



Switch-disconnector, 3 p, 250A, frame size 2

Part no. LN2-250-I  
 Catalog No. 112004

Delivery program

|  |             |      |  |
|--|-------------|------|--|
| Product range  |             |      | Switch-disconnectors   |
| Protective function                                  |             |      | Disconnectors/main switches  |
| Standard/Approval                                    |             |      | IEC  |
| Installation type                                    |             |      | Fixed  |
| Construction size                                    |             |      | LN2  |
| 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                                      |             |      | 3 pole   |
| Standard equipment                                   |             |      | Screw connection   |
| Switch positions                                     |             |      | I, +, 0  |
| Rated current = rated uninterrupted current          | $I_n = I_u$ | A    | 250  |
| Short-circuit protection max. fuse gL-characteristic |             | A gL | 250  |

Technical data

Switch-disconnectors

|   |             |      |       |
|---|-------------|------|-------|
| Rated surge voltage invariability           | $U_{imp}$   |      |       |
| Main contacts                               |             | V    | 8000  |
| Auxiliary contacts                          |             | V    | 6000  |
| Rated operational voltage                   | $U_e$       | V AC | 690   |
| Rated operating frequency                   | f           | Hz   | 50/60 |
| Rated current = rated uninterrupted current | $I_n = I_u$ | A    | 250   |
| Overvoltage category/pollution degree       |             |      | III/3 |
| Rated insulation voltage                    | $U_i$       | V    | 690   |
| Use in unearthed supply systems             |             | V    | ≤ 690 |

Rated short-circuit making capacity

|               |       |    |     |
|---------------|-------|----|-----|
| 690 V 50/60 H | $I_c$ | kA | 5.5 |
|---------------|-------|----|-----|

Rated short-time withstand current

|           |          |    |     |
|-----------|----------|----|-----|
| t = 0.3 s | $I_{cw}$ | kA | 3.5 |
| t = 1 s   | $I_{cw}$ | kA | 3.5 |

Rated conditional short-circuit current

|                      |  |         |                        |
|----------------------|--|---------|------------------------|
| With back-up fuse    |  | A gG/gL | PN2(N2)-160...250: 250 |
| 400 ... 415 V        |  | kA      | 100                    |
| 690 V                |  | kA      | 80                     |
| With downstream fuse |  | A gG/gL | PN2(N2)-160...250: 250 |
| 400 ... 415 V        |  | kA      | 100                    |
| 690 V                |  | kA      | 80                     |

Rated making and breaking capacity

|                           |            |       |       |
|---------------------------|------------|-------|-------|
| Rated operational current | $I_e$      | A     |       |
| 415 V                     | $I_e$      | A     | 250   |
| 690 V                     | $I_e$      | A     | 250   |
| 415 V                     | $I_e$      | A     | 250   |
| 690 V                     | $I_e$      | A     | 250   |
| Lifespan, mechanical      | Operations |       | 20000 |
| Max. operating frequency  |            | Ops/h | 120   |

Lifespan, electrical

|                |            |  |       |
|----------------|------------|--|-------|
| 400 V 50/60 Hz | Operations |  | 10000 |
|----------------|------------|--|-------|

|                                   |            |    |       |
|-----------------------------------|------------|----|-------|
| 415 V 50/60 Hz                    | Operations |    | 10000 |
| 690 V 50/60 Hz                    | Operations |    | 7500  |
| 400 V 50/60 Hz                    | Operations |    | 7500  |
| 415 V 50/60 Hz                    | Operations |    | 7500  |
| 690 V 50/60 Hz                    | Operations |    | 5000  |
| Total break time at short-circuit |            | ms | < 10  |

### Terminal capacity

|   |      |                 |                                      |
|---|------|-----------------|--------------------------------------|
| Standard equipment  |      |                 | Screw connection                     |
| Round copper conductor                                    |      |                 |                                      |
| Box terminal  |      |                 |                                      |
| Solid   |      | mm <sup>2</sup> | 1 x (4 - 16)<br>2 x (4 - 16)         |
| Stranded  |      | mm <sup>2</sup> | 1 x (25 - 185)<br>2 x (25 - 70)      |
| Tunnel terminal   |      |                 |                                      |
| Solid   |      | mm <sup>2</sup> | 1 x (16 - 185)                       |
| Stranded  |      |                 |                                      |
| Stranded  |      | mm <sup>2</sup> | 1 x (25 - 185)                       |
| Bolt terminal and rear-side connection                    |      |                 |                                      |
| Direct on the switch                                      |      |                 |                                      |
| Solid   |      | mm <sup>2</sup> | 1 x (4 - 16)<br>2 x (4 - 16)         |
| Stranded  |      | mm <sup>2</sup> | 1 x (25 - 185)<br>2 x (25 - 70)      |
| Al conductors, Cu cable                                   |      |                 |                                      |
| Tunnel terminal   |      |                 |                                      |
| Solid   |      | mm <sup>2</sup> | 1 x 16                               |
| Stranded  |      |                 |                                      |
| Stranded  |      | mm <sup>2</sup> | 1 x (25 - 185)                       |
| Bolt terminal and rear-side connection                    |      |                 |                                      |
| Flat copper strip, with holes                             | min. | mm              | 2 x 16 x 0.8                         |
| Flat copper strip, with holes                             | max. | mm              | 10 x 16 x 0.8                        |
| Cu strip (number of segments x width x segment thickness) |      |                 |                                      |
| Box terminal  |      |                 |                                      |
|   | min. | mm              | 2 x 9 x 0.8                          |
|   | max. | mm              | 10 x 16 x 0.8                        |
| Bolt terminal and rear-side connection                    |      |                 |                                      |
| Flat copper strip, with holes                             | min. | mm              | 2 x 16 x 0.8                         |
| Flat copper strip, with holes                             | max. | mm              | 10 x 16 x 0.8                        |
| Copper busbar (width x thickness)                         | mm   |                 |                                      |
| Bolt terminal and rear-side connection                    |      |                 |                                      |
| Screw connection  |      |                 | M8                                   |
| Direct on the switch                                      |      |                 |                                      |
|   | min. | mm              | 16 x 5                               |
|   | max. | mm              | 20 x 5                               |
| Control cables  |      |                 |                                      |
|   |      | mm <sup>2</sup> | 1 x (0.75 - 2.5)<br>2 x (0.75 - 1.5) |

### Design verification as per IEC/EN 61439

|  |                  |   |  |
|--|------------------|---|--|
| Technical data for design verification                   |                  |   |  |
| Rated operational current for specified heat dissipation | I <sub>n</sub>   | A | 250  |
| Equipment heat dissipation, current-dependent            | P <sub>vid</sub> | W | 48   |
| 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. |

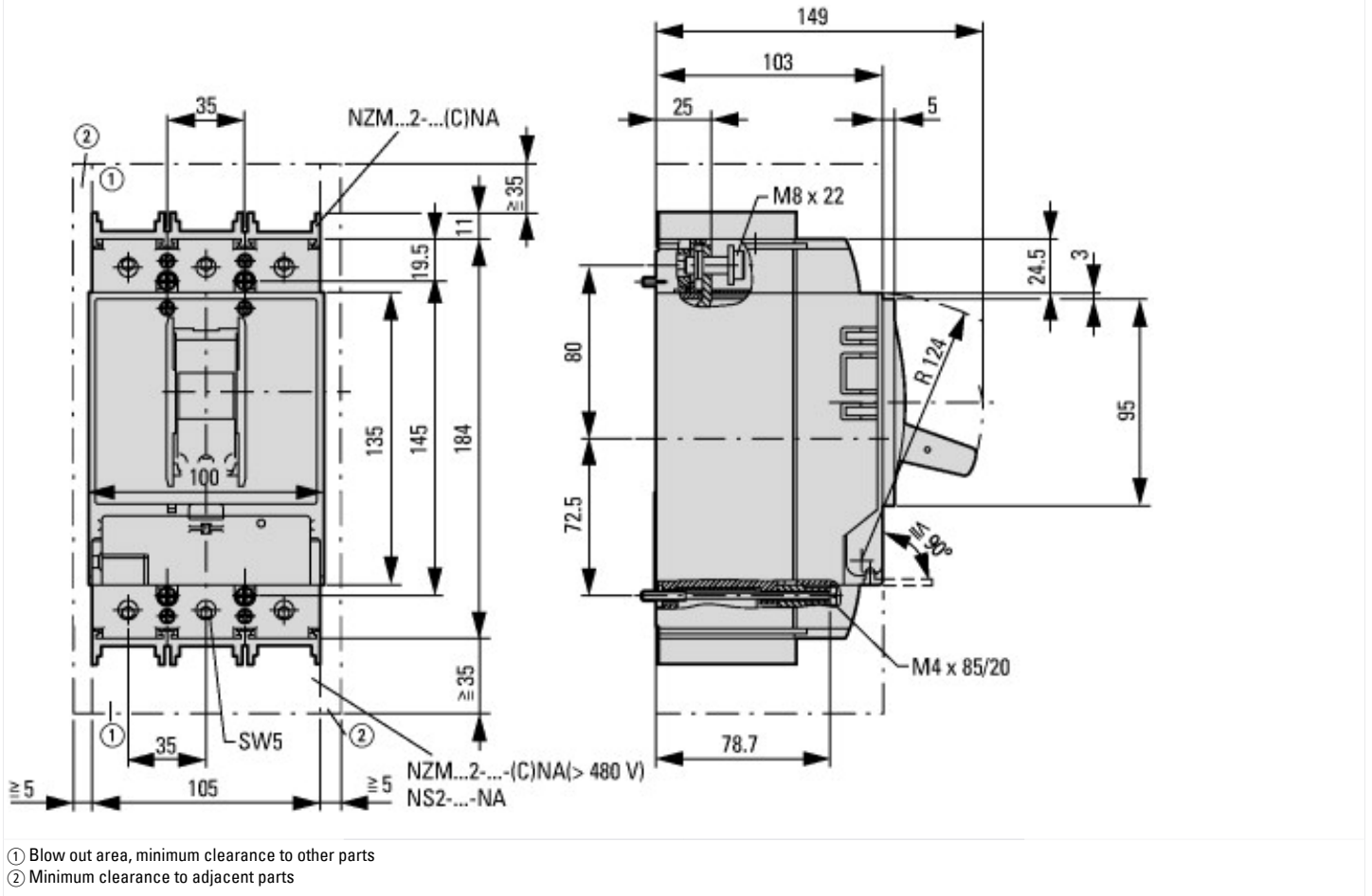
|  |  |  |
|--|--|--|
| 10.2.3.2 Verification of resistance of insulating materials to normal heat   |  | Meets the product standard's requirements.   |
| 10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects |  | Meets the product standard's 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.                         |

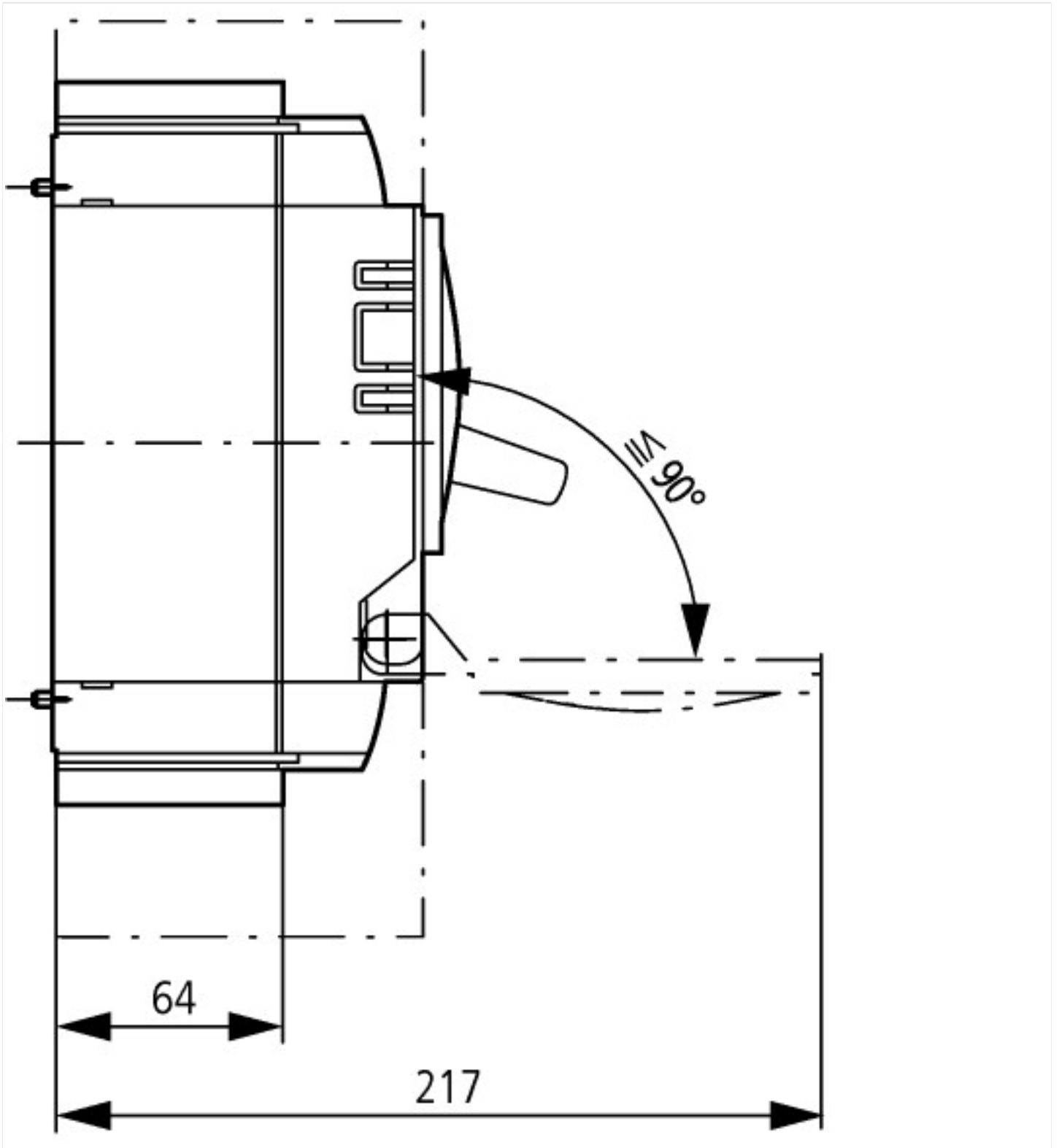
## Technical data ETIM 7.0

|  |    |  |
|--|----|--|
| 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   |    |  |
| Max. rated operation voltage U <sub>e</sub> AC   | V  | 400                                      |
| Rated operating voltage  | V  | 690 - 690                                |
| Rated permanent current I <sub>u</sub>   | A  | 250                                      |
| Rated permanent current at AC-23, 400 V  | A  |  |
| 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 I <sub>cw</sub>   | kA | 3.5                                      |
| Rated operation power at AC-23, 400 V  | kW | 132                                      |
| Switching power at 400 V   | kW | 0  |
| Conditioned rated short-circuit current I <sub>q</sub>   | kA | 100                                      |
| Number of poles  |    | 3  |
| 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                        | Grey             |
| Type of control element                       | Rocker lever     |
| Interlockable                                 | Yes              |
| Type of electrical connection of main circuit | Screw connection |
| Degree of protection (IP), front side         | IP20             |
| Degree of protection (NEMA)                   |                  |

## Dimensions





### Additional product information (links)

IL01206012Z circuit-breaker LZMB2, switch-disconnector LN2

IL01206012Z circuit-breaker LZMB2, switch-disconnector LN2

[https://es-assets.eaton.com/DOCUMENTATION/AWA\\_INSTRUCTIONS/IL01206012Z2017\\_05.pdf](https://es-assets.eaton.com/DOCUMENTATION/AWA_INSTRUCTIONS/IL01206012Z2017_05.pdf)