

SEMI-COND. CONTACTOR 3RF2,1-PH. AC 51 10 A 40  
DEGREES C 24-230 V / 24 V DC RING 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> |
| Ambient temperature                                                        |    |                               |
| • during operating                                                         | °C | -25 ... +60                   |
| • during storage                                                           | °C | -55 ... +80                   |
| Installation altitude / at a height over sea level / maximum               | m  | 1,000                         |
| Resistance against vibration / according to IEC 60068-2-6                  |    | 2g                            |
| Resistance against shock / according to IEC 60068-2-27                     |    | 15g / 11 ms                   |
| Item designation                                                           |    |                               |
| • according to DIN 40719 extendable after IEC 204-2 / according to IEC 750 |    | K                             |
| • according to DIN EN 61346-2                                              |    | Q                             |
| Number of NC contacts / for auxiliary contacts                             |    | 0                             |
| Number of NO contacts / for auxiliary contacts                             |    | 0                             |
| Number of change-over switches / for auxiliary contacts                    |    | 0                             |
| Main circuit:                                                              |    |                               |
| Number of NO contacts / for main contacts                                  |    | 1                             |
| Number of NC contacts / for main contacts                                  |    | 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        |

#### Control circuit:

|                                                           |                                                                                                                                                                 |    |
|-----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| <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  | 22.5 |
| <b>Height</b>                                                                      | mm  | 100  |
| <b>Depth</b>                                                                       | mm  | 94   |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                           |                                                                                                                                                                                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Connections:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                           |                                                                                                                                                                                                                                                               |
| <b>Design of the electrical connection / for main current circuit</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                           | ring cable connection                                                                                                                                                                                                                                         |
| <b>Design of the thread / of the connection screw / for main contacts</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                           | M5                                                                                                                                                                                                                                                            |
| <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>Type of the connectable conductor cross-section</b> <ul style="list-style-type: none"> <li>• for main contacts / for JIS cable lug</li> <li>• for DIN cable lug / for main contacts</li> <li>• for AWG conductors <ul style="list-style-type: none"> <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> |                           | JIS C 2805 R 2-5, 5,5-5, 8-5, 14-5<br>DIN 46234 -5-2,5, -5-6, -5-10, -5-16, -5-25<br><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 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><br><br>mm²<br>mm² | 0.5 ... 2.5<br><br><br>0.5 ... 2.5<br>0.5 ... 2.5                                                                                                                                                                                                             |
| <b>Design of the electrical connection / for auxiliary and control current circuit</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                           | ring cable connection                                                                                                                                                                                                                                         |
| <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                        | 10                                                                                                                                                                                                                                                            |
| <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



CSA



GOST



UL



C-TICK



EG-Konf.

[Type Test  
Certificates/Test  
Report](#)

### other

[Environmental  
Confirmations](#)

## 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

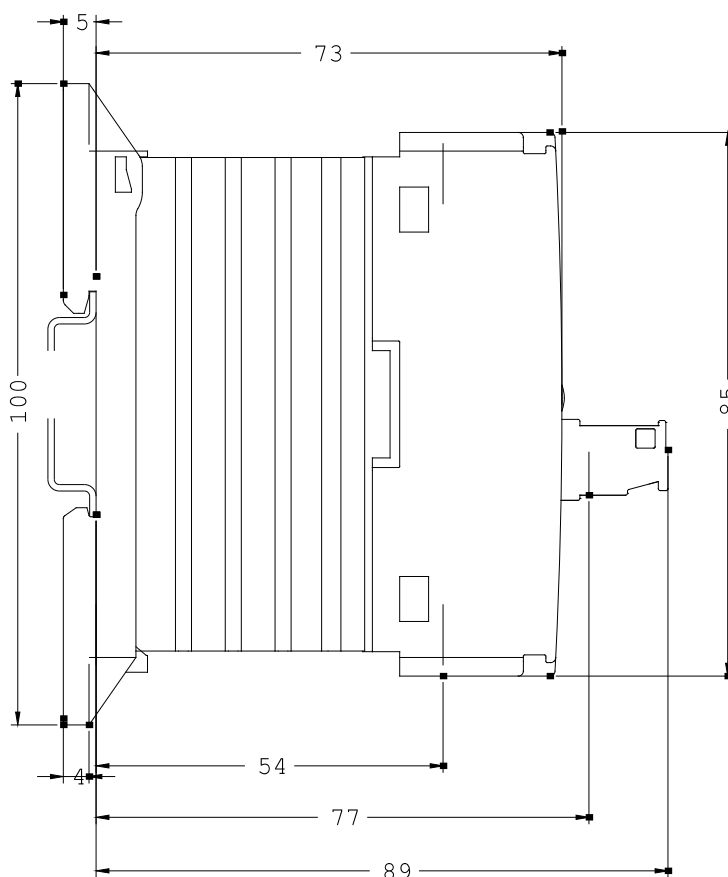
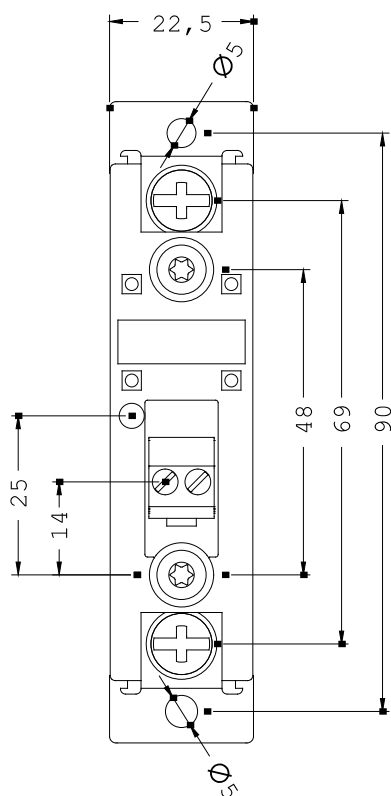
<http://www.siemens.com/cax>

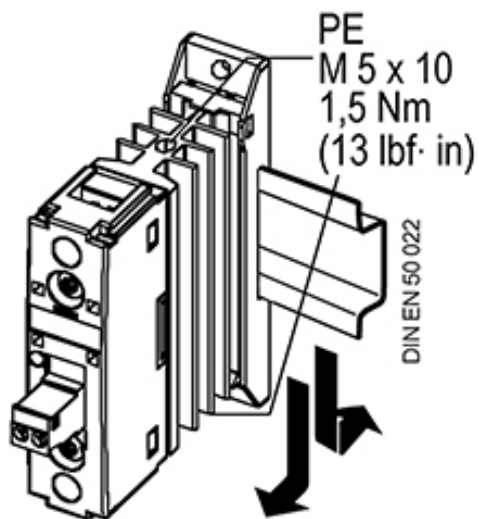
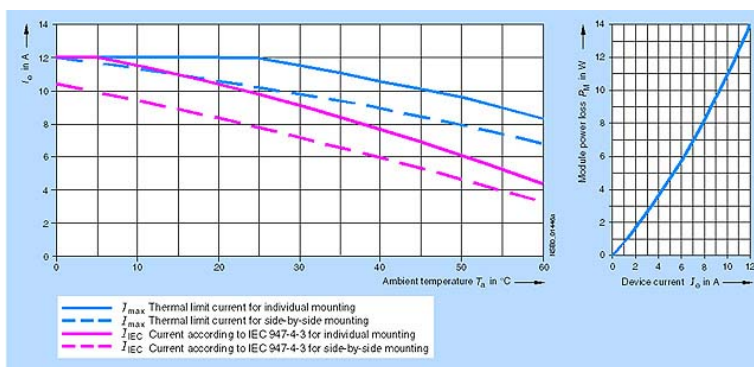
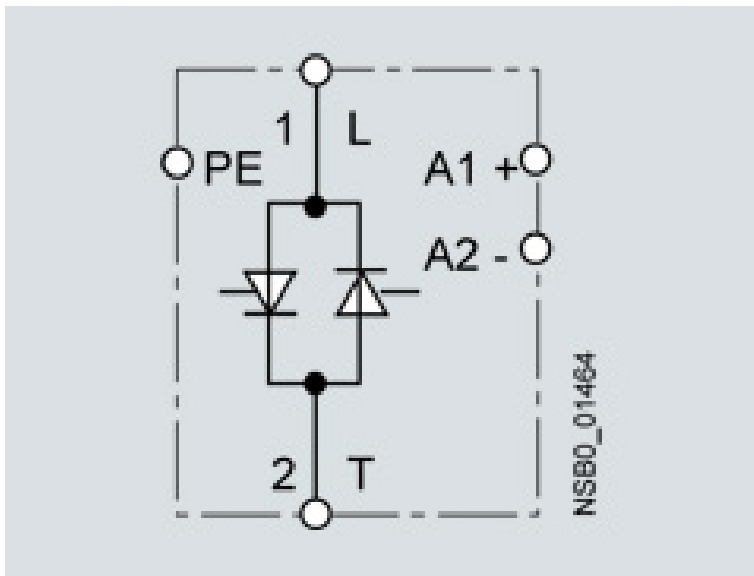
### Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<http://support.automation.siemens.com/WW/view/en/3RF2310-3AA02/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3RF2310-3AA02](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RF2310-3AA02)





last change:

Feb 4, 2013