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Worldwide English



IZMX40H3-V16W-1 - Circuit-breaker, 3 pole, 1600A, 105 kA, Selective operation, IEC, Withdraw able



183745 IZMX40H3-V16W-1

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183745 IZMX40H3-V16W-1

Circuit-breaker, 3 pole, 1600A, 105 kA, Selective operation, IEC, Withdraw able

EL-Nummer (Norway) 4398234

Circuit-breaker IZMX40 (Air circuit-breakers/switch-disconnectors), 3 pole, Current Range: Up to 4000 A, Rated current = rated uninterrupted current($I_n = I_u$): 1600 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): 640 A, Overload release, max.(I_r): 1600 A, Installation type: Withdraw able, 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
Withdraw able
Cassette must be separately ordered.
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 [$I_n = I_u$]

1600 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]
 640 A
 Overload release, max. [I_r]
 1600 A
 Non-delayed $I_{>}$ [$I_t = I_n \times \dots$]
 2 - 15, OFF
 Delayed I_{sd} [$I_{sd} = I_r \times \dots$]
 1,5 - 10

Technical data

General

Standards

IEC/EN 60947

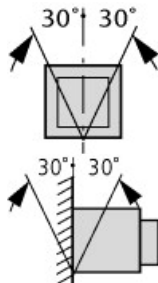
Ambient temperature Storage [9]

-20 - +70 °C

Ambient temperature Ambient 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 [$I_n = I_u$]

1600 A

Rated uninterrupted current at 50 °C [I_u]

1600 A

Rated uninterrupted current at 60 °C [I_u]

1600 A

Rated uninterrupted current at 70 °C [I_u]

1600 A

Rated impulse withstand voltage [U_{imp}]

12000 V AC

Rated operational voltage [U_e]

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} [kA] IEC/EN 60947 operating sequence I_{cu} O-t-COup 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)] 12500

Lifespan Lifespan, mechanical with maintenance [Switching cycles (ON/OFF)] 25000.

Lifespan Lifespan, electrical [Switching cycles (ON/OFF)] 10000

Lifespan Lifespan, electrical with maintenance [Switching cycles (ON/OFF)] 20000.

Maximum operating frequency [Operations/h] 60

Heat dissipation at rated current I_n Withdrawable units (switch with cassette) 140 W

Weight

Withdrawable 3-pole 69 kg

Cassette 3 pole 29 kg

Terminal capacities

Copper bar Withdrawable units Black 1 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]

1600 A

Equipment heat dissipation, current-dependent [P_{vid}]

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

Rated permanent current I_u

1600 A

Rated voltage

690 - 690 V

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

105 kA

Overload release current setting

640 - 1600 A

Adjustment range short-term delayed short-circuit release

960 - 16000 A

Adjustment range undelayed short-circuit release

3200 - 24000 A

Integrated earth fault protection

No

Type of electrical connection of main circuit

Rail connection

Device construction

Built-in device slide-in technique (withdrawable)

Suitable for DIN rail (top hat rail) mounting

No

DIN rail (top hat rail) mounting optional

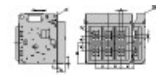
No

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



Door

Contact surface flange terminal

CAD data

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

DWG files

- [DA-CD-izmx40_3pol_w](#)
File
(Web)

edz files

- [DA-CE-ETN.IZMX40H3-V16W-1](#)
File
(Web)

Step files

- [DA-CS-izmx40_3pol_w](#)
File
(Web)

Product photo

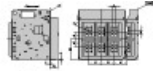


sg04916

Photo

ZMX40B, 3 pole, withdraw able units

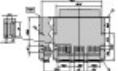
Dimensions single product



1230DIM-403

Line drawing

Door

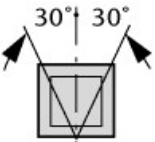


1230DIM-414

Line drawing

Door

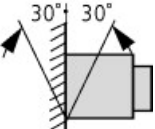
Contact surface flange terminal



123N098

Line drawing

Mounting position



123N099

Line drawing

Mounting position

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