

SIRIUS SOFT STARTER, S12, 432 A, 250 KW/400 V, 40 DEG., 200-460 V AC, 230 V AC, SCREW TERMINALS



| General technical data:                                                             |  |                                         |
|-------------------------------------------------------------------------------------|--|-----------------------------------------|
| product brand name                                                                  |  | SIRIUS                                  |
| • Product equipment Integrated bypass contact system                                |  | Yes                                     |
| • Product feature Thyristors                                                        |  | Yes                                     |
| Product function                                                                    |  |                                         |
| • Intrinsic device protection                                                       |  | Yes                                     |
| • motor overload protection                                                         |  | Yes                                     |
| • Evaluation of thermistor motor protection                                         |  | No                                      |
| • External reset                                                                    |  | Yes                                     |
| • Adjustable current limitation                                                     |  | Yes                                     |
| • Inside-delta circuit                                                              |  | No                                      |
| Product component Motor brake output                                                |  | No                                      |
| Equipment marking acc. to DIN EN 61346-2                                            |  | Q                                       |
| Equipment marking acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750 |  | G                                       |
| Power Electronics:                                                                  |  |                                         |
| Product designation                                                                 |  | soft starters for standard applications |

|                                                                                                                           |    |             |
|---------------------------------------------------------------------------------------------------------------------------|----|-------------|
| <b>Operating current</b>                                                                                                  |    |             |
| • at 40 °C rated value                                                                                                    | A  | 432         |
| • at 50 °C rated value                                                                                                    | A  | 385         |
| • at 60 °C rated value                                                                                                    | A  | 335         |
| <b>Mechanical power output for three-phase motors</b>                                                                     |    |             |
| • at 230 V                                                                                                                |    |             |
| — at standard circuit at 40 °C rated value                                                                                | W  | 132 000     |
| • at 400 V                                                                                                                |    |             |
| — at standard circuit at 40 °C rated value                                                                                | W  | 250 000     |
| <b>Yielded mechanical performance [hp] for three-phase AC motor at 200/208 V at standard circuit at 50 °C rated value</b> | hp | 125         |
| Operating frequency rated value                                                                                           | Hz | 50 ... 60   |
| Relative negative tolerance of the operating frequency                                                                    | %  | -10         |
| Relative positive tolerance of the operating frequency                                                                    | %  | 10          |
| Operating voltage at standard circuit rated value                                                                         | V  | 200 ... 460 |
| Relative negative tolerance of the operating voltage at standard circuit                                                  | %  | -15         |
| Relative positive tolerance of the operating voltage at standard circuit                                                  | %  | 10          |
| Minimum load [% of IM]                                                                                                    | %  | 20          |
| Adjustable motor current for motor overload protection minimum rated value                                                | A  | 207         |
| Continuous operating current [% of I <sub>e</sub> ] at 40 °C                                                              | %  | 115         |
| Power loss [W] at operating current at 40 °C during operation typical                                                     | W  | 165         |

#### Control electronics:

|                                                                          |    |     |
|--------------------------------------------------------------------------|----|-----|
| Type of voltage of the control supply voltage                            |    | AC  |
| Control supply voltage frequency 1 rated value                           | Hz | 50  |
| Control supply voltage frequency 2 rated value                           | Hz | 60  |
| Relative negative tolerance of the control supply voltage frequency      | %  | -10 |
| Relative positive tolerance of the control supply voltage frequency      | %  | 10  |
| Control supply voltage 1 at AC                                           |    |     |
| • at 50 Hz rated value                                                   | V  | 230 |
| • at 60 Hz rated value                                                   | V  | 230 |
| Relative negative tolerance of the control supply voltage at AC at 60 Hz | %  | -15 |
| Relative positive tolerance of the control supply voltage at AC at 60 Hz | %  | 10  |
| Display version for fault signal                                         |    | red |

#### Mechanical data:

|                                                        |    |                                                                                                                                                                                                                                                                      |
|--------------------------------------------------------|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Size of engine control device</b>                   |    | S12                                                                                                                                                                                                                                                                  |
| <b>Width</b>                                           | mm | 160                                                                                                                                                                                                                                                                  |
| <b>Height</b>                                          | mm | 230                                                                                                                                                                                                                                                                  |
| <b>Depth</b>                                           | mm | 278                                                                                                                                                                                                                                                                  |
| <b>Mounting type</b>                                   |    | screw fixing                                                                                                                                                                                                                                                         |
| <b>Mounting position</b>                               |    | With additional fan: With vertical mounting surface +/- 90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back<br>Without additional fan: With vertical mounting surface +/- 10° rotatable, with vertical mounting surface +/- 10° t |
| <b>Required spacing with side-by-side mounting</b>     |    |                                                                                                                                                                                                                                                                      |
| • upwards                                              | mm | 100                                                                                                                                                                                                                                                                  |
| • at the side                                          | mm | 5                                                                                                                                                                                                                                                                    |
| • downwards                                            | mm | 75                                                                                                                                                                                                                                                                   |
| <b>Installation altitude at height above sea level</b> | m  | 5 000                                                                                                                                                                                                                                                                |
| <b>Wire length maximum</b>                             | m  | 300                                                                                                                                                                                                                                                                  |
| <b>Number of poles for main current circuit</b>        |    | 3                                                                                                                                                                                                                                                                    |

#### Connections/ Terminals:

|                                                                                                                |  |                                                          |
|----------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------|
| <b>Type of electrical connection</b>                                                                           |  |                                                          |
| • for main current circuit                                                                                     |  | busbar connection                                        |
| • for auxiliary and control current circuit                                                                    |  | screw-type terminals                                     |
| <b>Number of NC contacts for auxiliary contacts</b>                                                            |  | 0                                                        |
| <b>Number of NO contacts for auxiliary contacts</b>                                                            |  | 2                                                        |
| <b>Number of CO contacts for auxiliary contacts</b>                                                            |  | 1                                                        |
| Type of connectable conductor cross-sections for main contacts for box terminal using the front clamping point |  |                                                          |
| • finely stranded with core end processing                                                                     |  | 70 ... 240 mm <sup>2</sup>                               |
| • finely stranded without core end processing                                                                  |  | 70 ... 240 mm <sup>2</sup>                               |
| • stranded                                                                                                     |  | 95 ... 300 mm <sup>2</sup>                               |
| Type of connectable conductor cross-sections for main contacts for box terminal using the back clamping point  |  |                                                          |
| • finely stranded with core end processing                                                                     |  | 120 ... 185 mm <sup>2</sup>                              |
| • finely stranded without core end processing                                                                  |  | 120 ... 185 mm <sup>2</sup>                              |
| • stranded                                                                                                     |  | 120 ... 240 mm <sup>2</sup>                              |
| Type of connectable conductor cross-sections for main contacts for box terminal using both clamping points     |  |                                                          |
| • finely stranded with core end processing                                                                     |  | min. 2x 50 mm <sup>2</sup> , max. 2x 185 mm <sup>2</sup> |
| • finely stranded without core end processing                                                                  |  | min. 2x 50 mm <sup>2</sup> , max. 2x 185 mm <sup>2</sup> |
| • stranded                                                                                                     |  | max. 2x 70 mm <sup>2</sup> , max. 2x 240 mm <sup>2</sup> |
| Type of connectable conductor cross-sections at AWG conductors for main contacts for box terminal              |  |                                                          |

|                                                                                                                                                                                                                                                   |  |                                                                          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• using the back clamping point</li> <li>• using the front clamping point</li> <li>• using both clamping points</li> </ul>                                                                                 |  | 250 ... 500 kcmil<br>3/0 ... 600 kcmil<br>min. 2x 2/0, max. 2x 500 kcmil |
| Type of connectable conductor cross-sections for DIN cable lug for main contacts <ul style="list-style-type: none"> <li>• finely stranded</li> <li>• stranded</li> </ul>                                                                          |  | 50 ... 240 mm <sup>2</sup><br>70 ... 240 mm <sup>2</sup>                 |
| Type of connectable conductor cross-sections for auxiliary contacts <ul style="list-style-type: none"> <li>• solid</li> <li>• finely stranded with core end processing</li> </ul>                                                                 |  | 2x (0.5 ... 2.5 mm <sup>2</sup> )<br>2x (0.5 ... 1.5 mm <sup>2</sup> )   |
| Type of connectable conductor cross-sections at AWG conductors <ul style="list-style-type: none"> <li>• for main contacts</li> <li>• for auxiliary contacts</li> <li>• for auxiliary contacts finely stranded with core end processing</li> </ul> |  | 2/0 ... 500 kcmil<br>2x (20 ... 14)<br>2x (20 ... 16)                    |

#### Ambient conditions:

|                                                                                                |    |             |
|------------------------------------------------------------------------------------------------|----|-------------|
| <b>Ambient temperature</b>                                                                     |    |             |
| <ul style="list-style-type: none"> <li>• during operation</li> <li>• during storage</li> </ul> | °C | -25 ... +60 |
|                                                                                                | °C | -40 ... +80 |
| <b>Derating temperature</b>                                                                    | °C | 40          |
| <b>Protection class IP</b>                                                                     |    | IP00        |

#### Certificates/ approvals:

|                          |     |                                |
|--------------------------|-----|--------------------------------|
| General Product Approval | EMC | For use in hazardous locations |
|--------------------------|-----|--------------------------------|



|                           |                   |                   |       |
|---------------------------|-------------------|-------------------|-------|
| Declaration of Conformity | Test Certificates | Shipping Approval | other |
|---------------------------|-------------------|-------------------|-------|



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[Umweltbestätigung](#)

|       |
|-------|
| other |
|-------|

[Bestätigungen](#)

#### UL/CSA ratings:

|                                                              |    |             |
|--------------------------------------------------------------|----|-------------|
| Yielded mechanical performance [hp] for three-phase AC motor |    |             |
| • at 220/230 V                                               |    |             |
| — at standard circuit at 50 °C rated value                   | hp | 150         |
| • at 460/480 V                                               |    |             |
| — at standard circuit at 50 °C rated value                   | hp | 300         |
| Contact rating of auxiliary contacts according to UL         |    | B300 / R300 |

#### Further information

##### Simulation Tool for Soft Starters (STS)

<https://support.industry.siemens.com/cs/ww/en/view/101494917>

##### 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

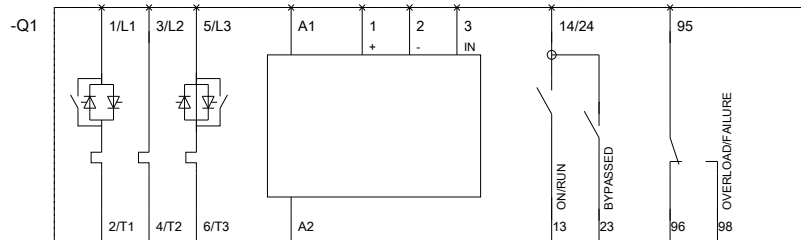
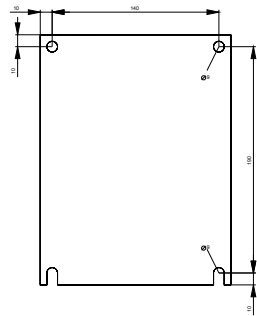
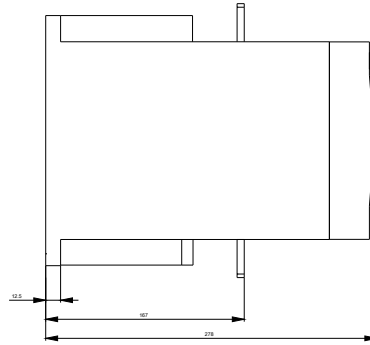
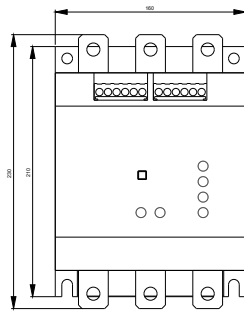
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW4076-6BB44>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RW4076-6BB44>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RW4076-6BB44&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RW4076-6BB44&lang=en)



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