



SIRIUS, COMPACT STARTER, DIRECT STARTER 690 V, 24 V AC/DC, 50 ... 60 HZ, 1 ... 4 A, IP20, CONNECTION MAIN CIRCUIT: PLUGGABLE, WITHOUT TERMINALS, CONNECTION AUXILIARY CIRCUIT: SCREW TERMINAL

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

| General technical data:  |   |  |
|--|---|--|
| <b>Product function</b>  |   |  |
| <ul style="list-style-type: none"> <li>Control circuit interface to parallel wiring</li> </ul>   |   | Yes  |
| <b>Insulation voltage</b>  |   |  |
| <ul style="list-style-type: none"> <li>Rated value</li> </ul>  | V | 690  |
| <b>maximum permissible voltage for safe isolation</b>  |   |  |
| <ul style="list-style-type: none"> <li>between auxiliary and auxiliary circuit</li> <li>between control and auxiliary circuit</li> <li>between main and auxiliary circuit</li> </ul> | V | 250<br>300<br>400  |
| <b>Degree of pollution</b>   |   | 3  |
| <b>Shock resistance</b>  |   | a=60 m/s <sup>2</sup> (6g) with 10 ms per 3 shocks in all axes                   |
| <b>Vibration resistance</b>  |   | f= 4 ... 5.8 Hz, d= 15 mm; f= 5.8 ... 500 Hz, a= 20 m/s <sup>2</sup> ; 10 cycles |
| <b>Surge voltage resistance Rated value</b>  | V | 6 000  |
| <b>Mechanical service life (switching cycles)</b>  |   |  |
| <ul style="list-style-type: none"> <li>of the main contacts typical</li> <li>of the auxiliary contacts typical</li> <li>of the signaling contacts typical</li> </ul>                 |   | 10 000 000<br>10 000 000<br>10 000 000   |
| <b>Electrical endurance (switching cycles) of the auxiliary contacts</b>   |   |  |
| <ul style="list-style-type: none"> <li>at DC-13 at 6 A at 24 V typical</li> <li>at AC-15 at 6 A at 230 V typical</li> </ul>  |   | 100 000<br>500 000   |

|   |  |   |
|---|--|---|
| <b>Electrical endurance (switching cycles) of the signaling contacts</b>  |  |   |
| <ul style="list-style-type: none"> <li>• at DC-13 at 6 A at 24 V typical</li> <li>• at AC-15 at 6 A at 230 V typical</li> </ul> |  | 100 000<br>500 000                              |
| <b>Type of assignment</b>   |  | continuous operation according to IEC 60947-6-2 |
| <b>Protection class IP</b>  |  | IP20  |
| <b>Equipment marking</b>  |  |   |
| <ul style="list-style-type: none"> <li>• acc. to DIN EN 61346-2</li> </ul>  |  | Q   |

#### Main circuit:

|   |                  |                                  |
|---|------------------|----------------------------------|
| <b>Number of poles for main current circuit</b>   |                  | 3                                |
| <b>Adjustable response value current of the current-dependent overload release</b>  | A                | 1 ... 4                          |
| <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>  |                  |                                  |
| <ul style="list-style-type: none"> <li>• at 400 V Rated value</li> <li>• at 500 V Rated value</li> <li>• at 690 V Rated value</li> </ul>  | kW<br>kW<br>kW   | 1.5<br>2.2<br>3                  |
| <b>Operating voltage</b>  |                  |                                  |
| <ul style="list-style-type: none"> <li>• at AC-3 Rated value maximum</li> </ul>   | V                | 690                              |
| <b>Operating current</b>  |                  |                                  |
| <ul style="list-style-type: none"> <li>• with AC at 400 V Rated value</li> <li>• at AC-43 <ul style="list-style-type: none"> <li>— at 400 V Rated value</li> <li>— at 500 V Rated value</li> <li>— at 690 V Rated value</li> </ul> </li> </ul>  | A<br>A<br>A<br>A | 4<br>3.6<br>3.9<br>3.8           |
| <b>Operating power</b>  |                  |                                  |
| <ul style="list-style-type: none"> <li>• at AC-3 <ul style="list-style-type: none"> <li>— at 400 V Rated value</li> </ul> </li> <li>• at AC-43 <ul style="list-style-type: none"> <li>— at 400 V Rated value</li> <li>— at 500 V Rated value</li> <li>— at 690 V Rated value</li> </ul> </li> </ul> | W<br>W<br>W<br>W | 1 500<br>1 500<br>2 200<br>3 000 |
| <b>Operating frequency</b>  |                  |                                  |
| <ul style="list-style-type: none"> <li>• at AC-41 acc. to IEC 60947-6-2 maximum</li> <li>• at AC-43 acc. to IEC 60947-6-2 maximum</li> </ul>  | 1/h<br>1/h       | 750<br>250                       |
| <b>No-load switching frequency</b>  | 1/h              | 3 600                            |

#### Control circuit/ Control:

|  |        |          |
|--|--------|----------|
| <b>Type of voltage</b>   |        | AC       |
| <b>Control supply voltage 1 with AC</b>  |        |          |
| <ul style="list-style-type: none"> <li>• at 50 Hz Rated value</li> <li>• at 60 Hz Rated value</li> </ul> | V<br>V | 24<br>24 |

|   |    |     |
|---|----|-----|
| <b>Control supply voltage 1</b>                       |    |     |
| • for DC Rated value                                  | V  | 24  |
| • Rated value   | Hz | 50  |
| <b>Control supply voltage frequency 2 Rated value</b> | Hz | 60  |
| <b>Holding power</b>                                  |    |     |
| • with AC maximum                                     | W  | 2.8 |
| • for DC maximum                                      | W  | 2.9 |

#### Auxiliary circuit:

|   |   |      |
|---|---|------|
| <b>Number of NC contacts</b>  |   |      |
| • for auxiliary contacts  |   | 1    |
| <b>Number of NO contacts</b>  |   |      |
| • for auxiliary contacts  |   | 1    |
| • of the instantaneous short-circuit release for signaling contact  |   | 1    |
| <b>Number of CO contacts</b>  |   |      |
| • of the current-dependent overload release for signaling contact   |   | 1    |
| <b>Product expansion Auxiliary switch</b>                           |   | Yes  |
| <b>Operating current of the auxiliary contacts at AC-12 maximum</b> | A | 10   |
| <b>Operating current of the auxiliary contacts at DC-13</b>         |   |      |
| • at 250 V  | A | 0.27 |

#### Protective and monitoring functions:

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

#### UL/CSA ratings:

|   |           |      |
|---|-----------|------|
| <b>Full-load current (FLA) for three-phase AC motor</b> |           |      |
| • at 480 V Rated value                                  | A         | 4    |
| • at 600 V Rated value                                  | A         | 4    |
| <b>yielded mechanical performance [hp]</b>              |           |      |
| • for three-phase AC motor at 200/208 V Rated value     | metric hp | 0.75 |
| • for three-phase AC motor at 220/230 V Rated value     | metric hp | 0.75 |
| • for three-phase AC motor at 460/480 V Rated value     | metric hp | 2    |

|   |           |   |
|---|-----------|---|
| <ul style="list-style-type: none"> <li>for three-phase AC motor at 575/600 V Rated value</li> </ul> | metric hp | 3   |
| <b>Contact rating of the auxiliary contacts acc. to UL</b>  |           | contacts 21-22, 13-14, 43-44 Q600 / A600, contacts 77-78 R300 / B300, contacts 95-96-98 R300 / D300 |

### Short-circuit:

|   |  |  |
|---|--|--|
| <b>Product function Short circuit protection</b>  |  | Yes  |
| <b>Design of short-circuit protection</b>   |  | electromagnetic  |
| <b>Design of the fuse link</b> <ul style="list-style-type: none"> <li>for short-circuit protection of the auxiliary switch required</li> <li>for short-circuit protection of the signaling switch of the short-circuit release required</li> <li>for short-circuit protection of the signaling switch of the overload release required</li> </ul> |  | fuse gL/gG: 10 A<br><br>6A gL/gG/400V<br><br>4A gL/gG/400V |

### Installation/ mounting/ dimensions:

|   |    |  |
|---|----|--|
| <b>mounting position</b>                                      |    | any  |
| <ul style="list-style-type: none"> <li>recommended</li> </ul> |    | vertical, on horizontal standard mounting rail |
| <b>Mounting type</b>  |    | screw and snap-on mounting                     |
| <b>Height</b>   | mm | 170  |
| <b>Width</b>  | mm | 45   |
| <b>Depth</b>  | mm | 165  |

### Connections/ Terminals:

|  |  |  |   |
|--|--|--|---|
| <b>Type of electrical connection</b>               |  | <ul style="list-style-type: none"> <li>for main current circuit</li> <li>for auxiliary and control current circuit</li> </ul>  | plug-in without terminals<br>screw-type terminals   |
| <b>Product function</b>                            |  | <ul style="list-style-type: none"> <li>removable terminal for main circuit</li> <li>removable terminal for auxiliary and control circuit</li> </ul>  | Yes<br>Yes  |
| <b>Type of connectable conductor cross-section</b> |  | <ul style="list-style-type: none"> <li>for main contacts               <ul style="list-style-type: none"> <li>— solid</li> <li>— finely stranded with core end processing</li> </ul> </li> <li>for AWG conductors for main contacts</li> <li>for auxiliary contacts               <ul style="list-style-type: none"> <li>— solid</li> <li>— finely stranded with core end processing</li> </ul> </li> <li>for AWG conductors for auxiliary contacts</li> </ul> | 2x (1.5 ... 6 mm <sup>2</sup> ), 1x 10 mm <sup>2</sup><br>2x (1.5 ... 6 mm <sup>2</sup> )<br>2x (16 ... 10), 1x 8<br><br>0.5 ... 4 mm <sup>2</sup> , 2x (0.5 ... 2.5 mm <sup>2</sup> )<br>0.5 ... 2.5 mm <sup>2</sup> , 2x (0.5 ... 1.5 mm <sup>2</sup> )<br>2x (20 ... 14) |

### Safety related data:

|   |  |           |
|---|--|-----------|
| <b>B10 value with high demand rate acc. to SN 31920</b> |  | 3 000 000 |
| <b>Proportion of dangerous failures</b>                 |  |           |

|   |     |             |
|---|-----|-------------|
| • with low demand rate acc. to SN 31920                                   | %   | 40          |
| • with high demand rate acc. to SN 31920                                  | %   | 50          |
| <b>Failure rate [FIT] with low demand rate acc. to SN 31920</b>           | FIT | 100         |
| <b>T1 value for proof test interval or service life acc. to IEC 61508</b> | y   | 20          |
| <b>Protection against electrical shock</b>                                |     | finger-safe |

#### Communication/ Protocol:

|  |  |    |
|--|--|----|
| <b>Product function Bus communication</b>                      |  | No |
| <b>Product function Control circuit interface with IO link</b> |  | No |

#### Ambient conditions:

|  |    |             |
|--|----|-------------|
| <b>Installation altitude at height above sea level maximum</b> | m  | 2 000       |
| <b>Ambient temperature</b>                                     |    |             |
| • during operation   | °C | -20 ... +60 |
| • during storage   | °C | -55 ... +80 |
| • during transport   | °C | -55 ... +80 |
| <b>Relative humidity during operation</b>                      | %  | 10 ... 90   |

#### Electromagnetic compatibility:

|  |  |   |
|--|--|---|
| <b>Conducted interference due to burst acc. to IEC 61000-4-4</b>                     |  | 4 kV main contacts, 2 kV auxiliary contacts |
| <b>Conducted interference due to conductor-earth surge acc. to IEC 61000-4-5</b>     |  | 4 kV main contacts, 2 kV auxiliary contacts |
| <b>Conducted interference due to conductor-conductor surge acc. to IEC 61000-4-5</b> |  | 2 kV main contacts, 1 kV auxiliary contacts |
| <b>Conducted interference due to high-frequency radiation acc. to IEC 61000-4-6</b>  |  | 0.15-80Mhz at 10V                           |
| <b>Field-bound parasitic coupling acc. to IEC 61000-4-3</b>                          |  | 10 V/m                                      |
| <b>Electrostatic discharge acc. to IEC 61000-4-2</b>                                 |  | 8 kV  |

#### Supply voltage:

|  |  |    |
|--|--|----|
| <b>Supply voltage required Auxiliary voltage</b> |  | No |
|--|--|----|

#### Certificates/ approvals:

|                          |     |                                       |
|--------------------------|-----|---------------------------------------|
| General Product Approval | EMC | Functional Safety/Safety of Machinery |
|--------------------------|-----|---------------------------------------|



|                   |                   |
|-------------------|-------------------|
| Test Certificates | Shipping Approval |
|-------------------|-------------------|

[Type Test Certificates/Test Report](#)



|                   |       |
|-------------------|-------|
| Shipping Approval | other |
|-------------------|-------|



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#### Further information

**Information- and Downloadcenter (Catalogs, Brochures,...)**

<http://www.siemens.com/industrial-controls/catalogs>

**Industry Mall (Online ordering system)**

<http://www.siemens.com/industrymall>

**Cax online generator**

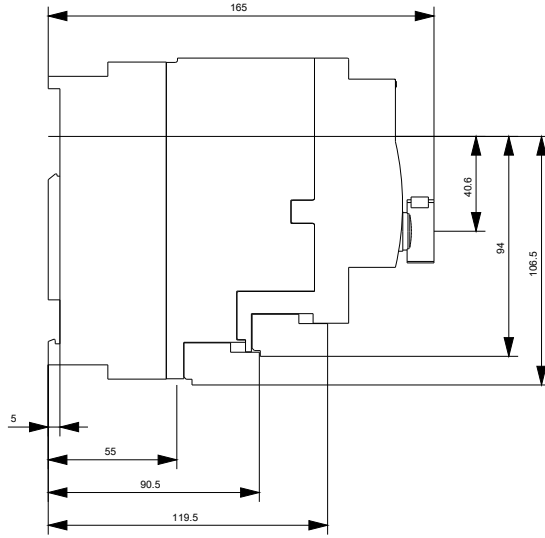
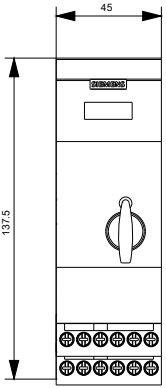
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA61201CB33>

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

<http://support.automation.siemens.com/WW/view/en/3RA61201CB33/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RA61201CB33&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA61201CB33&lang=en)



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