# DATASHEET - IZMX40N4-P12F

**Circuit-breaker, 4p, 1250 A, fixed**

| | |
|---|---|
| **Part no.** | **IZMX40N4-P12F** |
| **Catalog No.** | **149911** |
| **Eaton Catalog No.** | **RES8134B12-NMNN2MN1X** |

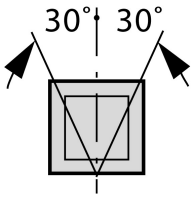
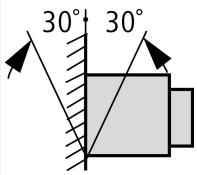
Powering Business Worldwide™

## Delivery program

| | | | |
|---|---|---|---|
| Product range | | | Air circuit-breakers/switch-disconnectors |
| Product range | | | Open circuit-breakers |
| Current Range | | | Up to 4000 A |
| Protective function | | | Professional protection |
| Installation type | | | Fixed |
| Construction size | | | IZMX40 |
| Release system | | | Electronic release |
| Standard/Approval | | | IEC |
| Number of poles | | | 4 pole |
| Degree of Protection | | | IP20, IP55 with protective cover, IP41 door sealing frame |
| | | | suitable for zone selectivity<br>suitable for communication<br>with integrated system monitor<br>with integrated test possibility<br>with graphic LCD color display<br>optionally fittable by user with comprehensive accessories |
| Rated current = rated uninterrupted current | $I_n = I_u$ | A | 1250 |
| up to 440 V 50/60 Hz | $I_{cu}$ | kA | 85 |
| up to 440 V 50/60 Hz | $I_{cs}$ | kA | 85 |
| Overload release, min. | $I_r$ | A | 625 |
| Overload release, max. | $I_r$ | A | 1250 |
| Non-delayed<br>  | $I_i = I_n$ x … | | 2 - 12, OFF |
| Delayed<br>  | $I_{sd} = I_r$ x … | | 2 - 10 |

## Technical data

### General

| | | | |
|---|---|---|---|
| Standards | | | IEC/EN 60947 |
| Ambient temperature | | | |
| Storage | ϑ | °C | -25 - +70 (device with LCD-display -20 - +70) |
| Operating (open) | | °C | -25 - +70 (device with LCD-display -20 - +70) |
| Mounting position | | |  |
| | | |  |
| Utilization category | | | B |
| Degree of Protection | | | IP20, IP55 with protective cover, IP41 door sealing frame |
| Direction of incoming supply | | | as required |

### Main conducting paths

| | | | |
|---|---|---|---|
| Rated current = rated uninterrupted current | $I_n = I_u$ | A | 1250 |

| | | | |
|---|---|---|---|
| Rated uninterrupted current at 50 °C | $I_u$ | A | 1250 |
| Rated uninterrupted current at 60 °C | $I_u$ | A | 1250 |
| Rated uninterrupted current at 70 °C | $I_u$ | A | 1250 |
| Rated impulse withstand voltage | $U_{imp}$ | V AC | 12000 |
| Rated operational voltage | $U_e$ | V AC | 690 |
| Use in IT electrical power networks up to U = 440 V | $I_{IT}$ | kA | 57.6 |
| Overvoltage category/pollution degree | | | III/3 |
| Rated insulation voltage | $U_i$ | V | 1000 |

## Switching capacity

| | | | |
|---|---|---|---|
| Rated short-circuit making capacity | $I_{cm}$ | | |
| up to 440 V 50/60 Hz | $I_{cm}$ | kA | 187 |
| up to 690 V 50/60 Hz | $I_{cm}$ | kA | 166 |
| Rated short-time withstand current 50/60 Hz | | | |
| t = 1 s | $I_{cw}$ | kA | 85 |
| t = 3 s | $I_{cw}$ | kA | 66 |
| Rated short-circuit breaking capacity $I_{cn}$ | $I_{cn}$ | | |
| IEC/EN 60947 operating sequence $I_{cu}$ O-t-CO | | | |
| up to 240 V 50/60 Hz | $I_{cu}$ | kA | 85 |
| up to 440 V 50/60 Hz | $I_{cu}$ | kA | 85 |
| up to 690 V 50/60 Hz | $I_{cu}$ | kA | 75 |
| IEC/EN 60947 operating sequence $I_{cs}$ O-t-CO-t-CO | | | |
| up to 240 V 50/60 Hz | $I_{cs}$ | kA | 85 |
| up to 440 V 50/60 Hz | $I_{cs}$ | kA | 85 |
| up to 690 V 50/60 Hz | $I_{cs}$ | kA | 75 |
| Operating times | | | |
| Closing delay via spring release | | ms | 35 |
| Total opening delay via shunt release | | ms | 22 |
| Total opening delay via undervoltage release | | ms | 37 |
| | | | |
| Total opening delay on non-delayed short-circuit release (up to complete arc quenching) | | ms | 45 |
| Maximum operating frequency | Operations/h | | 60 |
| Heat dissipation at rated current $I_n$ | | | |
| Fixed mounting | | W | 60 |

## Weight

| | | | |
|---|---|---|---|
| Fixed mounting | | | |
| 3-pole | | kg | 43 |
| 4-pole | | kg | 56 |

## Terminal capacities

| | | | |
|---|---|---|---|
| Copper bar | | | |
| Fixed mounting | | | |
| Black | | mm | 1 x 60 x 10 |
| | | | These are values used in separate switchgear. The actual values will depend on the temperature around the circuit-breaker, which is influenced by the ambient temperature, the degree of protection (IP), the mounting height, the partitions, and any external ventilation. Depending on the specific switchgear design, this may result in derating, which can then be compensated for by increasing the cross-sectional area. Temperature rise tests in the specific switchgear can provide specific and detailed information. |
| | | | Permissible continuous current for circuit-breakers operating in switchboards at various internal ambient temperatures. The switchboard's internal ambient temperature should be estimated using the calculation methods of IEC regulation. |
| **Notes** | | | IZMX-DTP-PTM external voltage measuring module required |

# Design verification as per IEC/EN 61439

| | | | |
|---|---|---|---|
| Technical data for design verification | | | |
| Rated operational current for specified heat dissipation | $I_n$ | A | 1250 |

| | | | |
|---|---|---|---|
| Equipment heat dissipation, current-dependent | $P_{vid}$ | W | 60 |
| 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 6.0

Low-voltage industrial components (EG000017) / Power circuit-breaker for trafo/generator/installation prot. (EC000228)

Electric engineering, automation, process control engineering / Low-voltage switch technology / Circuit breaker (LV < 1 kV) / Circuit breaker for power transformer, generator and system protection (ecl@ss8.1-27-37-04-09 [AJZ716010])

| | | | |
|---|---|---|---|
| Rated permanent current Iu | | A | 1250 |
| Rated voltage | | V | 690 - 690 |
| Rated short-circuit breaking capacity Icu at 400 V, 50 Hz | | kA | 85 |
| Overload release current setting | | A | 625 - 1250 |
| Adjustment range short-term delayed short-circuit release | | A | 2500 - 12500 |
| Adjustment range undelayed short-circuit release | | A | 2500 - 15000 |
| Integrated earth fault protection | | | No |
| Type of electrical connection of main circuit | | | Rail connection |
| Device construction | | | Built-in device fixed built-in technique |
| Suitable for DIN rail (top hat rail) mounting | | | No |
| DIN rail (top hat rail) mounting optional | | | No |
| 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 | | | 2 |
| Switched-off indicator available | | | Yes |
| With under voltage release | | | No |
| Number of poles | | | 4 |
| Position of connection for main current circuit | | | Back side |
| Type of control element | | | Push button |
| Complete device with protection unit | | | Yes |
| Motor drive integrated | | | No |

| | | | |
|---|---|---|---|
| Motor drive optional | | | Yes |
| Degree of protection (IP) | | | IP20 |