

SENTRON, fuse switch disconnecter 3NP1, 3-pole, NH000, 160 A, for 40mm 8US busbar system, Rahmenklemme, cover level 32/70 mm



| Model  |                               |
|--|-------------------------------|
| product brandname  | SENTRON                       |
| Product designation  | 3NP1 fuse switch disconnecter |
| Design of the product  | cover level 32/70 mm          |
| Busbar design  | busbar thickness 5 or 10 mm   |
| Design of the load switch / Strip form                         | No                            |
| Type of the driving mechanism / motor drive                    | No                            |
| General technical data   |                               |
| Number of poles  | 3                             |
| Size of disconnecting link                                     | 0                             |
| Size of fuse link  | NH000                         |
| Continuous current / at 35 °C / rated value                    | 160 A                         |
| Let-through current / with closed switch / maximum permissible | 15 kA                         |
| cut-off value $I^{*2}t_{max.}$ / 500 V                         | 56 000 A <sup>2</sup> ·s      |
| Power factor   |                               |
| • at AC-22 B   | 0.65                          |
| • at AC-23 B   | 0.45                          |
| • with capacitive load   | -0.25                         |

|   |             |
|---|-------------|
| <b>circuit-breaker / Design</b>                             | 3NP11       |
| <b>Mechanical service life (switching cycles) / typical</b> | 2 000       |
| <b>Fuse system</b>  | LV HRC fuse |

|  |       |
|--|-------|
| <b>Voltage</b>                         |       |
| Insulation voltage / rated value       | 690 V |
| <b>Power factor / at AC-21 B</b>       | 0.95  |
| Surge voltage resistance / rated value | 8 kV  |

|   |      |
|---|------|
| <b>Protection class</b>   |      |
| <b>Protection class IP</b>  |      |
| <ul style="list-style-type: none"> <li>• with closed switch / with cover or cable lug cover</li> </ul>    | IP40 |
| <ul style="list-style-type: none"> <li>• with closed switch / without cover or cable lug cover</li> </ul> | IP30 |
| <ul style="list-style-type: none"> <li>• on the front</li> </ul>  | IP40 |
| <ul style="list-style-type: none"> <li>• open</li> </ul>  | IP20 |

|  |     |
|--|-----|
| <b>Dissipation</b>   |     |
| <b>Power loss [W]</b>  |     |
| <ul style="list-style-type: none"> <li>• for rated value of the current / at AC / in hot operating state / per pole</li> </ul> | 3 W |
| <ul style="list-style-type: none"> <li>• maximum</li> </ul>  | 9 W |

|   |                          |
|---|--------------------------|
| <b>Electricity</b>  |                          |
| <b>Continuous current</b>   |                          |
| <ul style="list-style-type: none"> <li>• rated value</li> </ul>               | 100 A                    |
| <ul style="list-style-type: none"> <li>• at 40 °C / rated value</li> </ul>    | 150 A                    |
| <ul style="list-style-type: none"> <li>• at 45 °C / rated value</li> </ul>    | 140 A                    |
| <ul style="list-style-type: none"> <li>• at 50 °C / rated value</li> </ul>    | 130 A                    |
| <ul style="list-style-type: none"> <li>• at 55 °C / rated value</li> </ul>    | 120 A                    |
| <b>Let-through current / with high-speed activation / maximum permissible</b> | 10 kA                    |
| <b>Let-through current / I<sub>c</sub> / maximum permissible</b>              |                          |
| <ul style="list-style-type: none"> <li>• 400 V</li> </ul>                     | 15 000 A                 |
| <ul style="list-style-type: none"> <li>• 500V</li> </ul>                      | 15 000 A                 |
| <b>cut-off value I**2t,max. / 400 V</b>                                       | 56 000 A <sup>2</sup> ·s |

|   |       |
|---|-------|
| <b>Main circuit</b>   |       |
| <b>Operating voltage</b>  |       |
| <ul style="list-style-type: none"> <li>• at AC / rated value / maximum</li> </ul> | 690 V |
| <ul style="list-style-type: none"> <li>• at DC / rated value</li> </ul>           | 440 V |
| <ul style="list-style-type: none"> <li>• at DC / rated value / maximum</li> </ul> | 440 V |
| <b>Operating current / with capacitive load</b>                                   |       |
| <ul style="list-style-type: none"> <li>• at 400 V / maximum</li> </ul>            | 72 A  |
| <ul style="list-style-type: none"> <li>• at 500 V / maximum</li> </ul>            | 55 A  |

## Suitability

### Suitability for use

|                             |     |
|-----------------------------|-----|
| • Main switch               | No  |
| • switch disconnecter       | Yes |
| • EMERGENCY OFF switch      | No  |
| • safety switch             | Yes |
| • maintenance/repair switch | Yes |

## Product details

|                             |     |
|-----------------------------|-----|
| Product feature / interlock | Yes |
|-----------------------------|-----|

### Product component

|   |    |
|---|----|
| • Trip indicator                            | No |
| • Phase failure monitoring                  | No |
| • undervoltage release                      | No |
| • undervoltage release with leading contact | No |

|                            |     |
|----------------------------|-----|
| Product feature / sealable | Yes |
|----------------------------|-----|

### Product extension

|                                     |     |
|-------------------------------------|-----|
| • Auxiliary switch                  | Yes |
| • optional                          |     |
| — locking capability                | Yes |
| — motor drive                       | No  |
| — Phase failure monitoring          | Yes |
| — fuse monitoring                   | Yes |
| — Voltage trigger                   | No  |
| — Overvoltage protection monitoring | Yes |

## Product function

### Product function

|                                     |    |
|-------------------------------------|----|
| • fuse monitoring                   | No |
| • Overvoltage protection monitoring | No |

## Short circuit

### Conditional short-circuit current (I<sub>q</sub>)

|   |        |
|---|--------|
| • rated value   | 80 kA  |
| • at AC / at 500 V / with high-speed activation / rated value | 80 kA  |
| • at AC / at 690 V / with high-speed activation / rated value | 80 kA  |
| • with closed switch / at AC / at 500 V / rated value         | 120 kA |
| • with closed switch / at AC / at 690 V / rated value         | 120 kA |

## Connections

|  |                     |
|--|---------------------|
| Arrangement of electrical connectors / for main current circuit  | other               |
| Connectable conductor cross-section / for main contacts  |                     |
| <ul style="list-style-type: none"> <li>• single or multi-stranded / minimum</li> </ul>                   | 1.5 mm <sup>2</sup> |
| <ul style="list-style-type: none"> <li>• single or multi-stranded / maximum</li> </ul>                   | 50 mm <sup>2</sup>  |
| <ul style="list-style-type: none"> <li>• finely stranded / with core end processing / minimum</li> </ul> | 1.5 mm <sup>2</sup> |
| <ul style="list-style-type: none"> <li>• finely stranded / with core end processing / maximum</li> </ul> | 35 mm <sup>2</sup>  |
| <ul style="list-style-type: none"> <li>• stranded / minimum</li> </ul>                                   | 1.5 mm <sup>2</sup> |
| <ul style="list-style-type: none"> <li>• stranded / maximum</li> </ul>                                   | 50 mm <sup>2</sup>  |
| <b>Tightening torque / with screw-type terminals</b>   |                     |
| <ul style="list-style-type: none"> <li>• minimum</li> </ul>  | 3.5 N·m             |
| <ul style="list-style-type: none"> <li>• maximum</li> </ul>  | 4 N·m               |
| Type of electrical connection / for main current circuit   | box terminal        |

### Mechanical Design





|  |          |
|--|----------|
| <b>Height</b>  | 211.4 mm |
| <b>Width</b>   | 88.8 mm  |
| <b>Depth</b>   | 127.6 mm |
| <b>Mounting type</b>   | busbar   |
| <b>Mounting type</b>   |          |
| <ul style="list-style-type: none"> <li>• floor mounting</li> </ul>                         | No       |
| <ul style="list-style-type: none"> <li>• front mounting</li> </ul>                         | No       |
| <ul style="list-style-type: none"> <li>• front mounting with 4-hole attachment</li> </ul>  | No       |
| <ul style="list-style-type: none"> <li>• front mounting with central attachment</li> </ul> | No       |
| <ul style="list-style-type: none"> <li>• rail mounting</li> </ul>                          | Yes      |
| <b>Busbar center-to-center spacing</b>   | 40 mm    |
| <b>Net weight</b>  | 0.82 kg  |

### Environmental conditions

|  |        |
|--|--------|
| <b>Degree of pollution</b>   | 3      |
| <b>Ambient temperature</b>   |        |
| <ul style="list-style-type: none"> <li>• during operation / minimum</li> </ul> | -25 °C |
| <ul style="list-style-type: none"> <li>• during operation / maximum</li> </ul> | 55 °C  |
| <ul style="list-style-type: none"> <li>• during storage / minimum</li> </ul>   | -50 °C |
| <ul style="list-style-type: none"> <li>• during storage / maximum</li> </ul>   | 80 °C  |

### Certificates

|  |   |
|--|---|
| <b>Equipment marking</b>   |   |
| <ul style="list-style-type: none"> <li>• acc. to DIN EN 61346-2</li> </ul> | Q |
| <ul style="list-style-type: none"> <li>• acc. to DIN EN 81346-2</li> </ul> | Q |

| General Product Approval   | Declaration of Conformity   | Test Certificates  | Shipping Approval  |
|--|---|--|--|
| <br>CCC | <br>UL | <br>EG-Konf.<br><br><a href="#">spezielle Prüfbescheinigung</a><br><a href="#">n</a><br><br><a href="#">Typprüfbescheinigung/Werkszeugnis</a> | <br>LRS |

## Further information

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

<http://www.siemens.com/lowvoltage/catalogs>

### Industry Mall (Online ordering system)

<https://eb.automation.siemens.com/mall/en/WW/Catalog/Product/3NP1123-1BB20>

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

<http://support.automation.siemens.com/WW/view/en/3NP1123-1BB20/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3NP1123-1BB20](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3NP1123-1BB20)

### CAX-Online-Generator

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

### Tender specifications

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

