



SEMI-COND. CONTACTOR 3RF2,1-PH. AC 51 50A / AC15  
25A 40 DEG. C 48-600 V / 110-230 V AC  
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="#">3RF2950-0HA36</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="#">3RF2950-0GA36</a> |
| Ambient temperature                                                       |    |                               |
| • during operating                                                        | °C | -25 ... +60                   |
| • during storage                                                          | °C | -55 ... +80                   |
| Installation altitude / at a height over sea level / maximum              | 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>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>Control supply voltage frequency</b>                   |    |    |
| • 1 / rated value                                         | Hz | 50 |
| • 2 / rated value                                         | Hz | 60 |
| <b>Type of voltage / of the controlled supply voltage</b> |    | AC |

|                                                                                                                                                                                                                                                                                                                                     |    |                                                                                                                                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Control supply voltage / 1</b> <ul style="list-style-type: none"><li>• at 50 Hz / for AC<ul style="list-style-type: none"><li>• initial rated value</li><li>• final rated value</li></ul></li><li>• at 60 Hz / for AC<ul style="list-style-type: none"><li>• initial rated value</li><li>• final rated value</li></ul></li></ul> |    |                                                                                                                                                                 |
|                                                                                                                                                                                                                                                                                                                                     | V  | 110                                                                                                                                                             |
|                                                                                                                                                                                                                                                                                                                                     | V  | 230                                                                                                                                                             |
|                                                                                                                                                                                                                                                                                                                                     | V  | 110                                                                                                                                                             |
|                                                                                                                                                                                                                                                                                                                                     | V  | 230                                                                                                                                                             |
|                                                                                                                                                                                                                                                                                                                                     |    |                                                                                                                                                                 |
| <b>Control supply voltage</b> <ul style="list-style-type: none"><li>• at 50 Hz / for AC / final value for signal&lt;0&gt;-recognition</li><li>• at 60 Hz / for AC / final value for signal&lt;0&gt;-recognition</li></ul>                                                                                                           | V  | 40                                                                                                                                                              |
|                                                                                                                                                                                                                                                                                                                                     | V  | 40                                                                                                                                                              |
| <b>Tolerance of the line frequency</b>                                                                                                                                                                                                                                                                                              | Hz | 5                                                                                                                                                               |
| <b>Control current</b> <ul style="list-style-type: none"><li>• at minimum control supply voltage / for AC</li><li>• for AC / rated value</li></ul>                                                                                                                                                                                  | mA | 2                                                                                                                                                               |
|                                                                                                                                                                                                                                                                                                                                     | 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> <ul style="list-style-type: none"><li>• with screw-type terminals</li></ul>                                                                                                                            | N·m    | 2 ... 2.5                                         |
|                                                                                                                                                                                                                                                     |        |                                                   |
| <b>Tightening torque (lbf·in) / for main contacts</b> <ul style="list-style-type: none"><li>• with screw-type terminals</li></ul>                                                                                                                   | lbf·in | 18 ... 22                                         |
|                                                                                                                                                                                                                                                     |        |                                                   |
| <b>Type of the 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</li><li>• with conductor end processing</li></ul></li></ul> |        | 2x (1.5 ... 2.5 mm²), 2x (2.5 ... 6 mm²)          |
|                                                                                                                                                                                                                                                     |        | 2x (1 ... 2.5 mm²), 2x (2.5 ... 6 mm²), 1x 10 mm² |
|                                                                                                                                                                                                                                                     |        |                                                   |
|                                                                                                                                                                                                                                                     |        |                                                   |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                 |                                                                                                                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• for AWG conductors <ul style="list-style-type: none"> <li>• for main contacts</li> <li>• for auxiliary and control contacts</li> </ul> </li> <li>• 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> </li> </ul>                                                  |                                 | 2x (14 ... 10)<br>1x (AWG 20 ... 12)<br><br>1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.0 mm²)<br><br>1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.0 mm²)<br>1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.0 mm²) |
| <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 /</li> <li>• without conductor final cutting</li> </ul> </li> </ul> </li> </ul> | mm²<br>mm²<br>mm²<br>mm²<br>mm² | 1.5 ... 6<br>1 ... 10<br>0.5 ... 2.5<br>0.5 ... 2.5<br>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>                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                 | 20 ... 12                                                                                                                                                                              |
| <b>Stripping length / of the cable / for main contacts</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                     | mm                              | 7                                                                                                                                                                                      |
| <b>Stripping 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                                                                   |                                                                                             |                                                                                           | EMC                                                                                           | Declaration of Conformity                                                                         |
|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| <br>CSA | <br>GOST | <br>UL | <br>C-TICK | <br>EG-Konf. |
| <b>Test Certificates</b>                                                                   |                                                                                             | <b>other</b>                                                                              |                                                                                               |                                                                                                   |
| <a href="#">Special Test Certificate</a>                                                   | <a href="#">Type Test Certificates/Test Report</a>                                          | <a href="#">Environmental Confirmations</a>                                               |                                                                                               |                                                                                                   |

#### 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>

##### CAX-Online-Generator

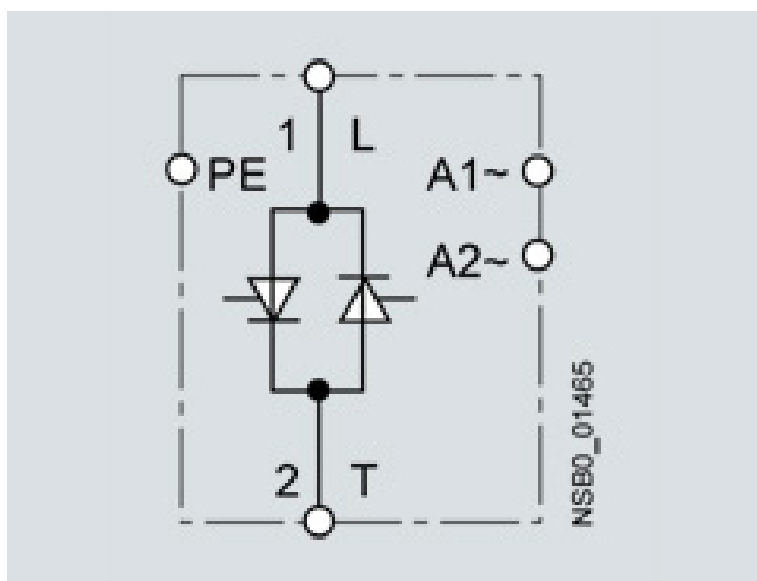
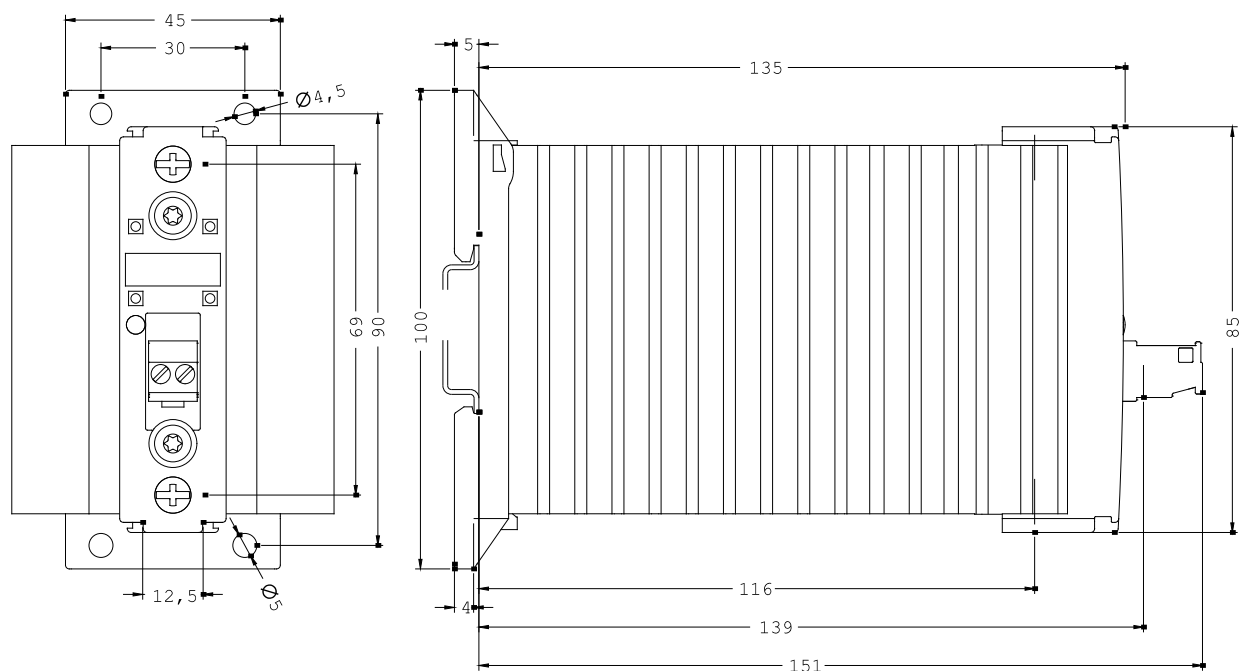
<http://www.siemens.com/cax>

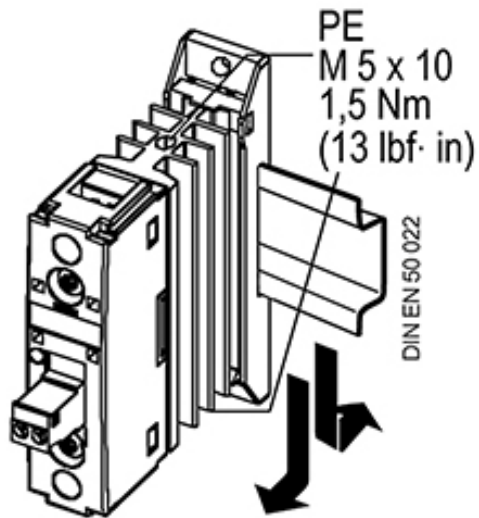
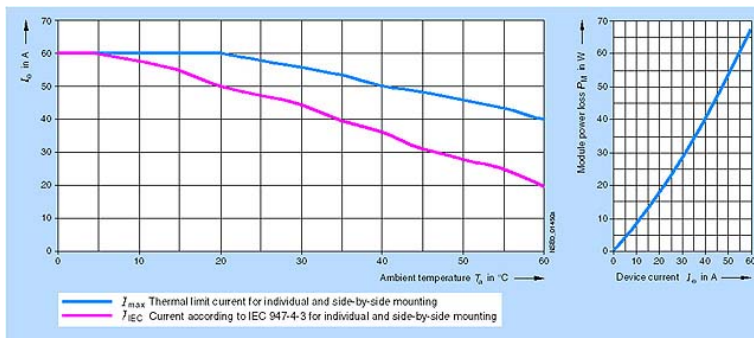
##### Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<http://support.automation.siemens.com/WW/view/en/3RF2350-1BA26/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3RF2350-1BA26](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RF2350-1BA26)





last change:

Feb 4, 2013