



Solid-state contactor 1-phase 3RF2 AC 51 / 40 A / 40 °C 48-600 V / 24 V DC Ring cable connection

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| product brand name                                      | SIRIUS   |
| product designation                                     | solid-state contactor  |
| design of the product                                   | single-phase   |
| product type designation                                | 3RF23  |
| manufacturer's article number                           |  |
| • _1 of the accessories that can be ordered             | <a href="#">3RF2900-3PA88</a>  |
| • _3 of the accessories that can be ordered             | <a href="#">3RF2900-0EA18</a>  |
| • _4 of the accessories that can be ordered             | <a href="#">3RF2950-0GA16</a>  |
| product designation                                     |  |
| • _1 of the accessories that can be ordered             | terminal cover   |
| • _3 of the accessories that can be ordered             | converter  |
| • _4 of the accessories that can be ordered             | load monitoring  |
| General technical data                                  |  |
| product function  | zero-point switching   |
| power loss [W] for rated value of the current           |  |
| • at AC in hot operating state                          | 44 W   |
| • at AC in hot operating state per pole                 | 44 W   |
| • without load current share typical                    | 0.4 W  |
| insulation voltage rated value                          | 600 V  |
| degree of pollution                                     | 3  |
| type of voltage   |  |
| • of the operating voltage                              | AC   |
| • of the control supply voltage                         | DC   |
| surge voltage resistance of main circuit rated value    | 6 kV   |
| protection class IP                                     | IP00   |
| protection class IP on the front according to IEC 60529 | IP00   |
| shock resistance according to IEC 60068-2-27            | 15g / 11 ms  |
| vibration resistance according to IEC 60068-2-6         | 2g   |
| reference code according to IEC 81346-2                 | Q  |
| Substance Prohibitance (Date)                           | 05/28/2009   |
| SVHC substance name                                     | Lead - 7439-92-1<br>Lead monoxide (lead oxide) - 1317-36-8<br>Dibutylbis(pentane-2,4-dionato-O,O')tin - 22673-19-4 |
| Weight  | 0.458 kg   |
| Main circuit  |  |
| number of poles for main current circuit                | 1  |
| number of NO contacts for main contacts                 | 1  |
| number of NC contacts for main contacts                 | 0  |
| type of voltage of the operating voltage                | AC   |
| operating voltage                                       |  |
| • at AC   |  |

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| — at 50 Hz rated value   | 48 ... 600 V   |
| — at 60 Hz rated value   | 48 ... 600 V   |
| <b>operating frequency rated value</b>   | 50 ... 60 Hz   |
| <b>operating range relative to the operating voltage at AC</b>                     |  |
| • at 50 Hz   | 40 ... 660 V   |
| • at 60 Hz   | 40 ... 660 V   |
| <b>operational current</b>   |  |
| • at AC-51 rated value   | 40 A   |
| • at AC-51 according to IEC 60947-4-3  | 33 A   |
| • according to UL 508 rated value  | 36 A   |
| <b>operational current minimum</b>   | 500 mA   |
| <b>rate of voltage rise at the thyristor for main contacts maximum permissible</b> | 1 000 V/μs   |
| <b>blocking voltage at the thyristor for main contacts maximum permissible</b>     | 1 600 V  |
| <b>reverse current of the thyristor</b>  | 10 mA  |
| <b>derating temperature</b>  | 40 °C  |
| <b>surge current resistance rated value</b>  | 1 150 A  |
| <b>I<sup>2</sup>t value maximum</b>  | 6 600 A <sup>2</sup> ·s  |
| <b>Control circuit/ Control</b>  |  |
| <b>type of voltage of the control supply voltage</b>                               | DC   |
| <b>control supply voltage 1 at DC rated value maximum permissible</b>              | 30 V   |
| <b>control supply voltage 1 at DC</b>  | 15 ... 24 V  |
| <b>control supply voltage</b>  |  |
| • at DC initial value for signal <1> detection                                     | 15 V   |
| • at DC full-scale value for signal<0> recognition                                 | 5 V  |
| <b>control current at minimum control supply voltage</b>                           |  |
| • at DC  | 13 mA  |
| control current at DC rated value  | 15 mA  |
| <b>ON-delay time</b>   | 1 ms; additionally max. one half-wave  |
| <b>OFF-delay time</b>  | 1 ms; additionally max. one half-wave  |
| <b>Auxiliary circuit</b>   |  |
| <b>type of switching contact</b>   | normally open contact (NO)   |
| <b>number of NC contacts for auxiliary contacts</b>                                | 0  |
| <b>number of NO contacts for auxiliary contacts</b>                                | 0  |
| number of CO contacts for auxiliary contacts                                       | 0  |
| <b>Installation/ mounting/ dimensions</b>  |  |
| fastening method side-by-side mounting   | Yes  |
| <b>fastening method</b>  | screw fixing and snap-on mounting on standard mounting rail 35 mm according to IEC 60715 |
| <b>design of the thread of the screw for securing the equipment</b>                | M4   |
| <b>height</b>  | 100 mm   |
| <b>width</b>   | 67 mm  |
| <b>depth</b>   | 141 mm   |
| <b>Connections/ Terminals</b>  |  |
| <b>product component removable terminal for auxiliary and control circuit</b>      | Yes  |
| <b>type of electrical connection</b>   |  |
| • for main current circuit   | Ring cable lug connection  |
| • for auxiliary and control circuit  | ring terminal lug connection   |
| <b>type of connectable conductor cross-sections</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  |
| <b>type of connectable conductor cross-sections</b>                                |  |
| • 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> )                     |
| — finely stranded without core end processing                                      | 1x (0.5 ... 2.5 mm <sup>2</sup> ), 2x (0.5 ... 1.0 mm <sup>2</sup> )                     |
| • for AWG cables for auxiliary and control contacts                                | 1x (AWG 20 ... 12)   |
| <b>tightening torque</b>   |  |

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| <ul style="list-style-type: none"> <li>• for main contacts with screw-type terminals</li> <li>• for auxiliary and control contacts with screw-type terminals</li> </ul> | 2 ... 2.5 N·m<br>0.5 ... 0.6 N·m |
| <b>tightening torque [lbf·in]</b>   |                                  |
| <ul style="list-style-type: none"> <li>• for auxiliary and control contacts with screw-type terminals</li> </ul>  | 4.5 ... 5.3 lbf·in               |
| <b>design of the thread of the connection screw</b>   |                                  |
| <ul style="list-style-type: none"> <li>• for main contacts</li> <li>• of the auxiliary and control contacts</li> </ul>  | M5<br>M3                         |
| <b>stripped length of the cable</b>   |                                  |
| <ul style="list-style-type: none"> <li>• for main contacts</li> <li>• for auxiliary and control contacts</li> </ul>   | 10 mm<br>10 mm                   |

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| <b>Electrical Safety</b>                                       |   |
| <b>protection class IP on the front according to IEC 60529</b> | IP00; IP20 with cover                                       |
| <b>touch protection on the front according to IEC 60529</b>    | finger-safe, for vertical contact from the front with cover |

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| <b>Ambient conditions</b>  |                                  |
| installation altitude at height above sea level maximum  | 1 000 m                          |
| <b>ambient temperature</b>   |                                  |
| <ul style="list-style-type: none"> <li>• during operation</li> <li>• during storage</li> </ul> | -25 ... +60 °C<br>-55 ... +80 °C |

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| <b>Electromagnetic compatibility</b>  |  |
| <b>conducted interference</b>   |  |
| <ul style="list-style-type: none"> <li>• due to burst according to IEC 61000-4-4</li> <li>• due to conductor-earth surge according to IEC 61000-4-5</li> <li>• due to conductor-conductor surge according to IEC 61000-4-5</li> <li>• due to high-frequency radiation according to IEC 61000-4-6</li> </ul> | 2 kV / 5 kHz behavior criterion 2<br>2 kV behavior criterion 2<br>1 kV behavior criterion 2<br><br>140 dBuV in the frequency range 0.15 ... 80 MHz, behavior criterion 1 |
| <b>field-based interference according to IEC 61000-4-3</b>  | 80 MHz ... 1 GHz 10 V/m, behavior criterion 1  |
| <b>electrostatic discharge according to IEC 61000-4-2</b>   | 4 kV contact discharging / 8 kV air discharging, behavior criterion 2  |
| <b>conducted HF interference emissions according to CISPR11</b>   | Class A for industrial environment   |
| <b>field-bound HF interference emission according to CISPR11</b>  | Class B for the domestic, business and commercial environments   |

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| <b>Short-circuit protection, design of the fuse link</b>  |   |
| manufacturer's article number <ul style="list-style-type: none"> <li>• of gS fuse for semiconductor protection at NH design usable</li> <li>• of full range R fuse link for semiconductor protection at cylindrical design usable</li> <li>• of back-up R fuse link for semiconductor protection at NH design usable</li> <li>• of back-up R fuse link for semiconductor protection at cylindrical design 14 x 51 mm usable</li> <li>• of back-up R fuse link for semiconductor protection at cylindrical design 22 x 58 mm usable</li> </ul> | <a href="#">3NE1802-0</a><br><a href="#">5SE1350</a><br><a href="#">3NE8017-1</a><br><a href="#">3NC1450</a><br><a href="#">3NC2280</a> |

#### Approvals Certificates

|                                 |            |
|---------------------------------|------------|
| <b>General Product Approval</b> | <b>EMV</b> |
|---------------------------------|------------|



[Confirmation](#)



|                          |              |                    |
|--------------------------|--------------|--------------------|
| <b>Test Certificates</b> | <b>other</b> | <b>Environment</b> |
|--------------------------|--------------|--------------------|

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#### Further information

Information on the packaging  
<https://support.industry.siemens.com/cs/ww/en/view/109813875>  
Information- and Downloadcenter (Catalogs, Brochures,...)

<https://www.siemens.com/ic10>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RF2340-3AA06>

Cax online generator

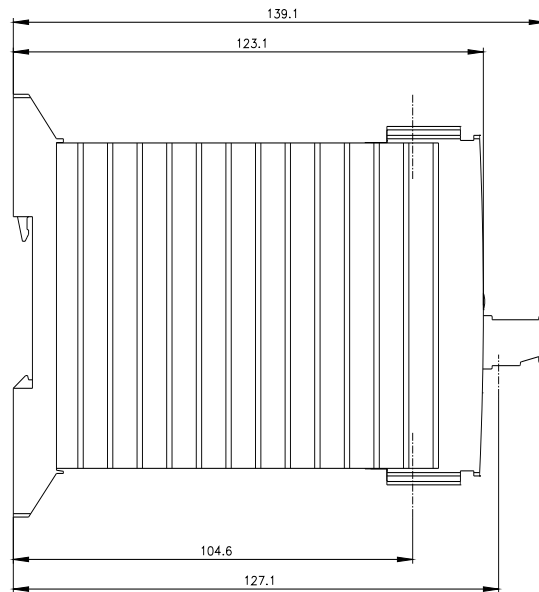
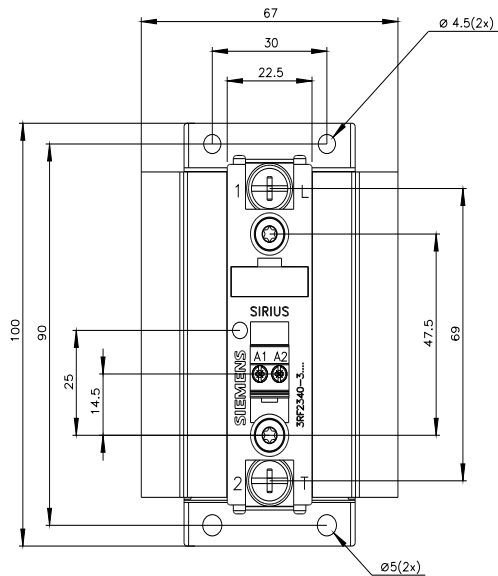
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RF2340-3AA06>

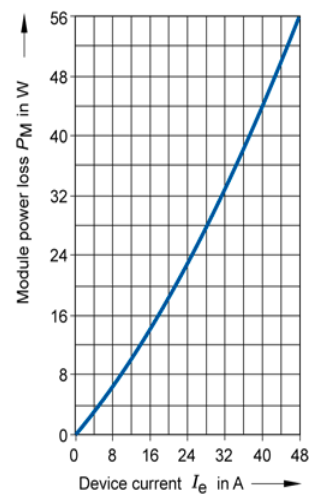
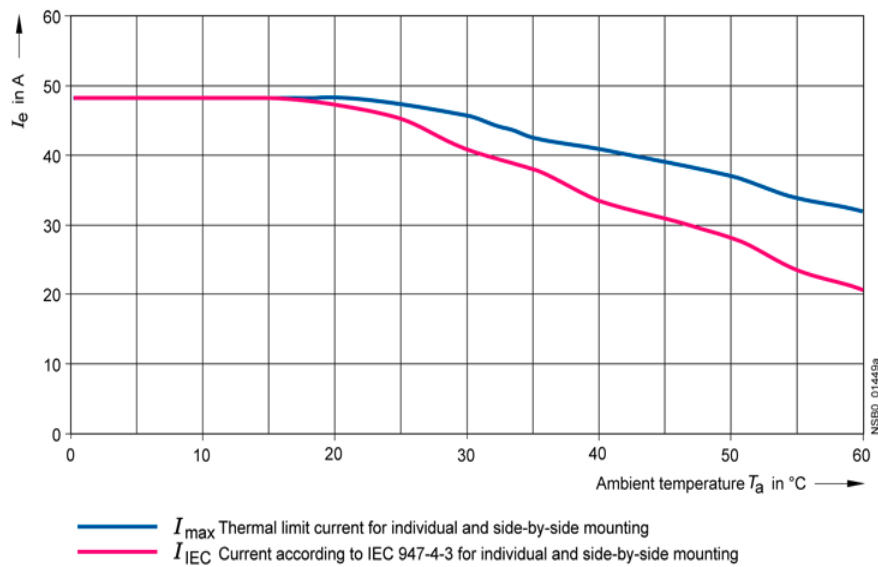
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RF2340-3AA06>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RF2340-3AA06&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RF2340-3AA06&lang=en)





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