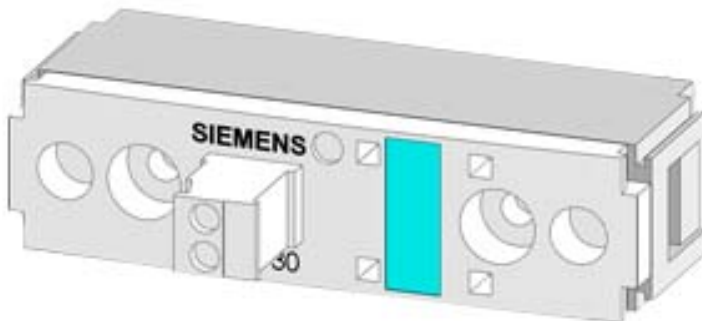


SEMICONDUCTOR RELAY 3RF2 WIDTH 22.5 MM, 50 A 48-460V / 24V DC SCREW CONNECTION WITHOUT CONTROL CONNECTOR



General technical data:

|   |  |                               |
|---|--|-------------------------------|
| product brand name  |  | SIRIUS                        |
| Product designation   |  | solid-state relay             |
| 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="#">3RF2950-0GA16</a> |
| Product designation _5 of the accessories that can be ordered         |  | load monitoring, basis        |

|  |    |                               |
|--|----|-------------------------------|
| <b>Manufacturer article number _5 of the accessories that can be ordered</b>               |    | <a href="#">3RF2920-0FA08</a> |
| <b>Ambient temperature</b>   |    |                               |
| • during operation   | °C | -25 ... +60                   |
| • during storage   | °C | -55 ... +80                   |
| <b>Installation altitude at height above sea level maximum</b>                             | m  | 1 000                         |
| <b>Vibration resistance acc. to IEC 60068-2-6</b>  |    | 2g                            |
| <b>Shock resistance acc. to IEC 60068-2-27</b>   |    | 15g / 11 ms                   |
| <b>Equipment marking acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750</b> |    | K                             |
| <b>Equipment marking acc. to DIN EN 61346-2</b>  |    | Q                             |
| <b>Number of NC contacts for auxiliary contacts</b>  |    | 0                             |
| <b>Number of NO contacts for auxiliary contacts</b>  |    | 0                             |
| <b>Number of CO contacts 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>   |                   |            |
| • Rated value maximum  | A                 | 50         |
| • at AC-51 Rated value   | A                 | 50         |
| • minimum  | mA                | 500        |
| <b>Operating voltage at AC</b>   |                   |            |
| • at 50 Hz Rated value   | V                 | 48 ... 460 |
| • at 60 Hz Rated value   | V                 | 48 ... 460 |
| <b>Operating range relative to the operating voltage at AC</b>                     |                   |            |
| • at 50 Hz   | V                 | 40 ... 506 |
| • at 60 Hz   | V                 | 40 ... 506 |
| <b>Operating frequency Rated value</b>   | Hz                | 50 ... 60  |
| <b>Relative symmetrical tolerance of the operating frequency</b>                   | %                 | 10         |
| <b>Insulation voltage Rated value</b>  | V                 | 600        |
| <b>Rate of voltage rise at the thyristor for main contacts maximum permissible</b> | V/μs              | 1 000      |
| <b>Blocking voltage at the thyristor for main contacts maximum permissible</b>     | V                 | 1 200      |
| <b>Reverse current of the thyristor</b>  | mA                | 10         |
| <b>Derating temperature</b>  | °C                | 40         |
| <b>Active power loss total typical</b>   | W                 | 66         |
| <b>Apparent power loss maximum</b>   | V·A               | 66         |
| <b>Surge current resistance Rated value</b>  | A                 | 600        |
| <b>I<sup>2</sup>t value maximum</b>  | A <sup>2</sup> ·s | 1 800      |
| <b>Short-circuit protection, design of the fuse link</b>                           |                   |            |





| Control circuit/ Control:                            |    |    |
|--|----|----|
| <b>Type of voltage of the control supply voltage</b> |    | DC |
| <b>Control supply voltage 1</b>                      |    |    |
| • at DC  |    |    |
| — Initial rated value                                | V  | 15 |
| — Final rated value                                  | V  | 24 |
| <b>Control supply voltage</b>                        |    |    |
| • at DC Full-scale value for signal<0> recognition   | V  | 5  |
| <b>Control current</b>                               |    |    |
| • at minimum control supply voltage                  |    |    |
| — at DC  | mA | 2  |
| • at DC Rated value                                  | mA | 15 |

| Installation/ mounting/ dimensions:                                 |     |              |
|---|-----|--------------|
| <b>Mounting type</b>  |     | screw fixing |
| <b>Mounting type Side-by-side mounting</b>                          |     | Yes          |
| <b>Design of the thread of the screw for securing the equipment</b> |     | M4           |
| <b>Tightening torque of the screw for securing the equipment</b>    | N·m | 1.5          |
| <b>Width</b>  | mm  | 22.5         |
| <b>Height</b>   | mm  | 85           |
| <b>Depth</b>  | mm  | 48           |

| Connections/ Terminals:   |        |   |
|---|--------|---|
| <b>Type of 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 with screw-type terminals</b>          | N·m    | 2 ... 2.5   |
| <b>Tightening torque [lbf·in] for main contacts with screw-type terminals</b> | lbf·in | 7 ... 10.3  |
| <b>Type of connectable conductor cross-section</b>                            |        |   |
| • for main contacts   |        |   |
| — solid   |        | 2x (1.5 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 6 mm <sup>2</sup> )                      |
| — finely stranded   |        |   |
| — with core end processing  |        | 2x (1 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 6 mm <sup>2</sup> ), 1x 10 mm <sup>2</sup> |
| • for AWG conductors  |        |   |
| — for main contacts   |        | 2x (14 ... 10)  |
| — for auxiliary and control contacts  |        | 1x (AWG 20 ... 12)  |
| • for auxiliary and control contacts  |        |   |
| — solid   |        | 1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.0 mm <sup>2</sup> )                    |
| — finely stranded   |        |   |
| — with core end processing  |        | 1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.0 mm <sup>2</sup> )                    |

|  |                 |  |
|--|-----------------|--|
| — without core end processing  |                 | 1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.0 mm <sup>2</sup> ) |
| <b>Connectable conductor cross-section</b>   |                 |  |
| • for main contacts  |                 |  |
| — single or multi-stranded   | mm <sup>2</sup> | 1.5 ... 6  |
| — finely stranded  |                 |  |
| — with core end processing   | mm <sup>2</sup> | 1 ... 10   |
| • for auxiliary and control contacts   |                 |  |
| — solid  | mm <sup>2</sup> | 0.5 ... 2.5  |
| — finely stranded  |                 |  |
| — with core end processing   | mm <sup>2</sup> | 0.5 ... 2.5  |
| — without core end processing  | mm <sup>2</sup> | 0.5 ... 2.5  |
| <b>AWG number as coded connectable conductor cross section</b>                                 |                 |  |
| • for main contacts  |                 | 14 ... 10  |
| • for auxiliary and control contacts   |                 | 20 ... 12  |
| <b>Type of 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 contacts</b>      |                 | M3   |
| <b>Wire stripping length of the cable</b>  |                 |  |
| • for main contacts  | mm              | 7  |
| • for auxiliary and control contacts   | mm              | 7  |
| <b>Tightening torque for auxiliary and control contacts with screw-type terminals</b>          | N·m             | 0.5 ... 0.6  |
| <b>Tightening torque [lbf·in] for auxiliary and control contacts with screw-type terminals</b> | lbf·in          | 4.5 ... 5.3  |

#### Certificates/ approvals:

| General Product Approval   | EMC   | Test Certificates   | other   |
|--|---|---|---|
| <br>CSA | <br>UR |  | <br>C-TICK |
|  |   | <a href="#">spezielle Prüfbescheinigungen</a><br><u>n</u>                           | <a href="#">Umweltbestätigung</a>   |

#### Further information

##### Short-circuit protection, design of the fuse link

[https://www.automation.siemens.com/cd-static/material/info/3RF21\\_eng.pdf](https://www.automation.siemens.com/cd-static/material/info/3RF21_eng.pdf)

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

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

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

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

##### Cax online generator

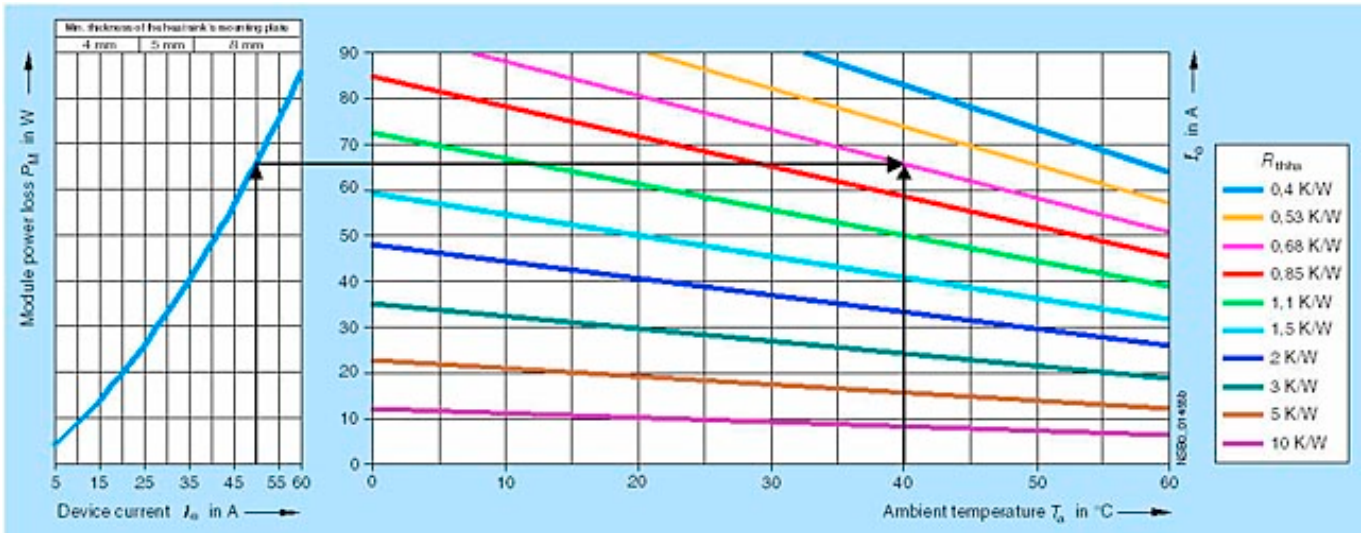
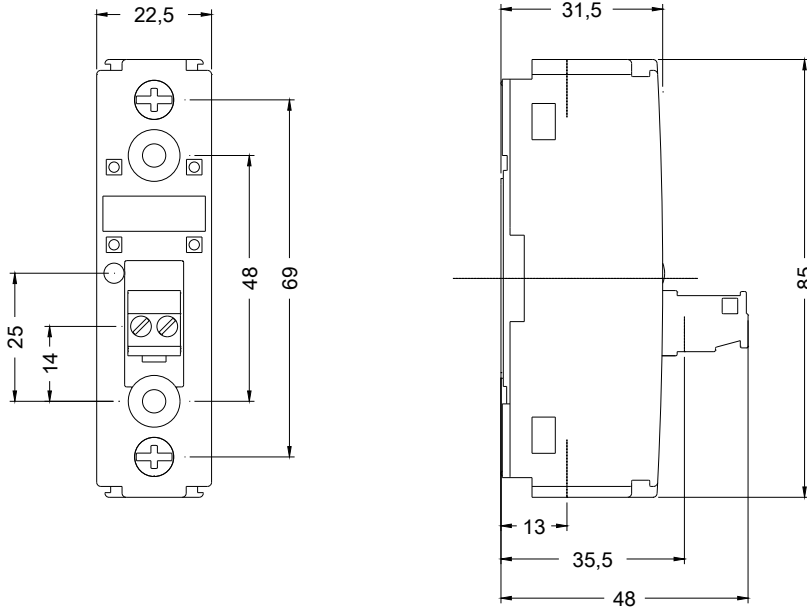
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RF21501AG04>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RF21501AG04>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RF21501AG04&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RF21501AG04&lang=en)



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