

SOLID STATE RELAY 3-PHASE 3RF2 30 A 40 DEG. C  
48-600 V / 4-30 V DC 3PH.-CONTROLLED SCREW  
TERMINAL BLOCKING VOLTAGE 1200 V



General technical data:

|   |    |                               |
|---|----|-------------------------------|
| product brand name  |    | SIRIUS                        |
| Product designation   |    | solid-state relay             |
| Product function  |    | zero-point switching          |
| Number of poles for main current circuit  |    | 3                             |
| Protection class IP   |    | IP20                          |
| Product designation _2 of the accessories that can be ordered                       |    | converter                     |
| Manufacturer article number _2 of the accessories that can be ordered               |    | <a href="#">3RF2900-0EA18</a> |
| Ambient temperature   |    |                               |
| • during operation  | °C | -25 ... +60                   |
| • during storage  | °C | -55 ... +80                   |
| Installation altitude at height above sea level maximum                             | m  | 1 000                         |
| Vibration resistance acc. to IEC 60068-2-6  |    | 2g                            |
| Shock resistance acc. to IEC 60068-2-27   |    | 15g / 11 ms                   |
| Equipment marking acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750 |    | K                             |
| Equipment marking acc. to DIN EN 61346-2  |    | Q                             |

|  |  |   |
|--|--|---|
| Number of NC contacts for auxiliary contacts |  | 0 |
| Number of NO contacts for auxiliary contacts |  | 0 |
| Number of CO contacts for auxiliary contacts |  | 0 |

#### Main circuit:

|   |                   |            |
|---|-------------------|------------|
| Number of NO contacts for main contacts                                     |                   | 3          |
| Number of NC contacts for main contacts                                     |                   | 0          |
| Operating current   |                   |            |
| • Rated value maximum   | A                 | 30         |
| • at AC-51 Rated value  | A                 | 30         |
| • minimum   | mA                | 500        |
| Derating temperature  | °C                | 40         |
| Surge current resistance Rated value  | A                 | 300        |
| I <sup>2</sup> t value maximum  | A <sup>2</sup> ·s | 450        |
| Operating voltage at AC   |                   |            |
| • at 50 Hz Rated value  | V                 | 48 ... 600 |
| • at 60 Hz Rated value  | V                 | 48 ... 600 |
| Operating range relative to the operating voltage at AC                     |                   |            |
| • at 50 Hz  | V                 | 40 ... 660 |
| • at 60 Hz  | V                 | 40 ... 660 |
| Operating frequency Rated value   | Hz                | 50 ... 60  |
| Relative symmetrical tolerance of the operating frequency                   | %                 | 10         |
| Insulation voltage Rated value  | V                 | 600        |
| Rate of voltage rise at the thyristor for main contacts maximum permissible | V/μs              | 500        |
| Blocking voltage at the thyristor for main contacts maximum permissible     | V                 | 1 200      |
| Reverse current of the thyristor  | mA                | 10         |
| Control current at minimum control supply voltage                           |                   |            |
| • at DC   | mA                | 2          |
| Short-circuit protection, design of the fuse link                           |                   |            |

#### Control circuit/ Control:

|  |    |          |
|--|----|----------|
| Type of voltage of the control supply voltage      |    | DC       |
| Control supply voltage 1                           |    |          |
| • at DC  | V  | 4 ... 30 |
| Control supply voltage                             |    |          |
| • at DC Full-scale value for signal<0> recognition | V  | 1        |
| Control current                                    |    |          |
| • at DC Rated value                                | mA | 15       |

#### Installation/ mounting/ dimensions:

|               |  |              |
|---------------|--|--------------|
| Mounting type |  | screw fixing |
|---------------|--|--------------|






|  |                       |     |
|--|-----------------------|-----|
| Mounting type  | Side-by-side mounting | Yes |
| Design of the thread of the screw for securing the equipment |                       | M4  |
| Tightening torque of the screw for securing the equipment    | N·m                   | 1.5 |
| Width  | mm                    | 45  |
| Height   | mm                    | 95  |
| Depth  | mm                    | 47  |

#### Connections/ Terminals:

|   |   |   |
|---|---|---|
| Type of electrical connection for main current circuit  |   | screw-type terminals  |
| Design of the thread of the connection screw for main contacts  |   | M4  |
| Tightening torque for main contacts with screw-type terminals   | N·m   | 2 ... 2.5   |
| Tightening torque [lbf·in] for main contacts with screw-type terminals  | lbf·in  | 7 ... 10.3  |
| <b>Type of 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> </ul> </li> <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 core end processing</li> <li>— without core end processing</li> </ul> </li> </ul> </li> </ul> |   | <p>2x (1.5 ... 2.5 mm<sup>2</sup>), 2x (2.5 ... 6 mm<sup>2</sup>)</p> <p>2x (1 ... 2.5 mm<sup>2</sup>), 2x (2.5 ... 6 mm<sup>2</sup>), 1x 10 mm<sup>2</sup></p> <p>2x (14 ... 10)</p> <p>1x (AWG 20 ... 12)</p> <p>1x (0.5 ... 2.5 mm<sup>2</sup>), 2x (0.5 ... 1.0 mm<sup>2</sup>)</p> <p>1x (0.5 ... 2.5 mm<sup>2</sup>), 2x (0.5 ... 1.0 mm<sup>2</sup>)</p> <p>1x (0.5 ... 2.5 mm<sup>2</sup>), 2x (0.5 ... 1.0 mm<sup>2</sup>)</p> |
| <b>Connectable conductor cross-section</b>  |   |   |
| <ul style="list-style-type: none"> <li>• for main contacts <ul style="list-style-type: none"> <li>— single or multi-stranded</li> <li>— finely stranded</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 core end processing</li> <li>— without core end processing</li> </ul> </li> </ul> </li> </ul>   | <p>mm<sup>2</sup></p> <p>mm<sup>2</sup></p> <p>mm<sup>2</sup></p> <p>mm<sup>2</sup></p> <p>mm<sup>2</sup></p> | <p>1.5 ... 6</p> <p>1 ... 10</p> <p>0.5 ... 2.5</p> <p>0.5 ... 2.5</p> <p>0.5 ... 2.5</p>   |
| <b>AWG number as coded connectable conductor cross section</b>  |   |   |
| <ul style="list-style-type: none"> <li>• for main contacts</li> <li>• for auxiliary and control contacts</li> </ul>   |   | <p>10 ... 14</p> <p>20 ... 12</p>   |

|   |        |                      |
|---|--------|----------------------|
| Type of electrical connection for auxiliary and control current circuit                 |        | screw-type terminals |
| Design of the thread of the connection screw of the auxiliary and control contacts      |        | M3                   |
| Wire stripping length of the cable  |        |                      |
| • for main contacts   | mm     | 7                    |
| • for auxiliary and control contacts  | mm     | 7                    |
| Tightening torque for auxiliary and control contacts with screw-type terminals          | N·m    | 0.5 ... 0.6          |
| Tightening torque [lbf·in] for auxiliary and control contacts with screw-type terminals | lbf·in | 4.5 ... 5.3          |

#### Certificates/ approvals:

| General Product Approval   | EMC   | Declaration of Conformity   | Test Certificates   |
|--|---|---|---|
| <br>CSA | <br>UR | <br>EAC        | <br>C-TICK |
|  |   | <br>EG-Konf. | <a href="#">Typprüfbescheinigung/Werkszeugnis</a>   |

#### other

[Umweltbestätigung](#)

#### Further information

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

[https://www.automation.siemens.com/cd-static/material/info/3RF22\\_eng.pdf](https://www.automation.siemens.com/cd-static/material/info/3RF22_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

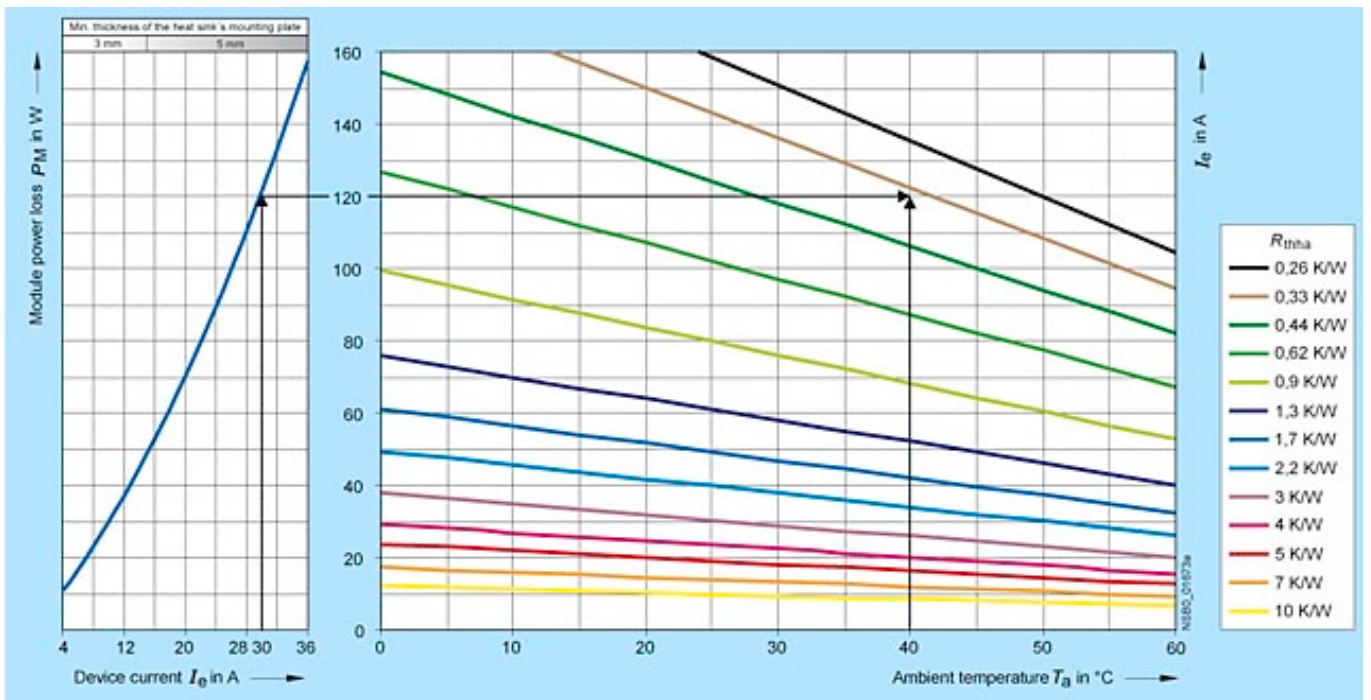
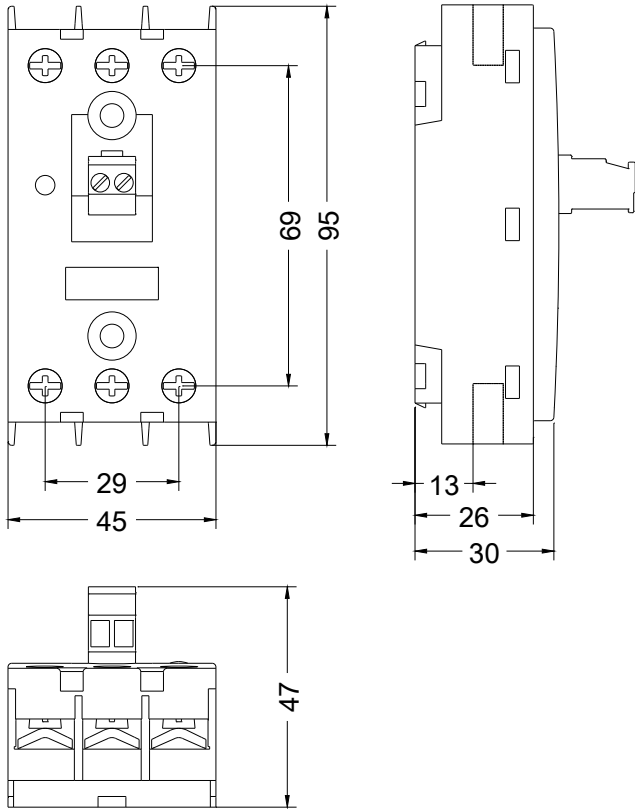
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RF22301AC45>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RF22301AC45>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RF22301AC45&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RF22301AC45&lang=en)



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