

SEMI-COND. CONTACTOR 3RF2,1-PH. AC 51 70 A 40  
DEGREES C 48-600 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="#">3RF2990-0GA16</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           |

#### Main circuit:

|                                                                                       |                   |            |
|---------------------------------------------------------------------------------------|-------------------|------------|
| <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                 | 70         |
| • at AC-51 / rated value                                                              | A                 | 70         |
| <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                 | 83         |
| <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      |

#### 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 fixing |
| <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  | 135          |
| <b>Height</b>                                                                      | mm  | 100          |
| <b>Depth</b>                                                                       | mm  | 157.5        |

| Connections:                                                              |     |                                             |
|---------------------------------------------------------------------------|-----|---------------------------------------------|
| <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>                              |     |                                             |
| • with screw-type terminals                                               | N·m | 2 ... 2.5                                   |
| <b>Type of the connectable conductor cross-section</b>                    |     |                                             |
| • for main contacts / for JIS cable lug                                   |     | JIS C 2805 R 2-5, 5,5-5, 8-5, 14-5          |
| • for DIN cable lug / for main contacts                                   |     | DIN 46234 -5-2,5, -5-6, -5-10, -5-16, -5-25 |
| • for AWG conductors                                                      |     |                                             |
| • for auxiliary and control contacts                                      |     | 1x (AWG 20 ... 12)                          |
| • for auxiliary and control contacts                                      |     |                                             |
| • solid                                                                   |     | 1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.0 mm²)  |
| • finely stranded                                                         |     |                                             |
| • with conductor end processing                                           |     | 1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.0 mm²)  |
| • without conductor final cutting                                         |     | 1x (0.5 ... 2.5 mm²), 2x (0.5 ... 1.0 mm²)  |
| <b>Conductor cross section that can be connected</b>                      |     |                                             |
| • for auxiliary and control contacts                                      |     |                                             |
| • solid                                                                   | mm² | 0.5 ... 2.5                                 |
| • stranded wire                                                           |     |                                             |
| • with conductor end processing /                                         | mm² | 0.5 ... 2.5                                 |
| • without conductor final cutting                                         | mm² | 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><br>• for auxiliary and control contacts |        | 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     | 10                    |
| <b>Tightening torque / for auxiliary and control contacts</b><br>• with screw-type terminals             | N·m    | 0.5 ... 0.6           |
| <b>Tightening torque (lbf·in) / for auxiliary and control contacts</b><br>• with screw-type terminals    | lbf·in | 4.5 ... 5.3           |

#### Certificates/approvals:

| General Product Approval                                                                                                                                                                                                                                                                                                                                                                                                                                            | EMC | Declaration of Conformity | Test Certificates                                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---------------------------|----------------------------------------------------|
|  CSA<br> GOST<br> UL<br> C-TICK<br> EG-Konf. |     |                           | <a href="#">Type Test Certificates/Test Report</a> |
| <b>other</b><br><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

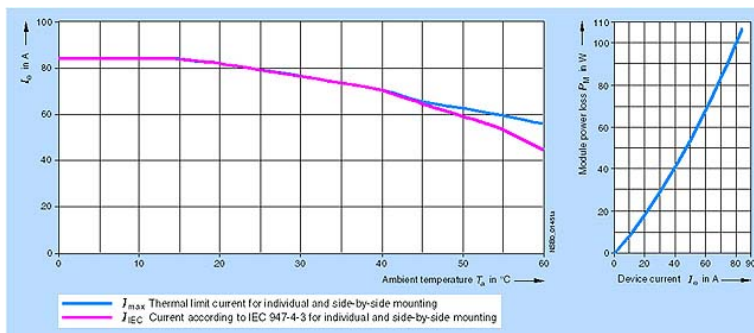
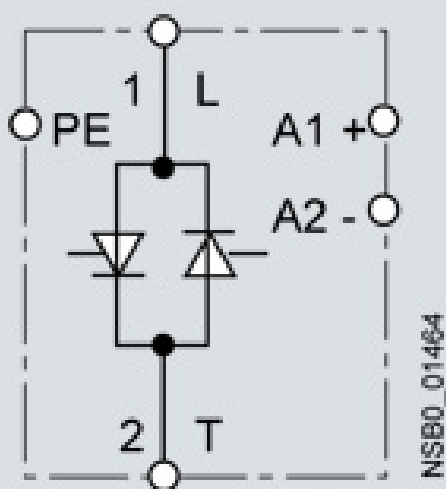
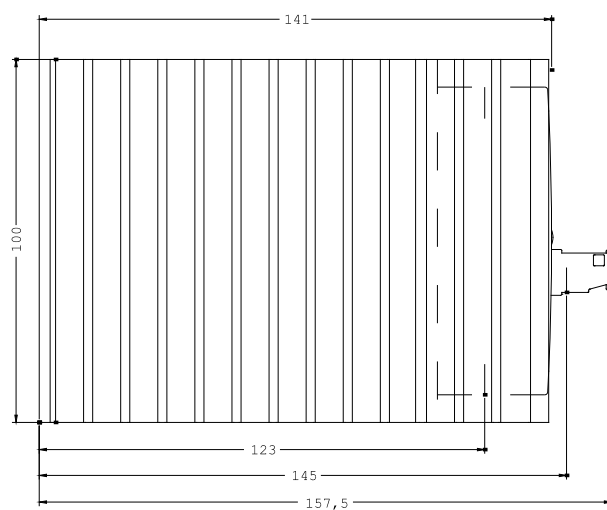
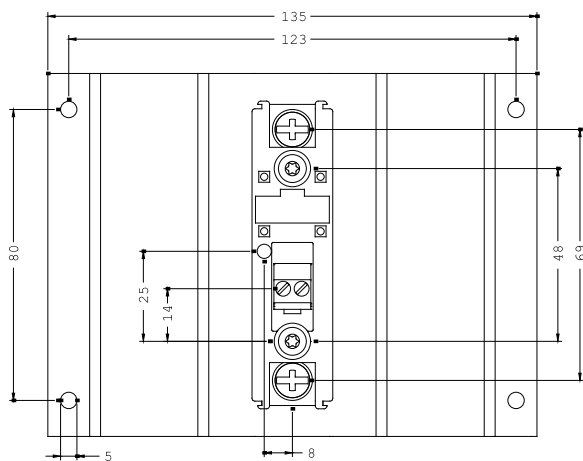
<http://www.siemens.com/cax>

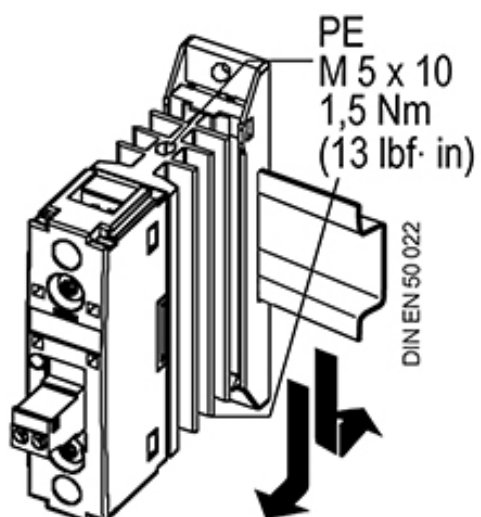
##### Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<http://support.automation.siemens.com/WW/view/en/3RF2370-3AA06/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3RF2370-3AA06](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RF2370-3AA06)





last change:

Feb 4, 2013