

SETRON, Fuse switch disconnecter 3NP1, 3-pole, NH1, 250 A, for Rittal busbar system 60 mm, flat terminal, Fuse monitoring: electronic EFM10, Cover level 32/70 mm



| Model  |                                |
|--|--------------------------------|
| Product brand name   | SETRON                         |
| 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 safety monitoring                                | electronic EFM 10              |
| Design of the operating mechanism                              | Cover handle                   |
| Design of the load switch / Strip form                         | No                             |
| Type of the driving mechanism / motor drive                    | No                             |
| General technical data   |                                |
| Number of poles  | 3                              |
| Type of device   | For Rittal 60 mm busbar system |
| Size of disconnecting link                                     | 1 and 0                        |
| Size of fuse link  | NH0, NH1                       |
| Continuous current / at 35 °C / rated value                    | 250 A                          |
| Let-through current / with closed switch / maximum permissible | 32 kA                          |
| cut-off value $I^{*2}t_{max.}$ / 500 V                         | 780 000 A <sup>2</sup> ·s      |
| Power factor   |                                |

|  |             |
|--|-------------|
| • at AC-22 B   | 0.65        |
| • at AC-23 B   | 0.45        |
| • with capacitive load                               | -0.25       |
| circuit-breaker / Design                             | 3NP11       |
| Mechanical service life (switching cycles) / typical | 1 600       |
| Fuse system  | LV HRC fuse |
| Degree of pollution                                  | 2           |

## Voltage

|  |         |
|--|---------|
| Insulation voltage                         |         |
| • rated value                              | 690 V   |
| • with degree of pollution 3 / rated value | 690 V   |
| • with degree of pollution 2 / rated value | 1 000 V |
| Power factor / at AC-21 B                  | 0.95    |
| Surge voltage resistance / rated value     | 8 kV    |
| Current / at AC / rated value              | 250 A   |
| Operating voltage                          |         |
| • at AC / rated value / minimum            | 230 V   |
| • at AC / rated value / maximum            | 690 V   |

## Protection class

|   |      |
|---|------|
| Protection class IP                                     |      |
| • with closed switch / with cover or cable lug cover    | IP40 |
| • with closed switch / without cover or cable lug cover | IP30 |
| • on the front  | IP40 |
| • open  | IP20 |

## Dissipation

|  |      |
|--|------|
| Power loss [W]   |      |
| • with conventional rated thermal current / without fuse / per pole          | 8 W  |
| • with conventional rated thermal current / without fuse / per device        | 24 W |
| • for rated value of the current / at AC / in hot operating state / per pole | 31 W |
| • of the fuse / per fuse / maximum   | 23 W |

## Current

|                                       |       |
|---------------------------------------|-------|
| Operating current                     |       |
| • at AC-23 B / at 690 V / rated value | 100 A |
| • at AC-23 B / at 500 V / rated value | 200 A |
| • at AC-23 B / at 400 V / rated value | 250 A |
| • at AC-23 B / at 240 V / rated value | 250 A |

|  |                           |
|--|---------------------------|
| • at AC-22 B / at 690 V / rated value                                  | 250 A                     |
| • at AC-22 B / at 500 V / rated value                                  | 250 A                     |
| • at AC-22 B / at 400 V / rated value                                  | 250 A                     |
| • at AC-22 B / at 240 V / rated value                                  | 250 A                     |
| • at AC-21 B / at 690 V / rated value                                  | 250 A                     |
| • at AC-21 B / at 500 V / rated value                                  | 250 A                     |
| • at AC-21 B / at 400 V / rated value                                  | 250 A                     |
| • at AC-21 B / at 240 V / rated value                                  | 250 A                     |
| Continuous current   |                           |
| • rated value  | 250 A                     |
| • at 40 °C / rated value   | 245 A                     |
| • at 45 °C / rated value   | 240 A                     |
| • at 50 °C / rated value   | 233 A                     |
| • at 55 °C / rated value   | 233 A                     |
| Let-through current / with high-speed activation / maximum permissible | 25 kA                     |
| Let-through current / I <sub>c</sub> / maximum permissible             |                           |
| • 400 V  | 32 000 A                  |
| • 500V   | 32 000 A                  |
| cut-off value I <sup>2</sup> t <sub>max.</sub> / 400 V                 | 551 000 A <sup>2</sup> ·s |

#### Main circuit

|  |      |
|--|------|
| Operating current / with capacitive load |      |
| • at 400 V / maximum                     | 72 A |
| • at 500 V / maximum                     | 55 A |

#### Auxiliary circuit

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

#### Suitability

|                             |     |
|-----------------------------|-----|
| <b>Suitability for use</b>  |     |
| • 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            | Yes |
| • 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 |
| — Voltage trigger                           | No  |
| — Overvoltage protection monitoring         | Yes |

### Product function

|                                     |     |
|-------------------------------------|-----|
| Product function                    |     |
| • fuse monitoring                   | Yes |
| • Overvoltage protection monitoring | No  |

### Short circuit

|   |        |
|---|--------|
| Conditional short-circuit current (I <sub>q</sub> )           |        |
| • rated value   | 80 kA  |
| • at AC / at 240 V / with high-speed activation / 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 | 50 kA  |
| • with closed switch / at AC / at 240 V / rated value         | 120 kA |
| • with closed switch / at AC / at 500 V / rated value         | 120 kA |
| • with closed switch / at AC / at 690 V / rated value         | 100 kA |

### Connections

|   |                            |
|---|----------------------------|
| Arrangement of electrical connectors / for main current circuit | other                      |
| Connectable conductor cross-section / for main contacts         |                            |
| • single or multi-stranded                                      | 16 ... 150 mm <sup>2</sup> |
| • stranded  | 16 ... 150 mm <sup>2</sup> |
| Tightening torque / with screw-type terminals                   | 10 ... 12 N·m              |
| Type of connection  | Flat terminal              |
| Type of electrical connection / for main current circuit        | busbar connection          |




### Mechanical Design

|        |        |
|--------|--------|
| Height | 306 mm |
|--------|--------|

|  |                     |
|--|---------------------|
| Width                                    | 183.7 mm            |
| Width                                    |                     |
| • of the busbar                          | 12 ... 30 mm        |
| Depth                                    | 169.5 mm            |
| Mounting type                            | busbar              |
| Mounting type                            |                     |
| • floor mounting                         | No                  |
| • front mounting                         | No                  |
| • front mounting with 4-hole attachment  | No                  |
| • front mounting with central attachment | No                  |
| • rail mounting                          | Yes                 |
| Mounting position                        | horizontal/vertical |
| Busbar center-to-center spacing          | 60 mm               |
| Net weight                               | 2.99 kg             |
| • during operation                       | -25 ... +55 °C      |
| • during storage                         | -50 ... +80 °C      |

## Certificates

|                          |   |
|--------------------------|---|
| Reference code           |   |
| • acc. to DIN EN 61346-2 | Q |
| • acc. to DIN EN 81346-2 | Q |

| General Product Approval   | Declaration of Conformity   | Test Certificates                                  | Shipping Approval  |
|--|---|--|--|
| <br>CCC | <br>EG-Konf. | <a href="#">Type Test Certificates/Test Report</a> | <br>LRS |

[Miscellaneous](#)

[Type Test Certificates/Test Report](#)

## Further information

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

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

**Industry Mall (Online ordering system)**

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3NP1143-1JC12>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3NP1143-1JC12>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3NP1143-1JC12](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3NP1143-1JC12)

**CAX-Online-Generator**

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

**Tender specifications**

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

