

# Specifications



## Eaton 183745

Eaton Moeller series IZMX/INX - ACB. Circuit-breaker, 3p, 1600A, 105 kA, Selective operation, IEC, Withdrawable

### General specifications

|                             |                                               |
|-----------------------------|-----------------------------------------------|
| <b>PRODUCT NAME</b>         | Eaton Moeller series IZMX/INX circuit-breaker |
| <b>CATALOG NUMBER</b>       | 183745                                        |
| <b>MODEL CODE</b>           | IZMX40H3-V16W-1                               |
| <b>EAN</b>                  | 4015081794812                                 |
| <b>PRODUCT LENGTH/DEPTH</b> | 584 mm                                        |
| <b>PRODUCT HEIGHT</b>       | 597 mm                                        |
| <b>PRODUCT WIDTH</b>        | 521 mm                                        |
| <b>PRODUCT WEIGHT</b>       | 69 kg                                         |
| <b>COMPLIANCES</b>          | IEC/EN 60947<br>IEC<br>RoHS conform           |

## Delivery programme

|                        |                                                              |
|------------------------|--------------------------------------------------------------|
| <b>AMPERAGE RATING</b> | 1600 A                                                       |
| <b>FEATURES</b>        | Motor drive optional<br>Complete device with protection unit |
| <b>FITTED WITH:</b>    | Switched-off indicator                                       |
| <b>FRAME</b>           | IZMX40                                                       |
| <b>NUMBER OF POLES</b> | Three-pole                                                   |
| <b>RELEASE SYSTEM</b>  | Electronic release                                           |

## SPECIAL FEATURES

- Cassette must be separately ordered.
- Main terminals must be separately ordered.
- suitable for zone selectivity
- optionally fittable by user with comprehensive accessories
- Terminal capacity hint: 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.

## Design verification to IEC/EN 61439

|                                                                                         |                                                                                                                                  |
|-----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <b>10.10 TEMPERATURE RISE</b>                                                           | The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices. |
| <b>10.11 SHORT-CIRCUIT RATING</b>                                                       | Is the panel builder's responsibility. The specifications for the switchgear must be observed.                                   |
| <b>10.12 ELECTROMAGNETIC COMPATIBILITY</b>                                              | Is the panel builder's responsibility. The specifications for the switchgear must be observed.                                   |
| <b>10.13 MECHANICAL FUNCTION</b>                                                        | The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.                         |
| <b>10.2.2 CORROSION RESISTANCE</b>                                                      | Meets the product standard's requirements.                                                                                       |
| <b>10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES</b>                         | Meets the product standard's requirements.                                                                                       |
| <b>10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT</b>       | Meets the product standard's requirements.                                                                                       |
| <b>10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS</b> | Meets the product standard's requirements.                                                                                       |
| <b>10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION</b>                                 | Meets the product standard's requirements.                                                                                       |
| <b>10.2.5 LIFTING</b>                                                                   | Does not apply, since the entire switchgear needs to be evaluated.                                                               |
| <b>10.2.6 MECHANICAL IMPACT</b>                                                         | Does not apply, since the entire switchgear needs to be evaluated.                                                               |
| <b>10.2.7 INSCRIPTIONS</b>                                                              | Meets the product standard's requirements.                                                                                       |
| <b>10.3 DEGREE OF PROTECTION OF ASSEMBLIES</b>                                          | Does not apply, since the entire switchgear needs to be evaluated.                                                               |
| <b>10.4 CLEARANCES AND</b>                                                              | Meets the product                                                                                                                |

|                  |                                                                                                                          |
|------------------|--------------------------------------------------------------------------------------------------------------------------|
| <b>TYPE</b>      | <ul style="list-style-type: none"> <li>Air circuit breakers/switch-disconnector</li> <li>Open circuit breaker</li> </ul> |
| <b>USED WITH</b> | Open circuit breaker<br>Air circuit breakers/switch-disconnector                                                         |

|                                                                 |                                                                    |
|-----------------------------------------------------------------|--------------------------------------------------------------------|
| <b>CREEPAGE DISTANCES</b>                                       | standard's requirements.                                           |
| <b>10.5 PROTECTION AGAINST ELECTRIC SHOCK</b>                   | Does not apply, since the entire switchgear needs to be evaluated. |
| <b>10.6 INCORPORATION OF SWITCHING DEVICES AND COMPONENTS</b>   | Does not apply, since the entire switchgear needs to be evaluated. |
| <b>10.7 INTERNAL ELECTRICAL CIRCUITS AND CONNECTIONS</b>        | Is the panel builder's responsibility.                             |
| <b>10.8 CONNECTIONS FOR EXTERNAL CONDUCTORS</b>                 | Is the panel builder's responsibility.                             |
| <b>10.9.2 POWER-FREQUENCY ELECTRIC STRENGTH</b>                 | Is the panel builder's responsibility.                             |
| <b>10.9.3 IMPULSE WITHSTAND VOLTAGE</b>                         | Is the panel builder's responsibility.                             |
| <b>10.9.4 TESTING OF ENCLOSURES MADE OF INSULATING MATERIAL</b> | Is the panel builder's responsibility.                             |

### Design verification to IEC/EN 61439 - technical data

|                                                                      |                |
|----------------------------------------------------------------------|----------------|
| <b>AMBIENT OPERATING TEMPERATURE - MAX</b>                           | 70 °C          |
| <b>AMBIENT STORAGE TEMPERATURE - MAX</b>                             | 70 °C          |
| <b>AMBIENT OPERATING TEMPERATURE - MIN</b>                           | -20 °C         |
| <b>AMBIENT OPERATING TEMPERATURE DETAILS</b>                         | -20 °C - 70 °C |
| <b>AMBIENT STORAGE TEMPERATURE - MIN</b>                             | -20 °C         |
| <b>EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT</b>                 | 140 W          |
| <b>RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)</b> | 1600 A         |

### Technical data - electrical

|                                                                        |                                                                                                       |
|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| <b>ACTUATOR TYPE</b>                                                   | Push button                                                                                           |
| <b>ADJUSTMENT RANGE SHORT-TERM DELAYED SHORT-CIRCUIT RELEASE - MAX</b> | 16000 A                                                                                               |
| <b>ADJUSTMENT RANGE SHORT-TERM DELAYED SHORT-CIRCUIT RELEASE - MIN</b> | 960 A                                                                                                 |
| <b>ADJUSTMENT RANGE UNDELAYED SHORT-CIRCUIT RELEASE - MAX</b>          | 24000 A                                                                                               |
| <b>ADJUSTMENT RANGE UNDELAYED SHORT-CIRCUIT RELEASE - MIN</b>          | 3200 A                                                                                                |
| <b>CLOSING DELAY VIA SPRING RELEASE</b>                                | 35 ms                                                                                                 |
| <b>DIRECTION OF INCOMING SUPPLY</b>                                    | As required                                                                                           |
| <b>ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT</b>                      | Rail connection                                                                                       |
| <b>LIFESPAN, ELECTRICAL</b>                                            | 10000 operations (switching capacity)<br>20000 operations (switching cycles ON/OFF, with maintenance) |
| <b>NUMBER OF STANDARD MECHANICAL</b>                                   | 60                                                                                                    |

|                                                                  |          |
|------------------------------------------------------------------|----------|
| <b>OPERATIONS PER HOUR - MAX</b>                                 |          |
| <b>OPERATING SEQUENCE UP TO 690 V, 50/60 HZ (IEC/EN 60947)</b>   | 85 kA    |
| <b>OVERLOAD RELEASE CURRENT SETTING - MAX</b>                    | 1600 A   |
| <b>OVERLOAD RELEASE CURRENT SETTING - MIN</b>                    | 640 A    |
| <b>OVERVOLTAGE CATEGORY</b>                                      | III      |
| <b>POLLUTION DEGREE</b>                                          | 3        |
| <b>POWER OF WITHDRAWABLE SWITCH WITH CASSETTE</b>                | 140 W    |
| <b>RATED IMPULSE WITHSTAND VOLTAGE (UIMP)</b>                    | 12 kV AC |
| <b>RATED INSULATION VOLTAGE (UI)</b>                             | 1000 V   |
| <b>RATED OPERATING VOLTAGE (UE) - MAX</b>                        | 690 V    |
| <b>RATED OPERATING VOLTAGE (UE) - MIN</b>                        | 240 V    |
| <b>RATED SHORT-CIRCUIT BREAKING CAPACITY AT 400 V, 50 HZ</b>     | 105 kA   |
| <b>RATED SHORT-CIRCUIT MAKING CAPACITY UP TO 440 V, 50/60 HZ</b> | 231 kA   |
| <b>RATED SHORT-CIRCUIT MAKING CAPACITY UP TO 690 V, 50/60 HZ</b> | 166 kA   |
| <b>RATED SHORT-TIME WITHSTAND CURRENT (T = 1 S)</b>              | 85 kA    |
| <b>RATED SHORT-TIME WITHSTAND CURRENT AT 50/60 HZ (T = 3 S)</b>  | 66 kA    |
| <b>RATED UNINTERRUPTED CURRENT (IU)</b>                          | 1600 A   |
| <b>RATED UNINTERRUPTED CURRENT (IU) AT 50°C</b>                  | 1600 A   |
| <b>RATED UNINTERRUPTED CURRENT (IU) AT 60°C</b>                  | 1600 A   |
| <b>RATED UNINTERRUPTED CURRENT (IU) AT 70°C</b>                  | 1600 A   |
| <b>SHORT-CIRCUIT RELEASE DELAYED SETTING - MAX</b>               | 16000 A  |
| <b>SHORT-CIRCUIT RELEASE DELAYED SETTING - MIN</b>               | 1200 A   |

|                                                                |                           |
|----------------------------------------------------------------|---------------------------|
| <b>SHORT-CIRCUIT RELEASE<br/>NON-DELAYED SETTING</b>           | 1.5 - 10 x I <sub>r</sub> |
| <b>SHORT-CIRCUIT RELEASE<br/>NON-DELAYED SETTING -<br/>MAX</b> | 24000 A                   |
| <b>SHORT-CIRCUIT RELEASE<br/>NON-DELAYED SETTING -<br/>MIN</b> | 0 A                       |
| <b>UTILIZATION CATEGORY</b>                                    | B                         |
| <b>VOLTAGE RATING AT AC</b>                                    | 690 V AC                  |

## Technical data - mechanical

|                                                                        |                                                                                                     |
|------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| <b>DEGREE OF PROTECTION</b>                                            | IP31<br>IP31 with door seals<br>IP55 with protective cover                                          |
| <b>DEVICE CONSTRUCTION</b>                                             | Built-in device slide-in<br>technique (withdrawable)                                                |
| <b>LIFESPAN, MECHANICAL</b>                                            | 12500 switching cycles<br>(ON/OFF)<br>25000 operations<br>(switching capacity, with<br>maintenance) |
| <b>MOUNTING METHOD</b>                                                 | Withdrawable                                                                                        |
| <b>NUMBER OF AUXILIARY<br/>CONTACTS (CHANGE-<br/>OVER CONTACTS)</b>    | 2                                                                                                   |
| <b>NUMBER OF AUXILIARY<br/>CONTACTS (NORMALLY<br/>CLOSED CONTACTS)</b> | 0                                                                                                   |
| <b>NUMBER OF AUXILIARY<br/>CONTACTS (NORMALLY<br/>OPEN CONTACTS)</b>   | 0                                                                                                   |
| <b>POSITION OF<br/>CONNECTION FOR MAIN<br/>CURRENT CIRCUIT</b>         | Back side                                                                                           |
| <b>PROTECTION</b>                                                      | Selective operation                                                                                 |
| <b>WEIGHT OF CASSETTE<br/>VERSION (3-POLE)</b>                         | 29 kg                                                                                               |
| <b>WEIGHT OF FIXED<br/>WITHDRAWABLE<br/>VERSION (3-POLE)</b>           | 69 kg                                                                                               |

## Technical data - mechanical - terminals

|                                           |                                                      |
|-------------------------------------------|------------------------------------------------------|
| <b>TERMINAL CAPACITY<br/>(COPPER BAR)</b> | 80 mm x 10 mm (1x) for<br>withdrawable units (black) |
|-------------------------------------------|------------------------------------------------------|

## Resources

|                            |                                                                                 |
|----------------------------|---------------------------------------------------------------------------------|
| CATALOGUES                 | <a href="#">eaton-acb-izmx-catalog-ca01305001z-en-us.pdf</a>                    |
| DECLARATIONS OF CONFORMITY | <a href="#">eaton-circuit-breaker-declaration-of-conformity-eu250301en.pdf</a>  |
| DRAWINGS                   | <a href="#">eaton-circuit-breaker-mounting-izmx-inx-mccb-dimensions-002.eps</a> |
|                            | <a href="#">eaton-circuit-breaker-izmx-inx-mccb-dimensions-015.eps</a>          |
|                            | <a href="#">eaton-circuit-breaker-mounting-izmx-inx-mccb-dimensions.eps</a>     |
|                            | <a href="#">eaton-circuit-breaker-izmx-inx-mccb-dimensions-014.eps</a>          |
|                            | <a href="#">DA-CE-ETN.IZMX40H3-V16W-1</a>                                       |
| ECAD MODEL                 | <a href="#">DA-CE-ETN.IZMX40H3-V16W-1</a>                                       |
| INSTALLATION VIDEOS        | <a href="#">Air Circuit Breakers Series IZMX</a>                                |
| MANUALS AND USER GUIDES    | <a href="#">MN013002_EN</a>                                                     |
| MCAD MODEL                 | <a href="#">eaton-air-circuit-breakers-mcad-drawings-izmx40-3pol-w.dwg</a>      |
|                            | <a href="#">DA-CS-izmx40_3pol_w</a>                                             |

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**PROJECT NAME:**

**PROJECT NUMBER:**

**PREPARED BY:**

**DATE:**

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