

Solid-state contactor AC 51 / 10 A / 40 °C 48-460 V / 24 V DC screw terminal Low power consumption



|                                                                                   |                       |
|-----------------------------------------------------------------------------------|-----------------------|
| product brand name                                                                | SIRIUS                |
| product designation                                                               | solid-state contactor |
| design of the product                                                             | single-phase          |
| product type designation                                                          | 3RF23                 |
| General technical data                                                            |                       |
| degree of pollution                                                               | 3                     |
| reference code / acc. to DIN EN 81346-2                                           | Q                     |
| Main circuit                                                                      |                       |
| operating current                                                                 |                       |
| • at AC-51 / rated value                                                          | 10.5 A                |
| • acc. to UL 508 / rated value                                                    | 9.6 A                 |
| operating current / minimum                                                       | 101 mA                |
| rate of voltage rise / at the thyristor / for main contacts / maximum permissible | 1 000 V/μs            |
| I <sup>2</sup> t value / maximum                                                  | 200 A <sup>2</sup> ·s |
| Control circuit/ Control                                                          |                       |
| type of voltage / of the control supply voltage                                   | DC                    |
| control supply voltage / 1                                                        |                       |

|                                                                                                              |                                       |
|--------------------------------------------------------------------------------------------------------------|---------------------------------------|
| <ul style="list-style-type: none"> <li>• at DC / rated value</li> </ul>                                      | 30 V                                  |
| <ul style="list-style-type: none"> <li>• at DC</li> </ul>                                                    | 15 ... 24 V                           |
| <b>control supply voltage</b>                                                                                |                                       |
| <ul style="list-style-type: none"> <li>• at DC / initial value for signal &lt;1&gt; detection</li> </ul>     | 15 V                                  |
| <ul style="list-style-type: none"> <li>• at DC / full-scale value for signal&lt;0&gt; recognition</li> </ul> | 5 V                                   |
| <b>control current / at minimum control supply voltage</b>                                                   |                                       |
| <ul style="list-style-type: none"> <li>• at DC</li> </ul>                                                    | 6.5 mA                                |
| control current / at DC / rated value                                                                        | 9 mA                                  |
| <b>switch-on delay time</b>                                                                                  | 1 ms; additionally max. one half-wave |
| <b>Off-delay time</b>                                                                                        | 1 ms; additionally max. one half-wave |

| Installation/ mounting/ dimensions |                                           |
|------------------------------------|-------------------------------------------|
| <b>height</b>                      | 100 mm                                    |
| <b>width</b>                       | 22.5 mm                                   |
| <b>depth</b>                       | 91 mm; 94.0 mm up to product revision E05 |

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

| Short-circuit protection, design of the fuse link                                                                                          |                           |
|--------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| manufacturer's article number                                                                                                              |                           |
| <ul style="list-style-type: none"> <li>• of gS fuse for semiconductor protection / at NH design</li> </ul>                                 | <a href="#">3NE1813-0</a> |
| <ul style="list-style-type: none"> <li>• of full range R fuse link for semiconductor protection / at cylindrical design</li> </ul>         | <a href="#">5SE1316</a>   |
| <ul style="list-style-type: none"> <li>• of back-up R fuse link for semiconductor protection / at NH design</li> </ul>                     | <a href="#">3NE8015-1</a> |
| <ul style="list-style-type: none"> <li>• of back-up R fuse link for semiconductor protection / at cylindrical design 10 x 38 mm</li> </ul> | <a href="#">3NC1016</a>   |
| <ul style="list-style-type: none"> <li>• of back-up R fuse link for semiconductor protection / at cylindrical design 14 x 51 mm</li> </ul> | <a href="#">3NC1420</a>   |

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| <ul style="list-style-type: none"> <li>• of back-up R fuse link for semiconductor protection / at cylindrical design 22 x 58 mm</li> </ul>                                                              | <a href="#">3NC2220</a>                                                                                                                                                                                                           |
| manufacturer's article number / of the gG fuse <ul style="list-style-type: none"> <li>• at NH design</li> <li>• at cylindrical design 10 x 38 mm</li> <li>• at cylindrical design 14 x 51 mm</li> </ul> | <a href="#">3NA6801</a><br><a href="#">3NW6001-1; These fuses have a smaller rated current than the semiconductor relays</a><br><a href="#">3NW6101-1; These fuses have a smaller rated current than the semiconductor relays</a> |
| manufacturer's article number <ul style="list-style-type: none"> <li>• of DIAZED fuse</li> <li>• of NEOZED fuse</li> </ul>                                                                              | <a href="#">5SB141</a><br><a href="#">5SE2306; These fuses have a smaller rated current than the semiconductor relays</a>                                                                                                         |

## Certificates/ approvals

| General Product Approval                                                                 |                                                                                         |                                                                                   | EMC                                                                                      | Declaration of Conformity                                                                       |                               |
|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-------------------------------|
| <br>CSA | <br>UL |  | <br>RCM | <br>EG-Konf. | <a href="#">Miscellaneous</a> |

| Test Certificates                                  | other                                                                              | Railway                             |
|----------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------|
| <a href="#">Type Test Certificates/Test Report</a> | <a href="#">Special Test Certificate</a>                                           | <a href="#">Confirmation</a>        |
|                                                    |  | <a href="#">Vibration and Shock</a> |

## Further information

**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=3RF2310-1AA04-0KN0>

**Cax online generator**  
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RF2310-1AA04-0KN0>

**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**  
<https://support.industry.siemens.com/cs/ww/en/ps/3RF2310-1AA04-0KN0>

**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**  
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RF2310-1AA04-0KN0&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RF2310-1AA04-0KN0&lang=en)





