

SIRIUS, COMPACT STARTER, DIRECT STARTER . 690 V, 24 V DC, 3 ... 12 A, IP20, CONN. MAIN CIRCUIT: PLUG-IN, W/O TERMINALS, CONN. CONTROL CIRCUIT: SPRING-LOADED TERMINAL



|                       |                 |
|-----------------------|-----------------|
| product brandname     | SIRIUS          |
| Product designation   | compact starter |
| Design of the product | direct starter  |

| General technical data                         |                                                                     |
|------------------------------------------------|---------------------------------------------------------------------|
| Product function                               |                                                                     |
| • Control circuit interface to parallel wiring | No                                                                  |
| Product extension                              |                                                                     |
| • Auxiliary switch                             | Yes                                                                 |
| Insulation voltage                             |                                                                     |
| • rated value                                  | 690 V                                                               |
| Degree of pollution                            | 3                                                                   |
| Surge voltage resistance rated value           | 6 000 V                                                             |
| Protection class IP                            | IP20                                                                |
| Shock resistance                               | a=60 m/s2 (6g) with 10 ms per 3 shocks in all axes                  |
| Vibration resistance                           | f= 4 ... 5.8 Hz, d= 15 mm; f= 5.8 ... 500 Hz, a= 20 m/s²; 10 cycles |
| Mechanical service life (switching cycles)     |                                                                     |
| • of the main contacts typical                 | 10 000 000                                                          |
| • of auxiliary contacts typical                | 10 000 000                                                          |
| • of the signaling contacts typical            | 10 000 000                                                          |

|                                                                                   |                                                 |
|-----------------------------------------------------------------------------------|-------------------------------------------------|
| <b>Electrical endurance (switching cycles) of auxiliary contacts</b>              |                                                 |
| • at DC-13 at 6 A at 24 V typical                                                 | 100 000                                         |
| • at AC-15 at 6 A at 230 V typical                                                | 500 000                                         |
| <b>Type of assignment</b>                                                         | continuous operation according to IEC 60947-6-2 |
| <b>Equipment marking</b>                                                          |                                                 |
| • acc. to DIN EN 61346-2                                                          | Q                                               |
| • acc. to DIN EN 81346-2                                                          | Q                                               |
| <b>Ambient conditions</b>                                                         |                                                 |
| <b>Installation altitude at height above sea level maximum</b>                    | 2 000 m                                         |
| <b>Ambient temperature</b>                                                        |                                                 |
| • during operation                                                                | -20 ... +60 °C                                  |
| • during storage                                                                  | -55 ... +80 °C                                  |
| • during transport                                                                | -55 ... +80 °C                                  |
| <b>Relative humidity during operation</b>                                         | 10 ... 90 %                                     |
| <b>Main circuit</b>                                                               |                                                 |
| <b>Number of poles for main current circuit</b>                                   | 3                                               |
| <b>Adjustable pick-up value current of the current-dependent overload release</b> | 3 ... 12 A                                      |
| <b>Formula for making capacity limit current</b>                                  | 12 x I <sub>e</sub>                             |
| <b>Formula for interruption capacity limit current</b>                            | 10 x I <sub>e</sub>                             |
| <b>Mechanical power output for 4-pole AC motor</b>                                |                                                 |
| • at 400 V rated value                                                            | 5.5 kW                                          |
| • at 500 V rated value                                                            | 5.5 kW                                          |
| • at 690 V rated value                                                            | 7.5 kW                                          |
| <b>Operating voltage</b>                                                          |                                                 |
| • at AC-3 rated value maximum                                                     | 690 V                                           |
| <b>Operating current</b>                                                          |                                                 |
| • at AC at 400 V rated value                                                      | 12 A                                            |
| • at AC-43                                                                        |                                                 |
| — at 400 V rated value                                                            | 11.5 A                                          |
| — at 500 V rated value                                                            | 12.4 A                                          |
| — at 690 V rated value                                                            | 8.9 A                                           |
| <b>No-load switching frequency</b>                                                | 3 600 1/h                                       |
| <b>Operating frequency</b>                                                        |                                                 |
| • at AC-41 acc. to IEC 60947-6-2 maximum                                          | 750 1/h                                         |
| • at AC-43 acc. to IEC 60947-6-2 maximum                                          | 250 1/h                                         |
| <b>Control circuit/ Control</b>                                                   |                                                 |
| <b>Type of voltage</b>                                                            | AC                                              |
| <b>Holding power</b>                                                              |                                                 |

- at DC maximum

2.9 W

#### Auxiliary circuit

|                                                                   |        |
|-------------------------------------------------------------------|--------|
| <b>Number of NC contacts</b>                                      |        |
| • for auxiliary contacts                                          | 0      |
| <b>Number of NO contacts</b>                                      |        |
| • for auxiliary contacts                                          | 0      |
| • of instantaneous short-circuit trip unit for signaling contact  | 0      |
| <b>Number of CO contacts</b>                                      |        |
| • of the current-dependent overload release for signaling contact | 0      |
| <b>Operating current of auxiliary contacts at AC-12 maximum</b>   | 10 A   |
| <b>Operating current of auxiliary contacts at DC-13</b>           |        |
| • at 250 V                                                        | 0.27 A |

#### Protective and monitoring functions

|                                                                  |                            |
|------------------------------------------------------------------|----------------------------|
| <b>Trip class</b>                                                | CLASS 10 and 20 adjustable |
| <b>Off-delay time</b>                                            | 50 ms                      |
| <b>Operational short-circuit current breaking capacity (Ics)</b> |                            |
| • at 400 V                                                       | 53 kA                      |
| • at 500 V rated value                                           | 3 kA                       |
| • at 690 V rated value                                           | 3 kA                       |

#### UL/CSA ratings

|                                                         |        |
|---------------------------------------------------------|--------|
| <b>Full-load current (FLA) for three-phase AC motor</b> |        |
| • at 480 V rated value                                  | 12 A   |
| • at 600 V rated value                                  | 12 A   |
| <b>Yielded mechanical performance [hp]</b>              |        |
| • for three-phase AC motor                              |        |
| — at 200/208 V rated value                              | 3 hp   |
| — at 220/230 V rated value                              | 3 hp   |
| — at 460/480 V rated value                              | 7.5 hp |
| — at 575/600 V rated value                              | 10 hp  |

#### Short-circuit protection

|                                                                 |                  |
|-----------------------------------------------------------------|------------------|
| <b>Product function Short circuit protection</b>                | Yes              |
| <b>Design of the fuse link</b>                                  |                  |
| • for short-circuit protection of the auxiliary switch required | fuse gL/gG: 10 A |

#### Installation/ mounting/ dimensions

|                          |                                                |
|--------------------------|------------------------------------------------|
| <b>Mounting position</b> | any                                            |
| • recommended            | vertical, on horizontal standard mounting rail |

|                      |                            |
|----------------------|----------------------------|
| <b>Mounting type</b> | screw and snap-on mounting |
| <b>Height</b>        | 191 mm                     |
| <b>Width</b>         | 45 mm                      |
| <b>Depth</b>         | 165 mm                     |

#### Connections/Terminals

|                                                                                                                                                   |                                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| <b>Product function</b>                                                                                                                           |                                                        |
| <ul style="list-style-type: none"> <li>removable terminal for main circuit</li> </ul>                                                             | Yes                                                    |
| <ul style="list-style-type: none"> <li>removable terminal for auxiliary and control circuit</li> </ul>                                            | Yes                                                    |
| <b>Type of electrical connection</b>                                                                                                              |                                                        |
| <ul style="list-style-type: none"> <li>for main current circuit</li> </ul>                                                                        | plug-in without terminals                              |
| <ul style="list-style-type: none"> <li>for auxiliary and control current circuit</li> </ul>                                                       | spring-loaded terminals                                |
| <b>Type of connectable conductor cross-sections</b>                                                                                               |                                                        |
| <ul style="list-style-type: none"> <li>for main contacts <ul style="list-style-type: none"> <li>solid</li> </ul> </li> </ul>                      | 2x (1.5 ... 6 mm <sup>2</sup> ), 1x 10 mm <sup>2</sup> |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>finely stranded with core end processing</li> </ul> </li> </ul>    | 2x (1.5 ... 6 mm <sup>2</sup> )                        |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>finely stranded without core end processing</li> </ul> </li> </ul> | 2x (1.5 ... 6 mm <sup>2</sup> )                        |
| <ul style="list-style-type: none"> <li>at AWG conductors for main contacts</li> </ul>                                                             | 2x (16 ... 10), 1x 8                                   |
| <b>Type of connectable conductor cross-sections</b>                                                                                               |                                                        |
| <ul style="list-style-type: none"> <li>for auxiliary contacts <ul style="list-style-type: none"> <li>solid</li> </ul> </li> </ul>                 | 2x (0.25 ... 1.5 mm <sup>2</sup> )                     |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>finely stranded with core end processing</li> </ul> </li> </ul>    | 2x (0.25 ... 1.5 mm <sup>2</sup> )                     |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>finely stranded without core end processing</li> </ul> </li> </ul> | 2x (0.25 ... 1.5 mm <sup>2</sup> )                     |
| <ul style="list-style-type: none"> <li>at AWG conductors for auxiliary contacts</li> </ul>                                                        | 2x (24 ... 16)                                         |

#### Safety related data

|                                                                                          |           |
|------------------------------------------------------------------------------------------|-----------|
| <b>B10 value</b>                                                                         |           |
| <ul style="list-style-type: none"> <li>with high demand rate acc. to SN 31920</li> </ul> | 3 000 000 |
| <b>Proportion of dangerous failures</b>                                                  |           |
| <ul style="list-style-type: none"> <li>with high demand rate acc. to SN 31920</li> </ul> | 50 %      |

#### Communication/ Protocol

|                                                                                                                  |                   |
|------------------------------------------------------------------------------------------------------------------|-------------------|
| <b>Product function Bus communication</b>                                                                        | Yes               |
| <b>Protocol is supported</b>                                                                                     |                   |
| <ul style="list-style-type: none"> <li>IO-Link protocol</li> </ul>                                               | Yes               |
| <b>IO-Link transfer rate</b>                                                                                     | COM2 (38,4 kBaud) |
| <b>Point-to-point cycle time between master and IO-Link device minimum</b>                                       | 2.5 ms            |
| <b>Type of voltage supply via input/output link master</b>                                                       | No                |
| <b>Amount of data</b>                                                                                            |                   |
| <ul style="list-style-type: none"> <li>of the address area of the inputs with cyclical transfer total</li> </ul> | 2 byte            |

- of the address area of the outputs with cyclical transfer total

2 byte

### Electromagnetic compatibility

|                                                      |                            |
|------------------------------------------------------|----------------------------|
| Field-bound parasitic coupling acc. to IEC 61000-4-3 | 80 ... 3000 MHz at 10V/m   |
| Electrostatic discharge acc. to IEC 61000-4-2        | 8 kV                       |
| Conducted HF-interference emissions acc. to CISPR11  | 150 kHz ... 30 MHz Class A |
| Field-bound HF-interference emission acc. to CISPR11 | 30 ... 1000 MHz Class A    |

### Supply voltage

|                                           |     |
|-------------------------------------------|-----|
| Supply voltage required Auxiliary voltage | Yes |
|-------------------------------------------|-----|

### Display

|                                                                                                       |                    |
|-------------------------------------------------------------------------------------------------------|--------------------|
| Display version                                                                                       | green/red dual LED |
| <ul style="list-style-type: none"> <li>• as status display of the input/output link device</li> </ul> |                    |

### Certificates/approvals

| General Product Approval                                                                  | EMC                                                                                            | Functional Safety/Safety of Machinery                                                       |
|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| <br>CCC | <br>EAC      | <br>VDE |
| <br>CSA | <br>C-Tick |                                                                                             |
| <br>UL  |                                                                                                |                                                                                             |

| Declaration of Conformity                                                                       | Test Certificates                                 | Shipping Approval                                                                                     |
|-------------------------------------------------------------------------------------------------|---------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| <br>EG-Konf. | <a href="#">Typprüfbescheinigung/Werkszeugnis</a> | <br>BUREAU VERITAS |
|                                                                                                 |                                                   | <br>LRS            |
|                                                                                                 |                                                   | <br>PRS          |
|                                                                                                 |                                                   | <br>RINA         |

| Shipping Approval                                                                           | other                                                           |
|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| <br>RMRS | <a href="#">Umweltbestätigung</a> <a href="#">Bestätigungen</a> |

### Further information

Information- and Downloadcenter (Catalogs, Brochures,...)  
<http://www.siemens.com/industrial-controls/catalogs>

Industry Mall (Online ordering system)  
<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RA6400-2DB43>

**Cax online generator**

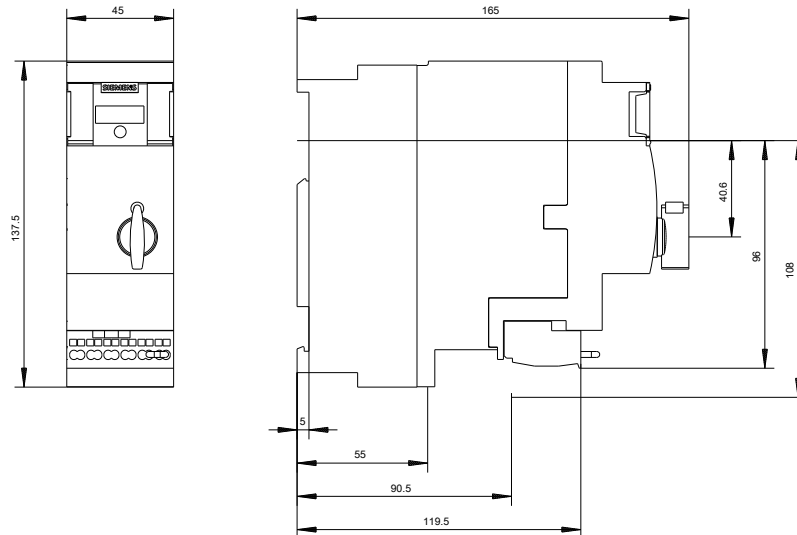
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA6400-2DB43>

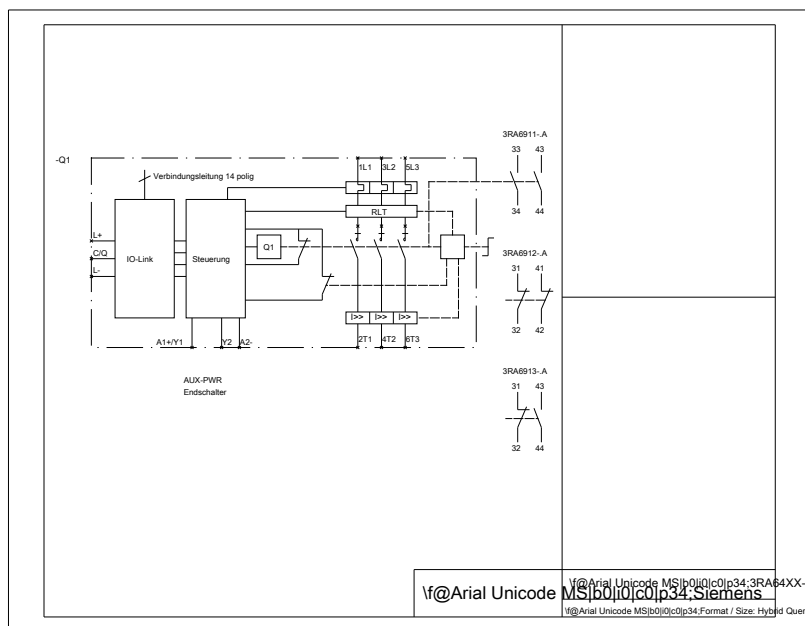
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

<https://support.industry.siemens.com/cs/ww/en/ps/3RA6400-2DB43>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RA6400-2DB43&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA6400-2DB43&lang=en)





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