



SIRIUS, COMPACT STARTER,  
DIRECT STARTER 690 V,  
110 ... 240 V AC/DC, 50 ... 60 HZ,  
3 ... 12 A, IP20,  
CONNECTION MAIN CIRCUIT: SPRING-LOADED  
TERMINAL,  
CONNECTION AUXILIARY CIRCUIT: SPRING-LOADED  
TERMINAL

### General technical data:

|                                                    |    |                                                 |
|----------------------------------------------------|----|-------------------------------------------------|
| product brand name                                 |    | SIRIUS                                          |
| Product designation                                |    | compact starter                                 |
| Design of the product                              |    | direct starter                                  |
| Trip class                                         |    | CLASS 10 and 20 adjustable                      |
| Product function                                   |    |                                                 |
| • control circuit interface to parallel wiring     |    | Yes                                             |
| • bus-communication                                |    | No                                              |
| • short circuit protection                         |    | Yes                                             |
| • control circuit interface with IO link           |    | No                                              |
| Type of assignment                                 |    | continuous operation according to IEC 60947-6-2 |
| Protection class IP                                |    | IP20                                            |
| Degree of pollution                                |    | 3                                               |
| mounting position / recommended                    |    | vertical, on horizontal standard mounting rail  |
| Installation altitude / at a height over sea level |    |                                                 |
| • maximum                                          | m  | 2,000                                           |
| Ambient temperature                                |    |                                                 |
| • during storage                                   | °C | -55 ... +80                                     |
| • during operating                                 | °C | -20 ... +60                                     |
| • during transport                                 | °C | -55 ... +80                                     |

|                                                                                                                                                                                                           |             |                                                                                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------------------------------------------------------------------------------|
| <b>Relative humidity</b><br>• during operating phase                                                                                                                                                      | %           | 10 ... 90                                                                        |
| <b>Resistance against shock</b>                                                                                                                                                                           |             | a=60 m/s <sup>2</sup> (6g) with 10 ms per 3 shocks in all axes                   |
| <b>Resistance against vibration</b>                                                                                                                                                                       |             | f= 4 ... 5.8 Hz, d= 15 mm; f= 5.8 ... 500 Hz, a= 20 m/s <sup>2</sup> ; 10 cycles |
| <b>Impulse voltage resistance / rated value</b>                                                                                                                                                           | V           | 6,000                                                                            |
| <b>Field-bound parasitic coupling</b><br>• according to IEC 61000-4-3                                                                                                                                     |             | 10 V/m                                                                           |
| <b>Insulation voltage / rated value</b>                                                                                                                                                                   | V           | 690                                                                              |
| <b>Conductor-bound parasitic coupling conductor-earth SURGE</b><br>• according to IEC 61000-4-5                                                                                                           |             | 4 kV main contacts, 2 kV auxiliary contacts                                      |
| <b>Conductor-bound parasitic coupling conductor-conductor SURGE</b><br>• according to IEC 61000-4-5                                                                                                       |             | 2 kV main contacts, 1 kV auxiliary contacts                                      |
| <b>Conductor-bound parasitic coupling BURST</b><br>• according to IEC 61000-4-4                                                                                                                           |             | 4 kV main contacts, 2 kV auxiliary contacts                                      |
| <b>Maximum permissible voltage for safe disconnection</b><br>• between main circuit and auxiliary circuit<br>• between control and auxiliary circuit<br>• between auxiliary circuit and auxiliary circuit | V<br>V<br>V | 400<br>300<br>250                                                                |
| <b>Reference code</b><br>• according to DIN 40719 extended according to IEC 204-2 / according to IEC 750<br>• according to DIN EN 61346-2                                                                 |             | Q<br>Q                                                                           |

#### Main circuit:

|                                                                                                                                                    |                |                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------------------|
| <b>Operating voltage / at AC-3 / rated value</b><br>• maximum                                                                                      | V              | 690                 |
| <b>Number of poles / for main current circuit</b>                                                                                                  |                | 3                   |
| <b>Adjustable response current</b><br>• of the current-dependent overload release                                                                  | A              | 3 ... 12            |
| <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>Emitted mechanical power / for 4-pole three-phase motor</b><br>• at 400 V / rated value<br>• at 500 V / rated value<br>• at 690 V / rated value | kW<br>kW<br>kW | 5.5<br>5.5<br>7.5   |
| <b>Service power / at AC-3 / at 400 V / rated value</b>                                                                                            | kW             | 5.5                 |
| <b>Frequency of operation / at AC-41 / according to IEC 60947-6-2 / maximum</b>                                                                    | 1/h            | 750                 |
| <b>Frequency of operation / at AC-43 / according to IEC 60947-6-2 / maximum</b>                                                                    | 1/h            | 250                 |

|                                                      |     |            |
|------------------------------------------------------|-----|------------|
| <b>Off-load operating frequency</b>                  | 1/h | 3,600      |
| <b>Mechanical operating cycles as operating time</b> |     |            |
| • of the main contacts / typical                     |     | 10,000,000 |
| • of the auxiliary contacts / typical                |     | 10,000,000 |
| • of the signal contacts / typical                   |     | 10,000,000 |

#### Control circuit:

|                                   |    |     |
|-----------------------------------|----|-----|
| <b>Type of voltage</b>            |    | AC  |
| <b>Control supply voltage / 1</b> |    |     |
| • for DC                          |    |     |
| • initial rated value             | V  | 110 |
| • final rated value               | V  | 240 |
| • at 50 Hz / for AC               |    |     |
| • initial rated value             | V  | 110 |
| • final rated value               | V  | 240 |
| • at 60 Hz / for AC               |    |     |
| • initial rated value             | V  | 110 |
| • final rated value               | V  | 240 |
| <b>Holding power</b>              |    |     |
| • for AC / maximum                | W  | 6   |
| • for DC / maximum                | W  | 5.1 |
| <b>Switch-off delay time</b>      | ms | 50  |
| <b>Start-up delay time</b>        | ms | 70  |

#### Auxiliary circuit:

|                                                                                                      |   |         |
|------------------------------------------------------------------------------------------------------|---|---------|
| <b>Product extension</b>                                                                             |   |         |
| • auxiliary switch                                                                                   |   | Yes     |
| <b>Number of NC contacts</b>                                                                         |   |         |
| • for auxiliary contacts                                                                             |   | 1       |
| <b>Number of NO contacts</b>                                                                         |   |         |
| • for auxiliary contacts                                                                             |   | 1       |
| • of the non-delayed short-circuit release / for alarm contact                                       |   | 1       |
| <b>Number of changeover contacts / of the current-dependent overload release / for alarm contact</b> |   | 1       |
| <b>Operating current / of the auxiliary contacts / at AC-12</b>                                      |   |         |
| • maximum                                                                                            | A | 10      |
| <b>Electrical switching cycle as operating time / of the auxiliary contacts</b>                      |   |         |
| • at AC-15 / at 6 A / at 230 V / typical                                                             |   | 500,000 |
| • at DC-13 / at 6 A / at 24 V / typical                                                              |   | 100,000 |

|                                                                                       |    |                                                        |
|---------------------------------------------------------------------------------------|----|--------------------------------------------------------|
| <b>Electrical switching cycle as operating time / of the signal contacts</b>          |    |                                                        |
| • at AC-15 / at 6 A / at 230 V / typical                                              |    | 500,000                                                |
| • at DC-13 / at 6 A / at 24 V / typical                                               |    | 100,000                                                |
| <b>Short-circuit:</b>                                                                 |    |                                                        |
| <b>Design of the fuse link / for short-circuit protection of the auxiliary switch</b> |    |                                                        |
| • required                                                                            |    | fuse gL/gG: 10 A                                       |
| <b>Installation/mounting/dimensions:</b>                                              |    |                                                        |
| <b>Mounting type</b>                                                                  |    | screw and snap-on mounting                             |
| <b>Width</b>                                                                          | mm | 45                                                     |
| <b>Height</b>                                                                         | mm | 191                                                    |
| <b>Depth</b>                                                                          | mm | 165                                                    |
| <b>mounting position</b>                                                              |    | any                                                    |
| <b>Connections:</b>                                                                   |    |                                                        |
| <b>Product function</b>                                                               |    |                                                        |
| • removable terminal for main circuit                                                 |    | Yes                                                    |
| • removable terminal for auxiliary and control circuit                                |    | Yes                                                    |
| <b>Design of the electrical connection</b>                                            |    |                                                        |
| • for main current circuit                                                            |    | spring-loaded terminals                                |
| • for auxiliary and control current circuit                                           |    | spring-loaded terminals                                |
| <b>Type of the connectable conductor cross-section</b>                                |    |                                                        |
| • for main contacts                                                                   |    |                                                        |
| • solid                                                                               |    | 2x (1.5 ... 6 mm <sup>2</sup> ), 1x 10 mm <sup>2</sup> |
| • finely stranded                                                                     |    |                                                        |
| • with conductor end processing                                                       |    | 2x (1.5 ... 6 mm <sup>2</sup> )                        |
| • without conductor final cutting                                                     |    | 2x (1.5 ... 6 mm <sup>2</sup> )                        |
| • for auxiliary contacts                                                              |    |                                                        |
| • solid                                                                               |    | 2x (0.25 ... 1.5 mm <sup>2</sup> )                     |
| • finely stranded                                                                     |    |                                                        |
| • with conductor end processing                                                       |    | 2x (0.25 ... 1.5 mm <sup>2</sup> )                     |
| • without conductor final cutting                                                     |    | 2x (0.25 ... 1.5 mm <sup>2</sup> )                     |
| • for AWG conductors                                                                  |    |                                                        |
| • for main contacts                                                                   |    | 2x (16 ... 10), 1x 8                                   |
| • for auxiliary contacts                                                              |    | 2x (24 ... 16)                                         |
| <b>Certificates/approvals:</b>                                                        |    |                                                        |
| <b>Verification of suitability</b>                                                    |    | IEC / EN 60947-6-2                                     |

## General Product Approval

## EMC

## Functional Safety / Safety of Machinery



CCC



CSA



UL



C-TICK



VDE

## Test Certificates

[Type Test  
Certificates/Test  
Report](#)

## Shipping Approval



LRS



PRS



RINA



RMRS

## other

[Declaration of  
Conformity](#)

[other](#)

[Environmental  
Confirmations](#)

## UL/CSA ratings:

### yielded mechanical performance (hp) / for three-phase squirrel cage motors

- at 200/208 V / rated value
- at 220/230 V / rated value
- at 460/480 V / rated value
- at 575/600 V / rated value

|    |     |
|----|-----|
| hp | 3   |
| hp | 3   |
| hp | 7.5 |
| hp | 10  |

### Full-load current (FLA) / for 3-phase motor

- at 480 V / rated value
- at 600 V / rated value

|   |    |
|---|----|
| A | 12 |
| A | 12 |

### Contact rating designation / for auxiliary contacts / according to UL

contacts 21-22, 13-14, 43-44 Q600 / A600, contacts  
77-78 R300 / B300, contacts 95-96-98 R300 / D300

## Reliability figures:

### B10 value

3,000,000

### Proportion of dangerous failures

% 50

### Proportion of dangerous failures / with low demand rate / according to SN 31920

% 40

### Protection against electrical shock

finger-safe

### Failure rate [FIT] / with low demand rate / according to SN 31920

FIT 100

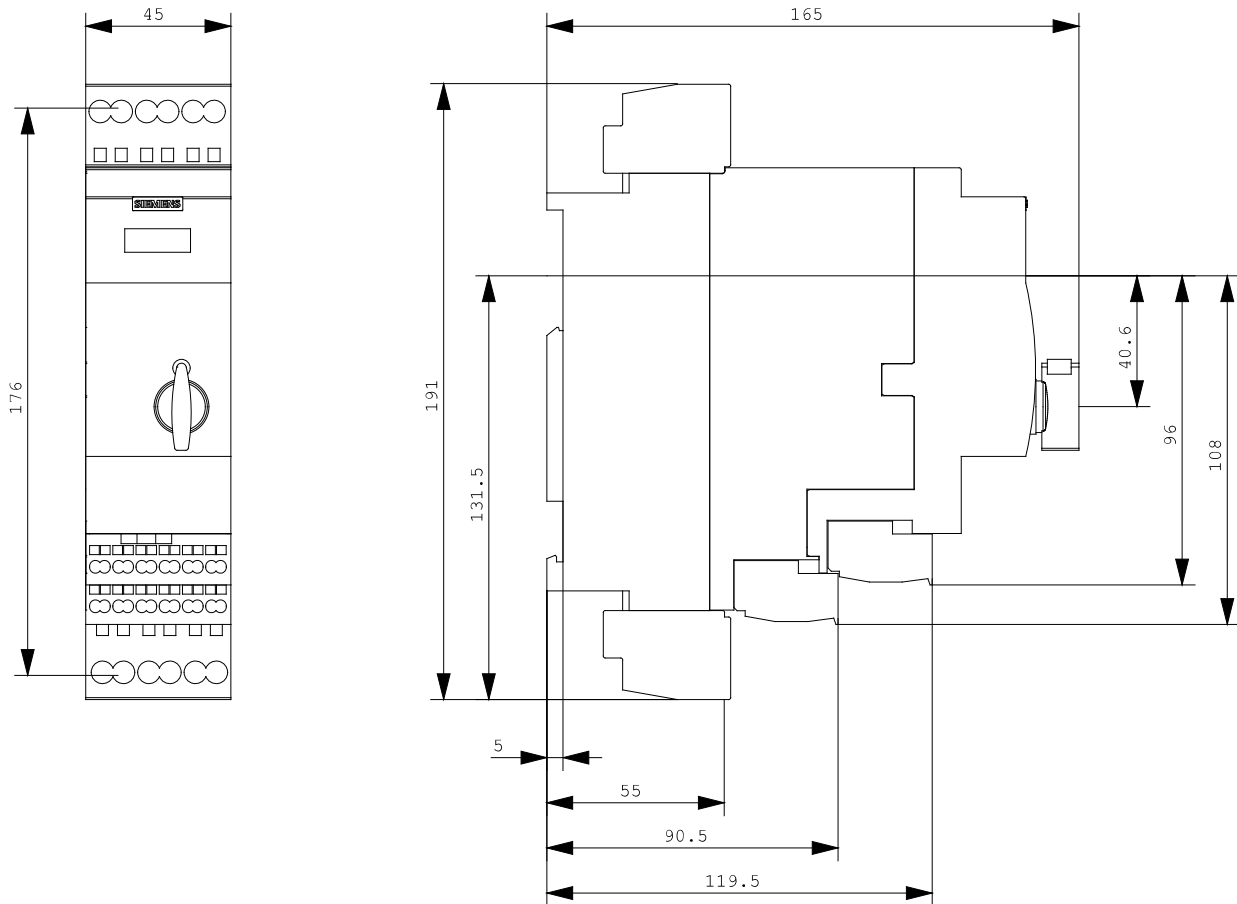
## Further information:

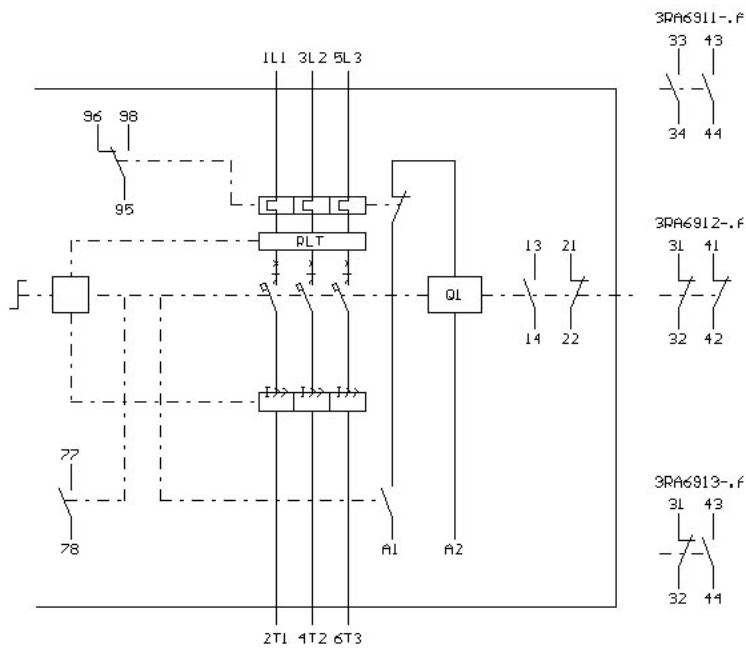
### Information- and Downloadcenter (Catalogs, Brochures,...)

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

### Industry Mall (Online ordering system)

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





last change:

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