



SEMICOND. CONTACTOR 3RF2,  
1-PH. AC 51 10.5 A 40 DEGREES C 24-230 V / 24V DC  
SCREW TERMINAL

| General technical data:                                                   |  |                               |
|---------------------------------------------------------------------------|--|-------------------------------|
| product brand name                                                        |  | SIRIUS                        |
| product designation                                                       |  | solid-state contactor         |
| Product function                                                          |  | zero-point 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 / _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="#">3RF2920-0GA13</a> |
| Product designation / _5 / of the accessories that can be ordered         |  | load monitoring, basis        |
| Manufacturer article number / _5 / of the accessories that can be ordered |  | <a href="#">3RF2920-0FA08</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                 | 10.5       |
| • at AC-51 / rated value                                                              | A                 | 10.5       |
| <b>Operating current / minimum</b>                                                    | mA                | 100        |
| <b>Operating voltage</b>                                                              |                   |            |
| • at 50 Hz / at AC / rated value                                                      | V                 | 24 ... 230 |
| • at 60 Hz / at AC / rated value                                                      | V                 | 24 ... 230 |
| <b>Working area related to the operating voltage</b>                                  |                   |            |
| • at 50 Hz / for AC                                                                   | V                 | 20 ... 253 |
| • at 60 Hz / for AC                                                                   | V                 | 20 ... 253 |
| <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              | 500        |
| <b>Block voltage / at the thyristor / for main contacts / maximum permissible</b>     | V                 | 800        |
| <b>Reverse current / of the thyristor</b>                                             | mA                | 10         |
| <b>Derating temperature</b>                                                           | °C                | 40         |
| <b>Active power loss / total / typical</b>                                            | W                 | 11         |
| <b>Resistance against the impulse current / rated value</b>                           | A                 | 200        |
| <b>I<sup>2</sup>t-level / maximum</b>                                                 | A <sup>2</sup> ·s | 200        |

|                                                           |  |    |
|-----------------------------------------------------------|--|----|
| <b>Control circuit:</b>                                   |  |    |
| <b>Type of voltage / of the controlled supply voltage</b> |  | DC |

|                                                                                                           |    |                                                                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Control supply voltage / 1</b><br><br>• for DC<br><br>• initial rated value<br><br>• final rated value | V  | 15                                                                                                                                                              |
|                                                                                                           | V  | 24                                                                                                                                                              |
|                                                                                                           |    |                                                                                                                                                                 |
| <b>Control supply voltage</b><br><br>• for DC / final value for signal<0>-recognition                     | V  | 5                                                                                                                                                               |
| <b>Control current</b><br><br>• at minimum control supply voltage / for DC<br><br>• for DC / rated value  |    |                                                                                                                                                                 |
|                                                                                                           | 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  | 22.5                                                         |
| <b>Height</b>                                                                      | mm  | 100                                                          |
| <b>Depth</b>                                                                       | mm  | 94                                                           |

| 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><br><br>• with screw-type terminals                                                                                                                                                                                                                                                |        |                                                   |
|                                                                                                                                                                                                                                                                                                                                | N·m    | 2 ... 2.5                                         |
| <b>Tightening torque (lbf·in) / for main contacts</b><br><br>• with screw-type terminals                                                                                                                                                                                                                                       |        |                                                   |
|                                                                                                                                                                                                                                                                                                                                | lbf·in | 18 ... 22                                         |
| <b>Type of the connectable conductor cross-section</b><br><br>• for main contacts<br><br>• solid<br><br>• finely stranded<br><br>• with conductor end processing<br><br>• for AWG conductors<br><br>• for main contacts<br><br>• for auxiliary and control contacts<br><br>• for auxiliary and control contacts<br><br>• solid |        |                                                   |
|                                                                                                                                                                                                                                                                                                                                |        | 2x (1.5 ... 2.5 mm²), 2x (2.5 ... 6 mm²)          |
|                                                                                                                                                                                                                                                                                                                                |        | 2x (1 ... 2.5 mm²), 2x (2.5 ... 6 mm²), 1x 10 mm² |
|                                                                                                                                                                                                                                                                                                                                |        | 2x (14 ... 10)                                    |
|                                                                                                                                                                                                                                                                                                                                |        | 1x (AWG 20 ... 12)                                |
|                                                                                                                                                                                                                                                                                                                                |        | 1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.0 mm²)        |

|                                                                                                                                                                                                                                                                                                                      |                 |                                                                                                                                              |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>finely stranded</li> <li>with conductor end processing</li> <li>without conductor final cutting</li> </ul>                                                                                                                                                                    |                 | 1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.0 mm <sup>2</sup> )<br>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</li> <li>solid</li> <li>stranded wire</li> <li>with conductor end processing</li> <li>for auxiliary and control contacts</li> <li>solid</li> <li>stranded wire</li> <li>with conductor end processing /</li> <li>without conductor final cutting</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                                                            |                                                                                     |                                                                                     | EMC                                                                                 | Declaration of Conformity                                                             |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  |  |  |
| CSA                                                                                 | GOST                                                                                | UL                                                                                  | C-TICK                                                                              | EG-Konf.                                                                              |
| Test Certificates                                                                   |                                                                                     | other                                                                               |                                                                                     |                                                                                       |
| <a href="#">Special Test Certificate</a>                                            | <a href="#">Type Test Certificates/Test Report</a>                                  | <a href="#">Environmental Confirmations</a>                                         |                                                                                     |                                                                                       |

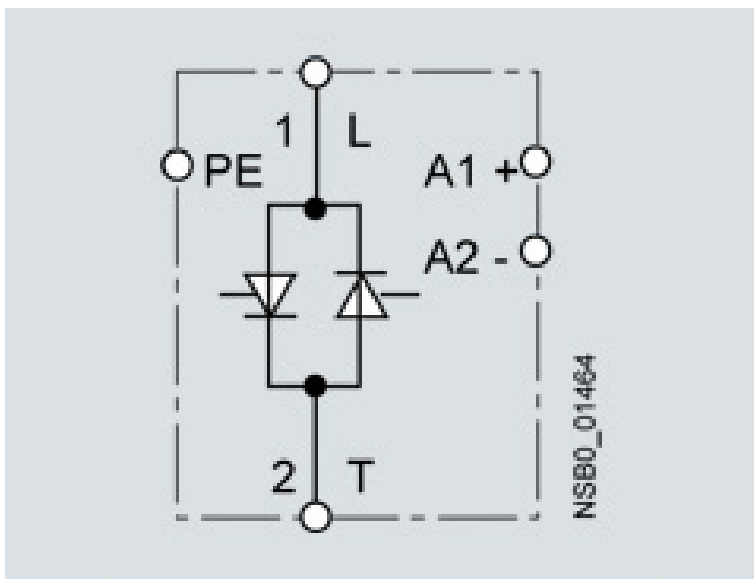
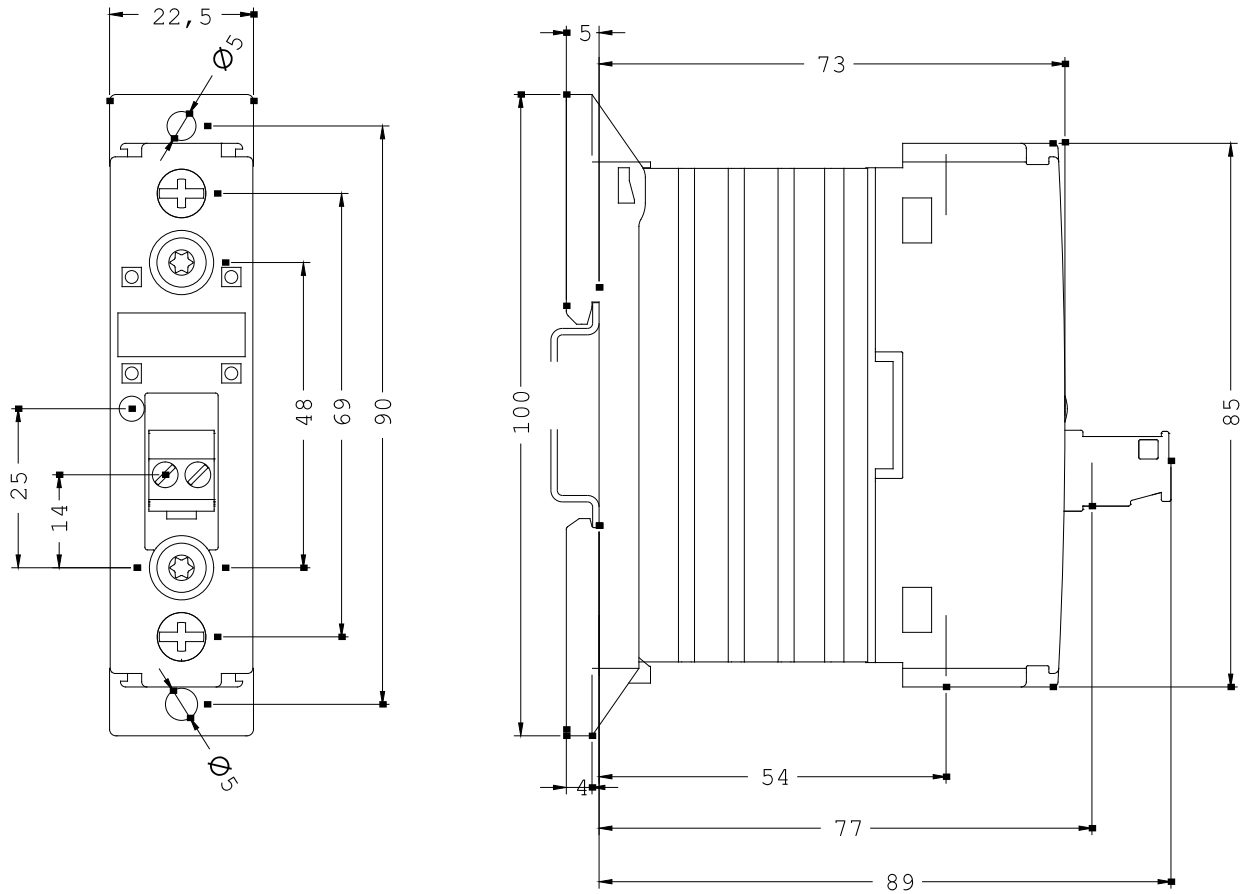
#### Further information:

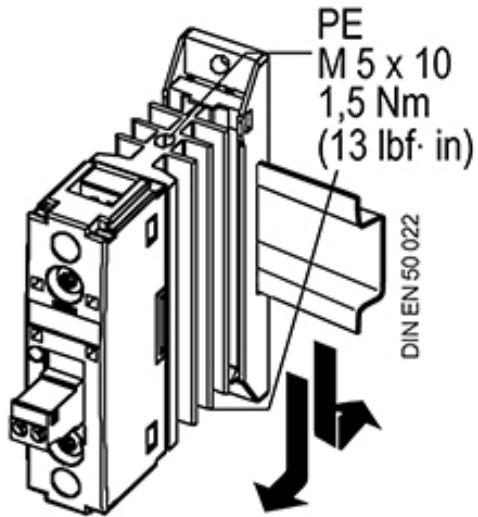
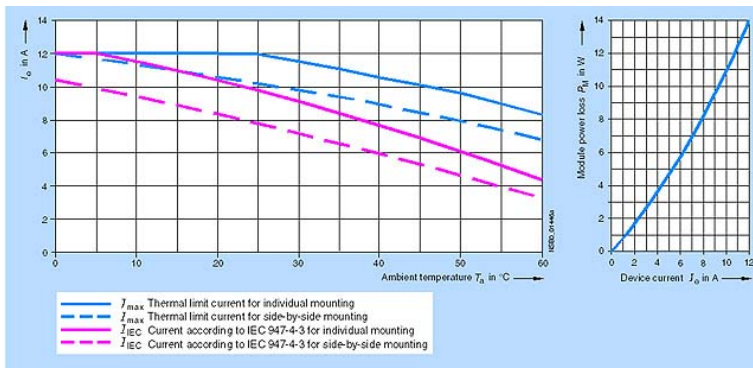
##### Information- and Downloadcenter (Catalogs, Brochures,...)

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

##### Industry Mall (Online ordering system)

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





last change:

Feb 4, 2013