



SEMI-COND. CONTACTOR 3RF2,1-PH. AC 51 50A / AC15 25A 40 DEG. C 48-600 V / 24 V DC INSTANTANEOUS SWITCHING

| General technical data:   |  |                               |
|---|--|-------------------------------|
| Product brand name  |  | SIRIUS                        |
| product designation   |  | solid-state contactor         |
| Product function  |  | instantaneous switching       |
| Number of poles / for main current circuit                                |  | 1                             |
| Protection class IP   |  | IP20                          |
| Product designation / _1 / of the accessories that can be ordered         |  | terminal cover                |
| Manufacturer article number / _1 / of the accessories that can be ordered |  | <a href="#">3RF2900-3PA88</a> |
| Product designation / _2 / of the accessories that can be ordered         |  | power regulator               |
| Manufacturer article number / _2 / of the accessories that can be ordered |  | <a href="#">3RF2950-0HA16</a> |
| Product designation / _3 / of the accessories that can be ordered         |  | converter                     |
| Manufacturer article number / _3 / of the accessories that can be ordered |  | <a href="#">3RF2900-0EA18</a> |
| Product designation / _4 / of the accessories that can be ordered         |  | load monitoring               |
| Manufacturer article number / _4 / of the accessories that can be ordered |  | <a href="#">3RF2950-0GA16</a> |
| Ambient temperature   |  |                               |

|  |    |             |
|--|----|-------------|
| • during operating   | °C | -25 ... 60  |
| • during storage   | °C | -55 ... 80  |
| <b>Installation altitude / at a height over sea level / maximum</b>        | m  | 1,000       |
| <b>Resistance against vibration / according to IEC 60068-2-6</b>           |    | 2g          |
| <b>Resistance against shock / according to IEC 60068-2-27</b>              |    | 15g / 11 ms |
| <b>Item designation</b>  |    |             |
| • according to DIN 40719 extendable after IEC 204-2 / according to IEC 750 |    | K           |
| • according to DIN EN 61346-2  |    | Q           |
| <b>Number of NC contacts / for auxiliary contacts</b>                      |    | 0           |
| <b>Number of NO contacts / for auxiliary contacts</b>                      |    | 0           |
| <b>Number of change-over switches / for auxiliary contacts</b>             |    | 0           |

|   |                   |            |
|---|-------------------|------------|
| <b>Main circuit:</b>  |                   |            |
| <b>Number of NO contacts / for main contacts</b>                                      |                   | 1          |
| <b>Number of NC contacts / for main contacts</b>                                      |                   | 0          |
| <b>Operating current</b>  |                   |            |
| • at AC-1 / at 400 V / rated value  | A                 | 50         |
| • at AC-51 / rated value  | A                 | 50         |
| <b>Operating current / minimum</b>  | mA                | 500        |
| <b>Operating voltage</b>  |                   |            |
| • at 50 Hz / at AC / rated value  | V                 | 48 ... 600 |
| • at 60 Hz / at AC / rated value  | V                 | 48 ... 600 |
| <b>Working area related to the operating voltage</b>                                  |                   |            |
| • at 50 Hz / for AC   | V                 | 40 ... 660 |
| • at 60 Hz / for AC   | V                 | 40 ... 660 |
| <b>Operating frequency</b>  |                   |            |
| • rated value   | Hz                | 50 ... 60  |
| <b>Relative symmetrical tolerance / of the operation frequency</b>                    | %                 | 10         |
| <b>Insulation voltage / rated value</b>   | V                 | 600        |
| <b>Voltage slew rate / at the thyristor / for main contacts / maximum permissible</b> | V/μs              | 1,000      |
| <b>Block voltage / at the thyristor / for main contacts / maximum permissible</b>     | V                 | 1,600      |
| <b>Reverse current / of the thyristor</b>   | mA                | 10         |
| <b>Derating temperature</b>   | °C                | 40         |
| <b>Active power loss / total / typical</b>  | W                 | 54         |
| <b>Resistance against the impulse current / rated value</b>                           | A                 | 1,150      |
| <b>I<sup>2</sup>t-level / maximum</b>   | A <sup>2</sup> ·s | 6,600      |

|                         |  |  |
|-------------------------|--|--|
| <b>Control circuit:</b> |  |  |
|-------------------------|--|--|

|   |   |    |
|---|---|----|
| <b>Type of voltage / of the controlled supply voltage</b> |   | DC |
| <b>Control supply voltage / 1</b>                         |   |    |
| • for DC  |   |    |
| • initial rated value                                     | V   | 15 |
| • final rated value                                       | V   | 24 |
| <b>Control supply voltage</b>                             |   |    |
| • for DC / final value for signal<0>-recognition          | V   | 5  |
| <b>Control current</b>                                    |   |    |
| • at minimum control supply voltage / for DC              | mA  | 2  |
| • for DC / rated value                                    | mA  | 15 |
| <b>Fuse assignments</b>                                   | <a href="https://www.automation.siemens.com/cd-static/material/info/3RF21_eng.pdf">https://www.automation.siemens.com/cd-static/material/info/3RF21_eng.pdf</a> |    |

#### Installation/mounting/dimensions:

|  |     |  |
|--|-----|--|
| <b>Type of mounting</b>  |     | screw and snap-on mounting onto 35 mm standard mounting rail |
| <b>Type of fixing/fixation / series installation</b>                               |     | Yes  |
| <b>Design of the thread / of the screw for fastening of the operating resource</b> |     | M4   |
| <b>Tightening torque / of the screw for fastening of the operating resource</b>    | N·m | 1.5  |
| <b>Width</b>   | mm  | 67.5   |
| <b>Height</b>  | mm  | 100  |
| <b>Depth</b>   | mm  | 156  |

#### Connections:

|   |        |   |
|---|--------|---|
| <b>Design of the electrical connection / for main current circuit</b>     |        | screw-type terminals  |
| <b>Design of the thread / of the connection screw / for main contacts</b> |        | M4  |
| <b>Tightening torque / for main contacts</b>                              |        |   |
| • with screw-type terminals   | N·m    | 2 ... 2.5   |
| <b>Tightening torque (lbf·in) / for main contacts</b>                     |        |   |
| • with screw-type terminals   | lbf·in | 18 ... 22   |
| <b>Type of the connectable conductor cross-section</b>                    |        |   |
| • for main contacts   |        |   |
| • solid   |        | 2x (1.5 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 6 mm <sup>2</sup> )                      |
| • finely stranded   |        |   |
| • with conductor end processing   |        | 2x (1 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 6 mm <sup>2</sup> ), 1x 10 mm <sup>2</sup> |
| • for AWG conductors  |        |   |
| • for main contacts   |        | 2x (14 ... 10)  |
| • for auxiliary and control contacts                                      |        | 1x (AWG 20 ... 12)  |
| • for auxiliary and control contacts                                      |        |   |

|  |                 |  |
|--|-----------------|--|
| <ul style="list-style-type: none"> <li>• solid</li> <li>• finely stranded <ul style="list-style-type: none"> <li>• with conductor end processing</li> <li>• without conductor final cutting</li> </ul> </li> </ul>   |                 | 1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.0 mm <sup>2</sup> ) |
|  |                 | 1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.0 mm <sup>2</sup> ) |
|  |                 | 1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.0 mm <sup>2</sup> ) |
| <b>Conductor cross section that can be connected</b>   |                 |  |
| <ul style="list-style-type: none"> <li>• for main contacts <ul style="list-style-type: none"> <li>• solid</li> <li>• stranded wire <ul style="list-style-type: none"> <li>• with conductor end processing</li> </ul> </li> </ul> </li> <li>• for auxiliary and control contacts <ul style="list-style-type: none"> <li>• solid</li> <li>• stranded wire <ul style="list-style-type: none"> <li>• with conductor end processing / minimum</li> <li>• without conductor final cutting</li> </ul> </li> </ul> </li> </ul> | mm <sup>2</sup> | 1.5 ... 6  |
|  | mm <sup>2</sup> | 1 ... 10   |
|  | mm <sup>2</sup> | 0.5 ... 2.5  |
|  | mm <sup>2</sup> | 0.5 ... 2.5  |
|  | mm <sup>2</sup> | 0.5 ... 2.5  |
| <b>AWG number / as coded connectable conductor cross-section / for main contacts</b>   |                 | 10 ... 14  |
| <b>Design of the electrical connection / for auxiliary and control current circuit</b>   |                 | screw-type terminals   |
| <b>Design of the thread / of the connection screw / of the auxiliary and control pins</b>  |                 | M3   |
| <b>AWG number / as coded connectable conductor cross-section</b>   |                 |  |
| <ul style="list-style-type: none"> <li>• for auxiliary and control contacts</li> </ul>   |                 | 20 ... 12  |
| <b>Skinning length / of the cable / for main contacts</b>  | mm              | 7  |
| <b>Skinning length / of the cable / for auxiliary and control contacts</b>   | mm              | 7  |
| <b>Tightening torque / for auxiliary and control contacts</b>  |                 |  |
| <ul style="list-style-type: none"> <li>• with screw-type terminals</li> </ul>  | N·m             | 0.5 ... 0.6  |
| <b>Tightening torque (lbf-in) / for auxiliary and control contacts</b>   |                 |  |
| <ul style="list-style-type: none"> <li>• with screw-type terminals</li> </ul>  | lbf-in          | 4.5 ... 5.3  |

#### Certificates/approvals:

##### General Product Approval



[ROSTEST](#)



##### Test Certificates

[Manufacturer](#)

##### other

[Manufacturer](#)

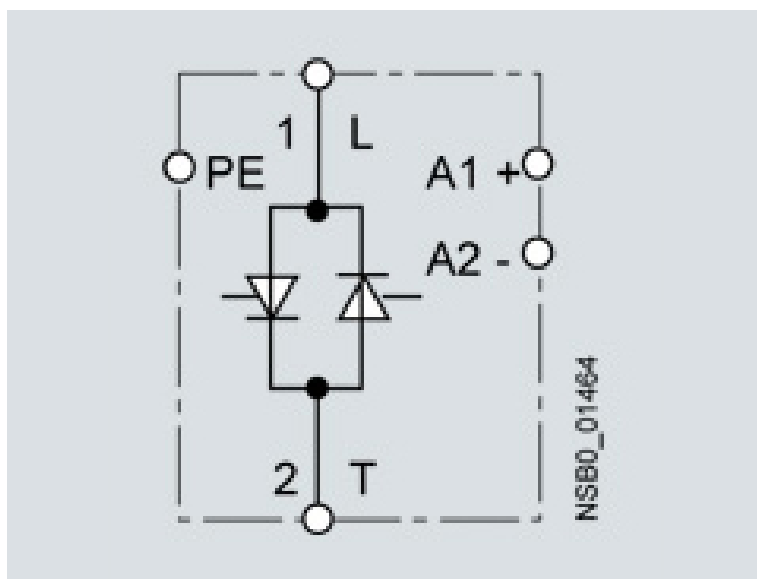
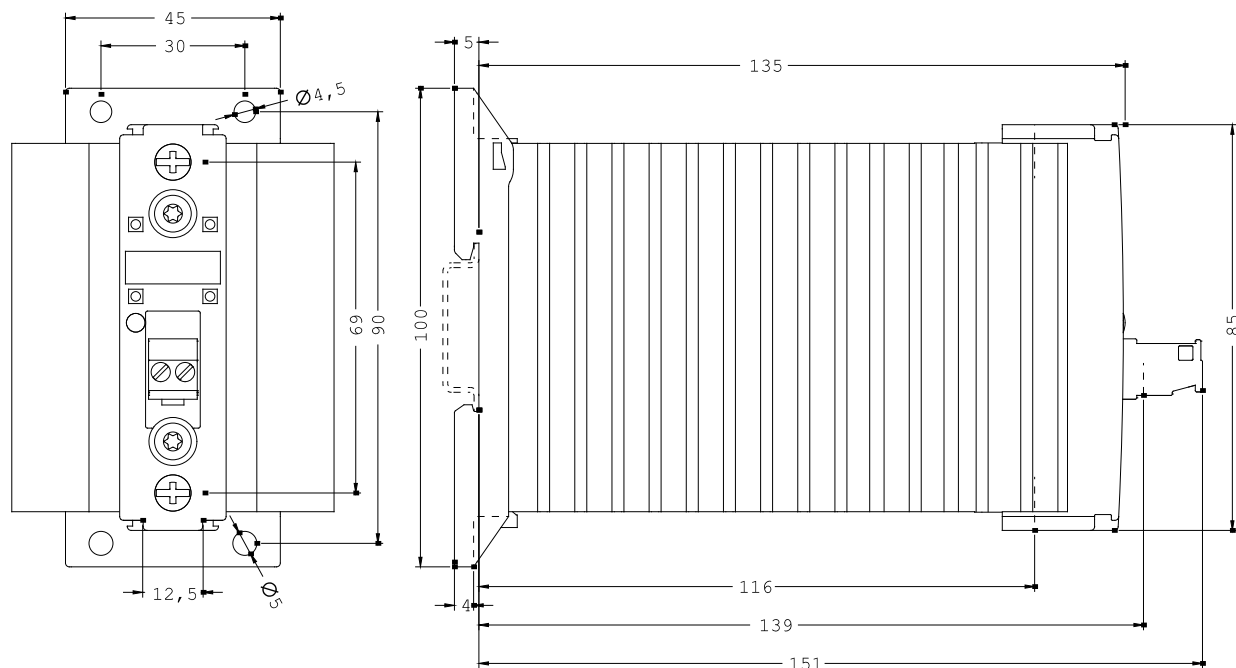
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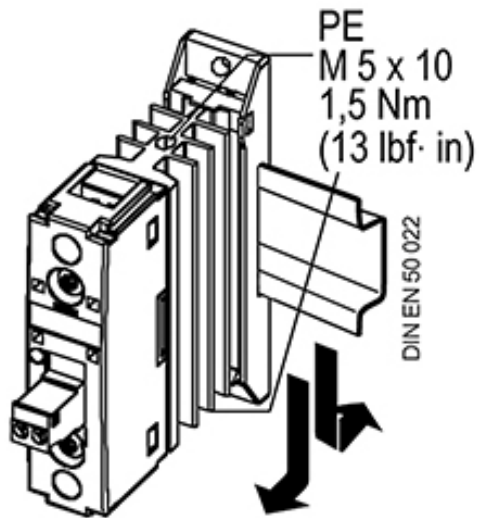
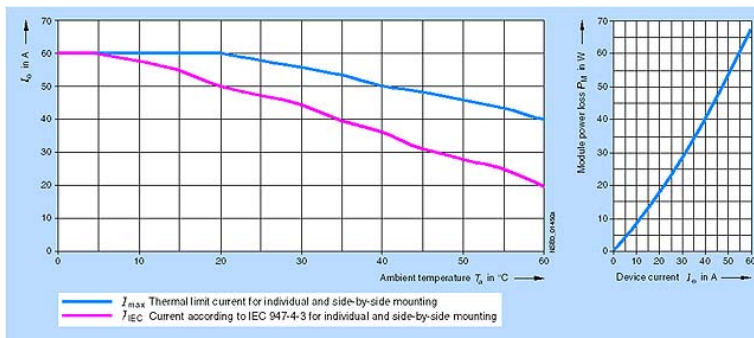
##### Information- and Downloadcenter (Catalogs, Brochures,...)

<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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