

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



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

| 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                                                                |
| 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                                    | 30 000                                          |
| • at AC-15 at 6 A at 230 V typical                                   | 200 000                                         |
| <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>Ambient temperature</b> |                |
| • during operation         | -20 ... +60 °C |
| • during storage           | -55 ... +80 °C |
| • during transport         | -55 ... +80 °C |

|                                                                                   |                     |
|-----------------------------------------------------------------------------------|---------------------|
| <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>          | DC    |
| <b>Holding power</b>            |       |
| • at DC maximum                 | 2.9 W |

|                              |  |
|------------------------------|--|
| <b>Auxiliary circuit</b>     |  |
| <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 |

|                                                                  |                            |
|------------------------------------------------------------------|----------------------------|
| <b>Protective and monitoring functions</b>                       |                            |
| <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                       |

|                                                         |        |
|---------------------------------------------------------|--------|
| <b>UL/CSA ratings</b>                                   |        |
| <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  |

|                                                                 |                  |
|-----------------------------------------------------------------|------------------|
| <b>Short-circuit protection</b>                                 |                  |
| <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 |

|                                           |                                                |
|-------------------------------------------|------------------------------------------------|
| <b>Installation/ mounting/ dimensions</b> |                                                |
| <b>Mounting position</b>                  | any                                            |
| • recommended                             | vertical, on horizontal standard mounting rail |
| <b>Mounting type</b>                      | screw and snap-on mounting                     |
| <b>Height</b>                             | 170 mm                                         |
| <b>Width</b>                              | 90 mm                                          |

|                                                                            |                                                                 |
|----------------------------------------------------------------------------|-----------------------------------------------------------------|
| Depth                                                                      | 165 mm                                                          |
| <b>Connections/Terminals</b>                                               |                                                                 |
| <b>Product function</b>                                                    |                                                                 |
| • removable terminal for main circuit                                      | Yes                                                             |
| • removable terminal for auxiliary and control circuit                     | Yes                                                             |
| <b>Type of electrical connection</b>                                       |                                                                 |
| • for main current circuit                                                 | plug-in without terminals                                       |
| • for auxiliary and control current circuit                                | screw-type terminals                                            |
| <b>Type of connectable conductor cross-sections</b>                        |                                                                 |
| • for main contacts                                                        |                                                                 |
| — solid                                                                    | 2x (1.5 ... 6 mm <sup>2</sup> ), 1x 10 mm <sup>2</sup>          |
| — finely stranded with core end processing                                 | 2x (1.5 ... 6 mm <sup>2</sup> )                                 |
| • at AWG conductors for main contacts                                      | 2x (16 ... 10), 1x 8                                            |
| <b>Type of connectable conductor cross-sections</b>                        |                                                                 |
| • for auxiliary contacts                                                   |                                                                 |
| — solid                                                                    | 0.5 ... 4 mm <sup>2</sup> , 2x (0.5 ... 2.5 mm <sup>2</sup> )   |
| — finely stranded with core end processing                                 | 0.5 ... 2.5 mm <sup>2</sup> , 2x (0.5 ... 1.5 mm <sup>2</sup> ) |
| • at AWG conductors for auxiliary contacts                                 | 2x (20 ... 14)                                                  |
| <b>Safety related data</b>                                                 |                                                                 |
| <b>B10 value</b>                                                           |                                                                 |
| • with high demand rate acc. to SN 31920                                   | 1 500 000                                                       |
| <b>Proportion of dangerous failures</b>                                    |                                                                 |
| • with high demand rate acc. to SN 31920                                   | 50 %                                                            |
| <b>Communication/ Protocol</b>                                             |                                                                 |
| <b>Product function Bus communication</b>                                  | Yes                                                             |
| <b>Protocol is supported</b>                                               |                                                                 |
| • IO-Link protocol                                                         | 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>                                                      |                                                                 |
| • of the address area of the inputs with cyclical transfer total           | 2 byte                                                          |
| • of the address area of the outputs with cyclical transfer total          | 2 byte                                                          |
| <b>Electromagnetic compatibility</b>                                       |                                                                 |
| <b>Field-bound parasitic coupling acc. to IEC 61000-4-3</b>                | 80 ... 3000 MHz at 10V/m                                        |
| <b>Electrostatic discharge acc. to IEC 61000-4-2</b>                       | 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 |
| • as status display of the input/output link device |                    |

#### Certificates/approvals

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



|                           |                   |                   |
|---------------------------|-------------------|-------------------|
| Declaration of Conformity | Test Certificates | Marine / Shipping |
|---------------------------|-------------------|-------------------|



[Type Test Certificates/Test Report](#)



|                   |       |
|-------------------|-------|
| Marine / Shipping | other |
|-------------------|-------|



[Environmental Confirmations](#)

[Confirmation](#)

#### 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=3RA6500-1DB43>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA6500-1DB43>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RA6500-1DB43>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RA6500-1DB43&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA6500-1DB43&lang=en)





