mm                                  |
| <b>Depth</b>             | 165 mm                                 |
| <b>Required spacing</b>  |                                        |
| • for grounded parts     |                                        |
| — forwards               | 10 mm                                  |
| — Backwards              | 0 mm                                   |
| — upwards                | 30 mm                                  |
| — at the side            | 9 mm                                   |
| — downwards              | 10 mm                                  |
| • for live parts         |                                        |
| — forwards               | 10 mm                                  |
| — Backwards              | 0 mm                                   |
| — upwards                | 30 mm                                  |
| — downwards              | 10 mm                                  |
| — at the side            | 9 mm                                   |




### Connections/ Terminals

|                                                              |                                                            |
|--------------------------------------------------------------|------------------------------------------------------------|
| <b>Type of electrical connection</b>                         |                                                            |
| • for main current circuit                                   | screw-type terminals                                       |
| <b>Type of connectable conductor cross-sections</b>          |                                                            |
| • for main contacts                                          |                                                            |
| — stranded                                                   | 1 ... 10 mm <sup>2</sup> , 2x (2.5 ... 6 mm <sup>2</sup> ) |
| • at AWG conductors for main contacts                        | 2x (16 ... 12), 2x (14 ... 8)                              |
| <b>Connectable conductor cross-section for main contacts</b> |                                                            |
| • finely stranded with core end processing                   | 1 ... 6 mm <sup>2</sup>                                    |

## Safety related data

|                                                                                                                                |           |
|--------------------------------------------------------------------------------------------------------------------------------|-----------|
| <b>B10 value</b> <ul style="list-style-type: none"><li>with high demand rate acc. to SN 31920</li></ul>                        | 1 000 000 |
| <b>Proportion of dangerous failures</b> <ul style="list-style-type: none"><li>with high demand rate acc. to SN 31920</li></ul> | 73 %      |

## Certificates/ approvals

| General Product Approval                                                          | For use in hazardous locations                                                            | Declaration of Conformity                                                                     | other                        |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|------------------------------|
|  | <br>ATEX | <br>EG-Konf. | <a href="#">Confirmation</a> |

## 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=3RA2120-1CD23-0BB4>

### Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA2120-1CD23-0BB4>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2120-1CD23-0BB4>

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

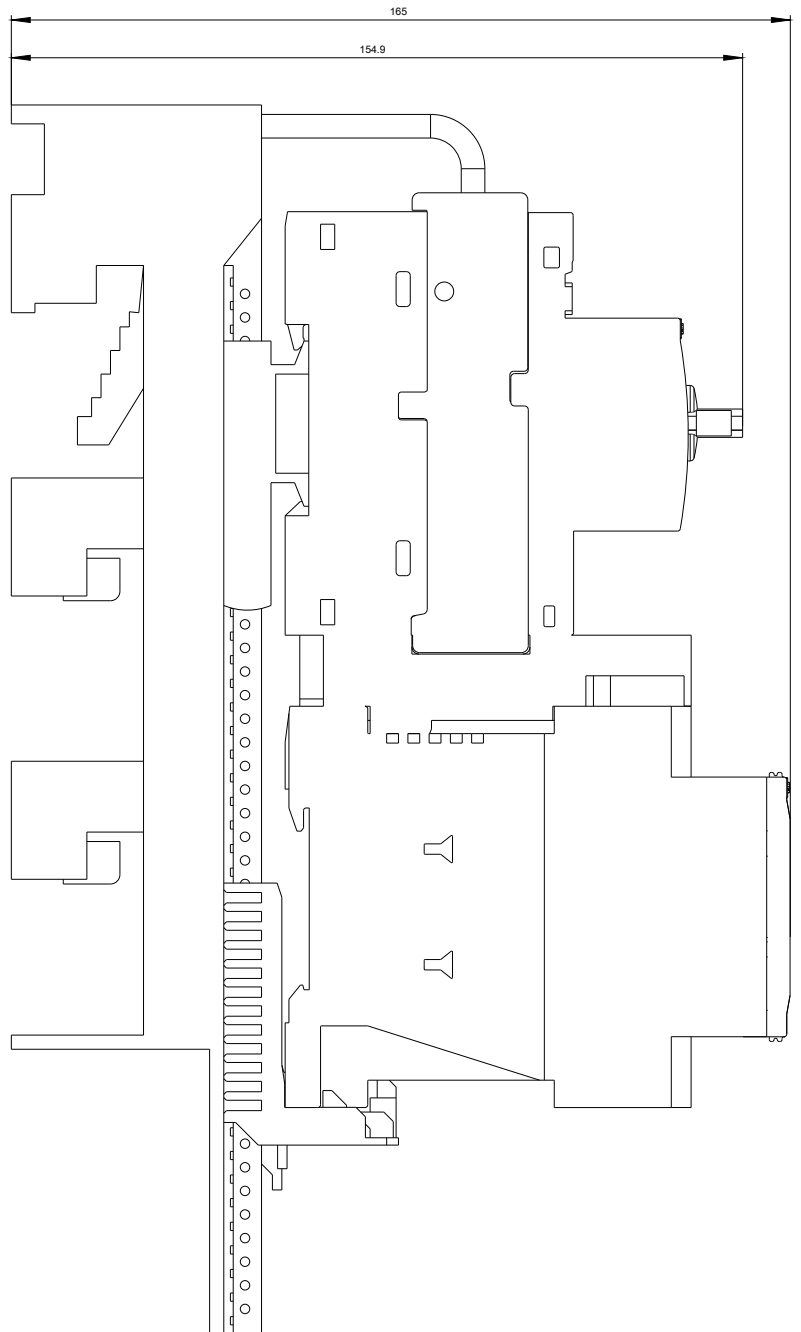
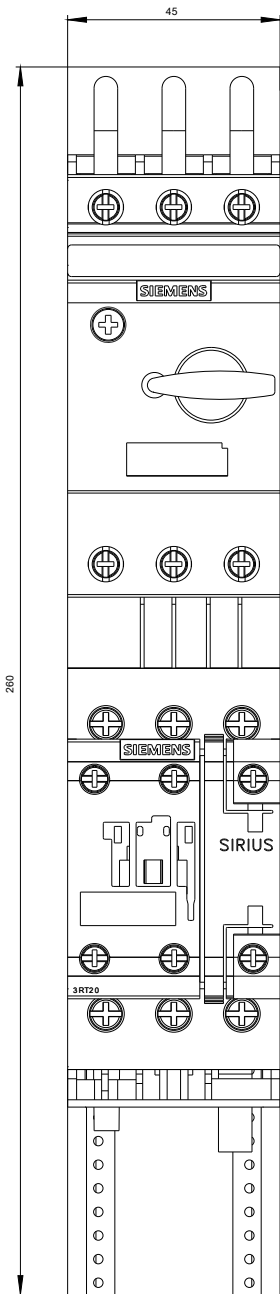
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RA2120-1CD23-0BB4&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA2120-1CD23-0BB4&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2120-1CD23-0BB4/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RA2120-1CD23-0BB4&objecttype=14&gridview=view1>







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