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Worldwide English



IZMX40H3-V20F-1 - Circuit-breaker, 3 pole, 2000A, 105 kA, Selective operation, IEC, Fixed



183722 IZMX40H3-V20F-1

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183722 IZMX40H3-V20F-1

Circuit-breaker, 3 pole, 2000A, 105 kA, Selective operation, IEC, Fixed

EL-Nummer (Norway)

4398211

Circuit-breaker IZMX40 (Air circuit-breakers/switch-disconnectors), 3 pole, Current Range: Up to 4000 A, Rated current = rated uninterrupted current($I_n = I_u$): 2000 A, up to 440 V 50/60 Hz(I_{cu}): 105 kA, up to 440 V 50/60 Hz(I_{cs}): 105 kA, Overload release, min.(I_r): 800 A, Overload release, max.(I_r): 2000 A, Installation type: Fixed, Standard/Approval: IEC, Protective function: Selective operation

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Delivery program

Product range

Air circuit-breakers/switch-disconnectors

Product range

Open circuit-breakers

Current Range

Up to 4000 A

Protective function

Selective operation

Installation type

Fixed

Main terminals must be separately ordered.

Construction size

IZMX40

Release system

Electronic release

Standard/Approval

IEC

Number of poles

3 pole

Degree of Protection

IP31 with door seals, IP55 with protective cover

suitable for zone selectivity

optionally fittable by user with comprehensive accessories

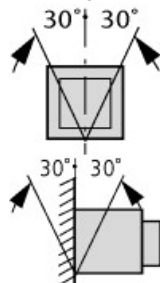
Rated current = rated uninterrupted current [$I_n = I_u$]

2000 A

up to 440 V 50/60 Hz [I_{cu}]
 105 kA
 up to 440 V 50/60 Hz [I_{cs}]
 105 kA
 Overload release, min. [I_r]
 800 A
 Overload release, max. [I_r]
 2000 A
 Non-delayed  [$I_t = I_n \times \dots$]
 2 - 15, OFF
 Delayed  [$I_{sd} = I_r \times \dots$]
 1,5 - 10

Technical data

General
 Standards
 IEC/EN 60947
 Ambient temperatureStorage [9]
 -20 - +70 °C
 Ambient temperatureAmbient temperature
 -20 - +70 °C
 Mounting position



Utilization category
 B
 Degree of Protection
 IP31 with door seals, IP55 with protective cover
 Direction of incoming supply
 as required
 Main conducting paths
 Rated current = rated uninterrupted current [$I_n = I_u$]
 2000 A
 Rated uninterrupted current at 50 °C [I_u]
 2000 A
 Rated uninterrupted current at 60 °C [I_u]
 2000 A
 Rated uninterrupted current at 70 °C [I_u]
 2000 A
 Rated impulse withstand voltage [U_{imp}]
 12000 V AC
 Rated operational voltage [U_b]
 690 V AC
 Use in IT electrical power networks up to [U]
 440 V
 Overvoltage category/pollution degree
 III/3
 Rated insulation voltage [U_i]
 1000 V
 Switching capacity
 Rated short-circuit making capacity [I_{cm}] up to 440 V 50/60 Hz [I_{cm}]
 231 kA
 Rated short-circuit making capacity [I_{cm}] up to 690 V 50/60 Hz [I_{cm}]
 166 kA
 Rated short-time withstand current 50/60 Hz $t = 1$ s [I_{cw}]
 85 kA
 Rated short-time withstand current 50/60 Hz $t = 3$ s [I_{cw}]
 66 kA
 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}]
 105 kA
 Rated short-circuit breaking capacity I_{cn} [I_{cn}] IEC/EN 60947 operating sequence I_{cu} O-t-CO up to 440 V 50/60 Hz [I_{cu}]

105 kA
 Rated short-circuit breaking capacity I_{cn} [kA] IEC/EN 60947 operating sequence I_{cu} O-t-COup to 690 V 50/60 Hz [I_{cu}]
 85 kA
 Rated short-circuit breaking capacity I_{cn} [kA] IEC/EN 60947 operating sequence I_{cs} O-t-CO-t-COup to 240 V 50/60 Hz [I_{cs}]
]
 105 kA
 Rated short-circuit breaking capacity I_{cn} [kA] IEC/EN 60947 operating sequence I_{cs} O-t-CO-t-COup to 440 V 50/60 Hz [I_{cs}]
]
 105 kA
 Rated short-circuit breaking capacity I_{cn} [kA] IEC/EN 60947 operating sequence I_{cs} O-t-CO-t-COup to 690 V 50/60 Hz [I_{cs}]
]
 75 kA
 Operating times Closing delay via spring release
 35 ms
 Operating times Total opening delay via shunt release
 35 ms
 Operating times Total opening delay via undervoltage release
 40 ms
 Operating times Total opening delay on non-delayed short-circuit release (up to complete arc quenching)
 52 ms
 Lifespan Lifespan, mechanical [Switching cycles (ON/OFF)]
 10000
 Lifespan Lifespan, mechanical with maintenance [Switching cycles (ON/OFF)]
 20000.
 Lifespan Lifespan, electrical [Switching cycles (ON/OFF)]
 8000
 Lifespan Lifespan, electrical with maintenance [Switching cycles (ON/OFF)]
 16000.
 Maximum operating frequency [Operations/h]
 60
 Heat dissipation at rated current I_r Fixed mounting
 150 W
 Weight
 Fixed mounting 3-pole
 43 kg
 Terminal capacities
 Copper bar Fixed mounting Black
 2 x 80 x 10 mm
 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.

Design verification as per IEC/EN 61439

Technical data for design verification
 Rated operational current for specified heat dissipation [I_r]
 2000 A
 Equipment heat dissipation, current-dependent [P_{vid}]
 150 W
 Operating ambient temperature min.
 -20 °C
 Operating ambient temperature max.
 +70 °C
 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 Strength of materials and parts 10.2.3.1 Verification of thermal stability of enclosures
 Meets the product standard's requirements.
 10.2 Strength of materials and parts 10.2.3.2 Verification of resistance of insulating materials to normal heat
 Meets the product standard's requirements.
 10.2 Strength of materials and parts 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 Strength of materials and parts 10.2.4 Resistance to ultra-violet (UV) radiation

Meets the product standard's requirements.

10.2 Strength of materials and parts 10.2.5 Lifting
Does not apply, since the entire switchgear needs to be evaluated.

10.2 Strength of materials and parts 10.2.6 Mechanical impact
Does not apply, since the entire switchgear needs to be evaluated.

10.2 Strength of materials and parts 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 Insulation properties 10.9.3 Impulse withstand voltage
Is the panel builder's responsibility.

10.9 Insulation properties 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) / Power circuit-breaker for trafo/generator/installation protection (EG000228)

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@ss10.0.1-27-37-04-09 [AJZ716013])

Rated permanent current I_n

2000 A

Rated voltage

690 - 690 V

Rated short-circuit breaking capacity I_{cu} at 400 V, 50 Hz

105 kA

Overload release current setting

800 - 2000 A

Adjustment range short-term delayed short-circuit release

1200 - 20000 A

Adjustment range undelayed short-circuit release

4000 - 30000 A

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

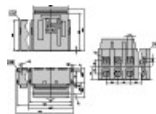
Number of auxiliary contacts as normally open contact

0

Number of auxiliary contacts as change-over contact

2
With switched-off indicator
Yes
With under voltage release
No
Number of poles
3
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)
IP31

Dimensions



- ☐ Door
- ☐ Contact surface flange terminal

CAD data

- [Product-specific CAD data](#)
(Web)
- [3D Preview](#)
(Web)

DWG files

- [DA-CD-izmx40_3pol_f](#)
File
(Web)

edz files

- [DA-CE-ETN.IZMX40H3-V20F-1](#)
File
(Web)

Step files

- [DA-CS-izmx40_3pol_f](#)
File
(Web)

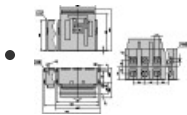
Product photo



[sg04616](#)

Photo
IZMX40B, 3 pole, fixed mounting

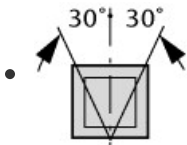
Dimensions single product



1230DIM-400

Line drawing

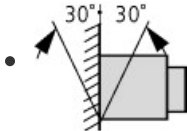
- ☐ Door
- ☐ Contact surface flange terminal



123N098

Line drawing

Mounting position



123N099

Line drawing

Mounting position

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