



**Switch-disconnector 4p 800A BG4**

**Part no.** N4-4-800  
**Catalog No.** 266029

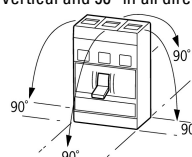
**EL-Nummer (Norway)** 0004358934

**Delivery program**

|  |             |      |  |
|--|-------------|------|--|
| Product range  |             |      | Switch-disconnectors   |
| Protective function                                  |             |      | Disconnectors/main switches  |
| Standard/Approval                                    |             |      | IEC  |
| Installation type                                    |             |      | Fixed  |
| Construction size                                    |             |      | N4   |
| Description  |             |      | Main switch characteristics including positive drive to IEC/EN 60204 and VDE 0113. Isolating characteristics to IEC/EN 60947-3 and VDE 0660. Busbar tag shroud to VDE 0160 Part 100. |
| Number of poles                                      |             |      | 4 pole   |
| Standard equipment                                   |             |      | Screw connection   |
| Switch positions                                     |             |      | I, +, 0  |
| Rated current = rated uninterrupted current          | $I_n = I_u$ | A    | 800  |
| Short-circuit protection max. fuse gL-characteristic |             | A gL | 1600   |

**Technical data**

**General**

|   |  |      |   |
|---|--|------|---|
| Standards   |  |      | IEC/EN 60947  |
| Protection against direct contact   |  |      | Finger and back-of-hand proof to DIN EN 50274/VDE 0106 part 263   |
| Climatic proofing   |  |      | Damp heat, constant, to IEC 60068-2-78<br>Damp heat, cyclic, to IEC 60068-2-30  |
| Ambient temperature   |  |      |   |
| Ambient temperature, storage  |  | °C   | - 40 - + 70   |
| Operation   |  | °C   | -25 - +70   |
| Mechanical shock resistance (10 ms half-sinusoidal shock) according to IEC 60068-2-27 |  | g    | 15 (half-sinusoidal shock 11 ms)  |
| Safe isolation to EN 61140  |  |      |   |
| Between auxiliary contacts and main contacts  |  | V AC | 500   |
| between the auxiliary contacts  |  | V AC | 300   |
| Mounting position   |  |      |   |
| Mounting position   |  |      | Vertical and 90° in all directions<br><br>With residual-current release XFI:<br>- NZM1, N1, NZM2, N2: vertical and 90° in all directions<br>with plug-in adapter elements<br>- NZM1, N1, NZM2, N2: vertical, 90° right/left<br>with withdrawable unit:<br>- NZM3, N3: vertical, 90 ° left<br>- NZM4, N4: vertical<br>with remote operator:<br>- NZM2, N(S)2, NZM3, N(S)3, NZM4, N(S)4: vertical and 90° in all directions |
| Direction of incoming supply  |  |      | as required   |
| Degree of protection  |  |      |   |
| Device  |  |      | In the area of the HMI devices: IP20 (basic protection type)  |
| Enclosures  |  |      | With insulating surround: IP40<br>With door coupling rotary handle: IP66  |
| Terminations  |  |      | Tunnel terminal: IP10<br>Phase isolator and band terminal: IP00   |

**Switch-disconnectors**

|                                   |           |   |      |
|-----------------------------------|-----------|---|------|
| Rated surge voltage invariability | $U_{imp}$ |   |      |
| Main contacts                     |           | V | 8000 |

|   |                                 |      |  |
|---|---------------------------------|------|--|
| Auxiliary contacts                          |                                 | V    | 6000   |
| Rated operational voltage                   | U <sub>e</sub>                  | V AC | 690  |
| Rated operating frequency                   | f                               | Hz   | 50/60  |
| Rated current = rated uninterrupted current | I <sub>n</sub> = I <sub>u</sub> | A    | 800  |
| Overvoltage category/pollution degree       |                                 |      | III/3  |
| Rated insulation voltage                    | U <sub>i</sub>                  | V    | 1000   |
| Use in unearthed supply systems             |                                 | V    | ≤ 525  |
| Other technical data (sheet catalogue)      |                                 |      | Weight<br>Temperature dependency, Derating<br>Effective power loss |

### Rated short-circuit making capacity

|               |                |    |    |
|---------------|----------------|----|----|
| 690 V 50/60 H | I <sub>c</sub> | kA | 53 |
|---------------|----------------|----|----|

### Rated short-time withstand current

|           |                 |    |    |
|-----------|-----------------|----|----|
| t = 0.3 s | I <sub>cw</sub> | kA | 25 |
| t = 1 s   | I <sub>cw</sub> | kA | 25 |

### Rated conditional short-circuit current

|                      |  |         |                        |
|----------------------|--|---------|------------------------|
| With back-up fuse    |  | A gG/gL | N4-630...1600: 2 x 800 |
| 400 ... 415 V        |  | kA      | 100                    |
| 690 V                |  | kA      | 80                     |
| With downstream fuse |  | A gG/gL | N4-630...1600: 2 x 800 |
| 400 ... 415 V        |  | kA      | 100                    |
| 690 V                |  | kA      | 80                     |

### Rated making and breaking capacity

|                           |                |       |       |
|---------------------------|----------------|-------|-------|
| Rated operational current | I <sub>e</sub> | A     |       |
| AC-22/23A                 |                |       |       |
| 415 V                     | I <sub>e</sub> | A     | 1600  |
| 690 V                     | I <sub>e</sub> | A     | 1600  |
| Lifespan, mechanical      | Operations     |       | 10000 |
| Max. operating frequency  |                | Ops/h | 60    |

### Lifespan, electrical

|                |            |  |      |
|----------------|------------|--|------|
| AC-1           |            |  |      |
| 400 V 50/60 Hz | Operations |  | 3000 |
| 415 V 50/60 Hz | Operations |  | 3000 |
| 690 V 50/60 Hz | Operations |  | 2000 |
| AC-3           |            |  |      |
| 400 V 50/60 Hz | Operations |  | 2000 |
| 415 V 50/60 Hz | Operations |  | 2000 |
| 690 V 50/60 Hz | Operations |  | 1000 |

### Terminal capacity

|  |      |                 |   |
|--|------|-----------------|---|
| Standard equipment                     |      |                 | Screw connection  |
| Optional accessories                   |      |                 | Tunnel terminal<br>connection on rear<br>Strip terminal |
| Copper conductors and cables           |      |                 |   |
| Tunnel terminal                        |      |                 |   |
| Stranded                               |      |                 |   |
| 4-hole                                 |      | mm <sup>2</sup> | 4 x (50 - 240)  |
| Bolt terminal and rear-side connection |      |                 |   |
| Direct on the switch                   |      |                 |   |
| Stranded                               |      | mm <sup>2</sup> | 1 x (120 - 185)<br>4 x (50 - 185)                       |
| Module plate                           |      |                 |   |
| Single hole                            | min. | mm <sup>2</sup> | 1 x (185 - 240)   |
| Single hole                            | max. | mm <sup>2</sup> | 2 x (70 - 185)  |
| Module plate                           |      |                 |   |
| Double hole                            | min. | mm <sup>2</sup> | 4 x 50  |
| Double hole                            | max. | mm <sup>2</sup> | 4 x (35 - 185)  |

|   |      |                 |                                   |
|---|------|-----------------|-----------------------------------|
| Connection width extension                                |      | mm <sup>2</sup> |                                   |
| Connection width extension                                |      | mm <sup>2</sup> | 4 x 300<br>6 x (95 - 240)         |
| Al conductors, Al cable                                   |      |                 |                                   |
| Tunnel terminal   |      |                 |                                   |
| Stranded  |      |                 |                                   |
| 4-hole  |      | mm <sup>2</sup> | 4 x (50 - 240)                    |
| Bolt terminal and rear-side connection                    |      |                 |                                   |
| Direct on the switch                                      |      |                 |                                   |
| Stranded  |      | mm <sup>2</sup> | 1 x (120 - 185)<br>4 x (50 - 185) |
| Module plate  |      |                 |                                   |
| Single hole   | min. | mm <sup>2</sup> | 1 x (185 - 240)                   |
| Single hole   | max. | mm <sup>2</sup> | 2 x (70 - 185)                    |
| Module plate  |      |                 |                                   |
| Double hole   | min. | mm <sup>2</sup> | 4 x 50                            |
| Double hole   | max. | mm <sup>2</sup> | 4 x (35 - 185)                    |
| Connection width extension                                |      | mm <sup>2</sup> |                                   |
| Connection width extension                                |      | mm <sup>2</sup> | 2 x 240<br>6 x (70 - 240)         |
| Cu strip (number of segments x width x segment thickness) |      |                 |                                   |
| Flat conductor terminal                                   |      |                 |                                   |
|   | min. | mm              | 6 x 16 x 0.8                      |
|   | max. | mm              | (2 x) 10 x 32 x 1.0               |
| Module plate  |      |                 |                                   |
| Single hole   |      | mm              | (2 x) 10 x 50 x 1.0               |
| Bolt terminal and rear-side connection                    |      |                 |                                   |
| Flat copper strip, with holes                             | min. | mm              | (2 x) 10 x 50 x 1.0               |
| Flat copper strip, with holes                             | max. | mm              | (2 x) 10 x 50 x 1.0               |
| Connection width extension                                |      | mm              | (2 x) 10 x 80 x 1.0               |
| Copper busbar (width x thickness)                         |      | mm              |                                   |
| Bolt terminal and rear-side connection                    |      |                 |                                   |
| Screw connection  |      |                 | M10                               |
| Direct on the switch                                      |      |                 |                                   |
|   | min. | mm              | 25 x 5                            |
|   | max. | mm              | 2 x (50 x 10)                     |
| Module plate  |      |                 |                                   |
| Single hole   | min. | mm              | 25 x 5                            |
| Single hole   | max. | mm              | 2 x (50 x 10)                     |
| Module plate  |      |                 |                                   |
| Double hole   |      | mm              | 2 x (50 x 10)                     |
| Connection width extension                                |      | mm              |                                   |
| Connection width extension                                | min. | mm              | 60 x 10                           |
| Connection width extension                                | max. | mm              | 2 x (80 x 10)                     |

## Design verification as per IEC/EN 61439

|  |                  |    |  |
|--|------------------|----|--|
| Technical data for design verification                   |                  |    |  |
| Rated operational current for specified heat dissipation | I <sub>n</sub>   | A  | 800  |
| Equipment heat dissipation, current-dependent            | P <sub>vid</sub> | W  | 79   |
| Operating ambient temperature min.                       |                  | °C | -25  |
| Operating ambient temperature max.                       |                  | °C | 70   |
| IEC/EN 61439 design verification                         |                  |    |  |
| 10.2 Strength of materials and parts                     |                  |    |  |
| 10.2.2 Corrosion resistance                              |                  |    | Meets the product standard's requirements. |
| 10.2.3.1 Verification of thermal stability of enclosures |                  |    | Meets the product standard's requirements. |

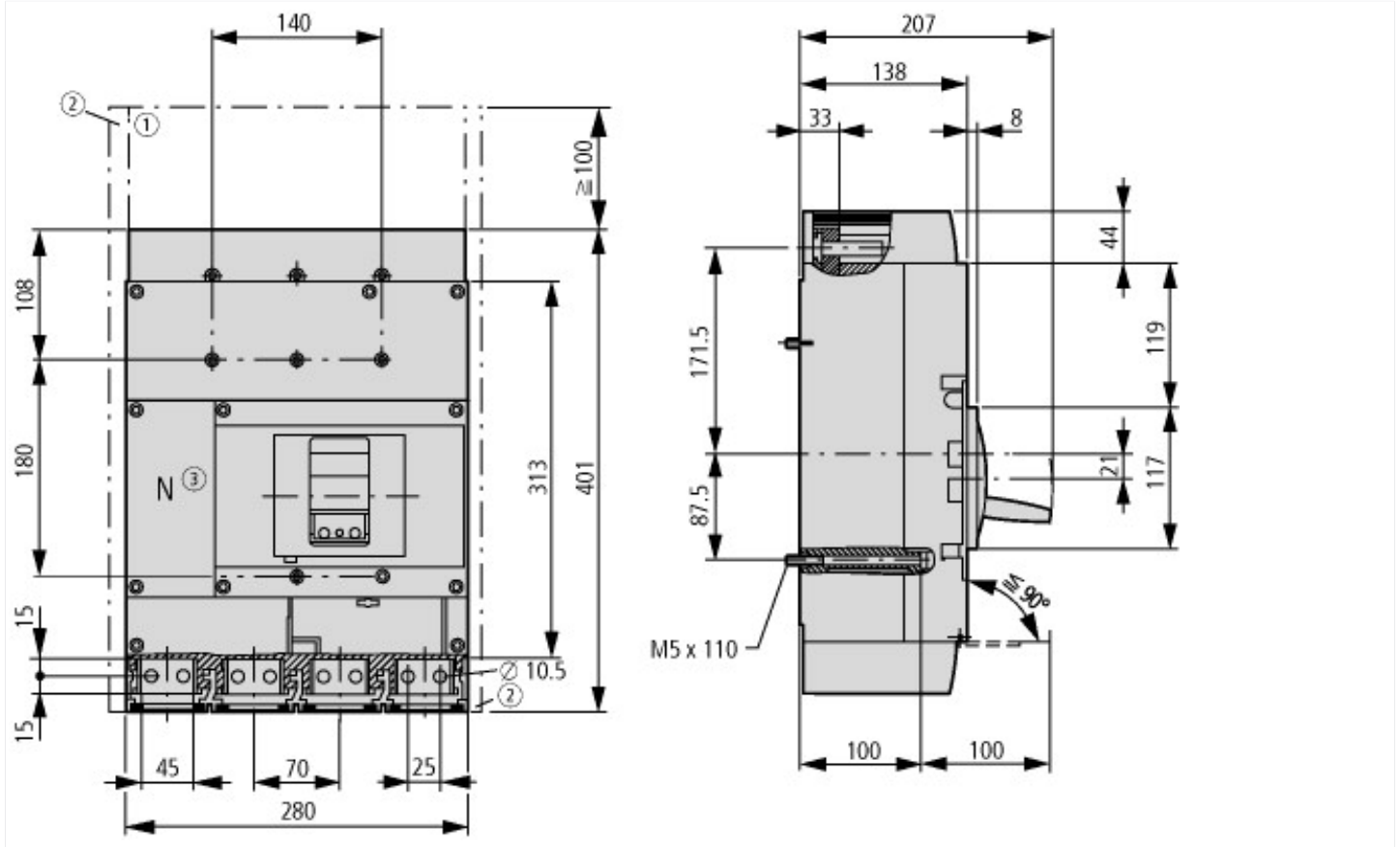
|  |  |  |
|--|--|--|
| 10.2.3.2 Verification of resistance of insulating materials to normal heat   |  | Meets the product standard's requirements.   |
| 10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects |  | Meets the product standard's requirements.   |
| 10.2.4 Resistance to ultra-violet (UV) radiation   |  | Meets the product standard's requirements.   |
| 10.2.5 Lifting   |  | Does not apply, since the entire switchgear needs to be evaluated.   |
| 10.2.6 Mechanical impact   |  | Does not apply, since the entire switchgear needs to be evaluated.   |
| 10.2.7 Inscriptions  |  | Meets the product standard's requirements.   |
| 10.3 Degree of protection of ASSEMBLIES  |  | Does not apply, since the entire switchgear needs to be evaluated.   |
| 10.4 Clearances and creepage distances   |  | Meets the product standard's requirements.   |
| 10.5 Protection against electric shock   |  | Does not apply, since the entire switchgear needs to be evaluated.   |
| 10.6 Incorporation of switching devices and components   |  | Does not apply, since the entire switchgear needs to be evaluated.   |
| 10.7 Internal electrical circuits and connections  |  | Is the panel builder's responsibility.   |
| 10.8 Connections for external conductors   |  | Is the panel builder's responsibility.   |
| 10.9 Insulation properties   |  |  |
| 10.9.2 Power-frequency electric strength   |  | Is the panel builder's responsibility.   |
| 10.9.3 Impulse withstand voltage   |  | Is the panel builder's responsibility.   |
| 10.9.4 Testing of enclosures made of insulating material   |  | Is the panel builder's responsibility.   |
| 10.10 Temperature rise   |  | The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices. |
| 10.11 Short-circuit rating   |  | Is the panel builder's responsibility. The specifications for the switchgear must be observed.                                   |
| 10.12 Electromagnetic compatibility  |  | Is the panel builder's responsibility. The specifications for the switchgear must be observed.                                   |
| 10.13 Mechanical function  |  | The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.                         |

## Technical data ETIM 7.0

|  |    |  |
|--|----|--|
| Low-voltage industrial components (EG000017) / Switch disconnecter (EC000216)  |    |  |
| Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Switch disconnecter (ec@ss10.0.1-27-37-14-03 [AKF060013]) |    |  |
| Version as main switch   |    | Yes                                      |
| Version as maintenance-/service switch   |    | Yes                                      |
| Version as safety switch   |    | No                                       |
| Version as emergency stop installation   |    | Yes                                      |
| Version as reversing switch  |    | No                                       |
| Number of switches   |    | 1  |
| Max. rated operation voltage Ue AC   | V  | 690                                      |
| Rated operating voltage  | V  | 690 - 690                                |
| Rated permanent current Iu   | A  | 800                                      |
| Rated permanent current at AC-23, 400 V  | A  | 0  |
| Rated permanent current at AC-21, 400 V  | A  | 0  |
| Rated operation power at AC-3, 400 V   | kW | 0  |
| Rated short-time withstand current Icw   | kA | 25                                       |
| Rated operation power at AC-23, 400 V  | kW | 450                                      |
| Switching power at 400 V   | kW | 0  |
| Conditioned rated short-circuit current Iq   | kA | 0  |
| Number of poles  |    | 4  |
| Number of auxiliary contacts as normally closed contact  |    | 0  |
| Number of auxiliary contacts as normally open contact  |    | 0  |
| Number of auxiliary contacts as change-over contact  |    | 0  |
| Motor drive optional   |    | Yes                                      |
| Motor drive integrated   |    | No                                       |
| Voltage release optional   |    | Yes                                      |
| Device construction  |    | Built-in device fixed built-in technique |
| Suitable for ground mounting   |    | Yes                                      |
| Suitable for front mounting 4-hole   |    | No                                       |
| Suitable for front mounting centre   |    | No                                       |
| Suitable for distribution board installation   |    | Yes                                      |

|   |  |                 |
|---|--|-----------------|
| Suitable for intermediate mounting            |  | Yes             |
| Colour control element                        |  | Black           |
| Type of control element                       |  | Rocker lever    |
| Interlockable                                 |  | Yes             |
| Type of electrical connection of main circuit |  | Bolt connection |
| Degree of protection (IP), front side         |  | IP20            |
| Degree of protection (NEMA)                   |  |                 |

## Dimensions



① Blow out area, minimum clearance to adjacent parts:

$U_i \leq 690 \text{ V}$ : 100 mm

$U_i \leq 1500 \text{ V}$ : 200 mm

② Minimum clearance to adjacent parts:

$U_i \leq 1500 \text{ V}$ : 70 mm

$U_i \leq 1500 \text{ V}$ : 70 mm

## Additional product information (links)

### IL01210010Z (AWA1230-2022) Circuit-Breaker, basic unit

|  |   |
|--|---|
| IL01210010Z (AWA1230-2022) Circuit-Breaker, basic unit | <a href="https://es-assets.eaton.com/DOCUMENTATION/AWA_INSTRUCTIONS/IL01210010Z2018_11.pdf">https://es-assets.eaton.com/DOCUMENTATION/AWA_INSTRUCTIONS/IL01210010Z2018_11.pdf</a>   |
| Weight   | <a href="http://ecat.moeller.net/flip-cat/?edition=HPLEN&amp;startpage=17.171">http://ecat.moeller.net/flip-cat/?edition=HPLEN&amp;startpage=17.171</a>   |
| Temperature dependency, Derating                       | <a href="http://ecat.moeller.net/flip-cat/?edition=HPLEN&amp;startpage=17.172">http://ecat.moeller.net/flip-cat/?edition=HPLEN&amp;startpage=17.172</a>   |
| Effective power loss                                   | <a href="http://ecat.moeller.net/flip-cat/?edition=HPLEN&amp;startpage=17.174">http://ecat.moeller.net/flip-cat/?edition=HPLEN&amp;startpage=17.174</a>   |
| CurveSelect characteristics program                    | <a href="http://www.eaton.eu/DE/Europe/Electrical/CustomerSupport/ConfigurationTools/CharacteristicsProgram/index.htm">http://www.eaton.eu/DE/Europe/Electrical/CustomerSupport/ConfigurationTools/CharacteristicsProgram/index.htm</a>         |
| Eaton configurator                                     | <a href="http://www.eaton.eu/DE/Europe/Electrical/CustomerSupport/ConfigurationTools/ConfiguratorCircuitBreaker/index.htm">http://www.eaton.eu/DE/Europe/Electrical/CustomerSupport/ConfigurationTools/ConfiguratorCircuitBreaker/index.htm</a> |
| additional technical information for NZM power switch  | <a href="https://es-assets.eaton.com/DOCUMENTATION/PDF/nzm_technik_de_en.pdf">https://es-assets.eaton.com/DOCUMENTATION/PDF/nzm_technik_de_en.pdf</a>   |