

# Specifications



Photo is representative



## Eaton 211805

Eaton Moeller series xEffect - AZ MCB.  
Miniature circuit breaker (MCB), 100A, 2p, C-Char

### General specifications

|                     |                                          |
|---------------------|------------------------------------------|
| <b>PRODUCT NAME</b> | Eaton Moeller series<br>xEffect - AZ MCB |
|---------------------|------------------------------------------|

|                       |        |
|-----------------------|--------|
| <b>CATALOG NUMBER</b> | 211805 |
|-----------------------|--------|

|                   |           |
|-------------------|-----------|
| <b>MODEL CODE</b> | AZ-2-C100 |
|-------------------|-----------|

|            |               |
|------------|---------------|
| <b>EAN</b> | 4015082118051 |
|------------|---------------|

|                                 |       |
|---------------------------------|-------|
| <b>PRODUCT<br/>LENGTH/DEPTH</b> | 90 mm |
|---------------------------------|-------|

|                       |       |
|-----------------------|-------|
| <b>PRODUCT HEIGHT</b> | 75 mm |
|-----------------------|-------|

|                      |       |
|----------------------|-------|
| <b>PRODUCT WIDTH</b> | 54 mm |
|----------------------|-------|

|                       |         |
|-----------------------|---------|
| <b>PRODUCT WEIGHT</b> | 0.46 kg |
|-----------------------|---------|

|                    |              |
|--------------------|--------------|
| <b>COMPLIANCES</b> | RoHS conform |
|--------------------|--------------|

|                       |                                          |
|-----------------------|------------------------------------------|
| <b>CERTIFICATIONS</b> | IEC/EN 60947-2<br>EN45545-2<br>IEC 61373 |
|-----------------------|------------------------------------------|



Powering Business Worldwide

## Additional information

### CURRENT LIMITING CLASS

3

### FEATURES

Additional equipment possible

### SPECIAL FEATURES

Ambient temperature hint: a 1 °C increase results in a 0.5% linear reduction of current carrying capacity

### USED WITH

AZ  
Miniature circuit breaker

## Delivery programme

### AMPERAGE RATING

100 A

### APPLICATION

- Switchgear for industrial and advanced commercial applications
- xEffect - Switchgear for industrial and advanced commercial applications

### NUMBER OF POLES

Two-pole

### NUMBER OF POLES (PROTECTED)

2

### NUMBER OF POLES (TOTAL)

2

### RELEASE CHARACTERISTIC

C

### TRIPPING CHARACTERISTIC

C

### TYPE

- AZ
- Miniature circuit breaker

## 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 CREEPAGE DISTANCES</b>                                           | Meets the product standard's requirements.                                                                                       |
| <b>10.5 PROTECTION</b>                                                                  | Does not apply, since the                                                                                                        |

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

|                                                                      |                  |
|----------------------------------------------------------------------|------------------|
| <b>AMBIENT OPERATING TEMPERATURE - MAX</b>                           | 55 °C            |
| <b>AMBIENT OPERATING TEMPERATURE - MIN</b>                           | -25 °C           |
| <b>EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT</b>                 | 18.3 W<br>18.2 W |
| <b>HEAT DISSIPATION CAPACITY</b>                                     | 0 W              |
| <b>HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT</b>                  | 9.1 W            |
| <b>RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)</b> | 100 A            |
| <b>STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT</b>                | 0 W              |

|                                                                 |                                                                    |
|-----------------------------------------------------------------|--------------------------------------------------------------------|
| <b>AGAINST ELECTRIC SHOCK</b>                                   | 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.                             |

## Technical data - electrical

|                                                                          |                     |
|--------------------------------------------------------------------------|---------------------|
| <b>ADMISSIBLE BACK-UP FUSE - MAX</b>                                     | 200 A gL/gG         |
| <b>DIRECTION OF INCOMING SUPPLY</b>                                      | As required         |
| <b>FREQUENCY RATING - MAX</b>                                            | 60 Hz               |
| <b>FREQUENCY RATING - MIN</b>                                            | 50 Hz               |
| <b>LIFESPAN, ELECTRICAL</b>                                              | 10000 operations    |
| <b>OPERATIONAL SWITCHING CAPACITY</b>                                    | 20 kA               |
| <b>OVERVOLTAGE CATEGORY</b>                                              | III                 |
| <b>POLLUTION DEGREE</b>                                                  | 2                   |
| <b>RATED IMPULSE WITHSTAND VOLTAGE (UIMP)</b>                            | 4 kV                |
| <b>RATED INSULATION VOLTAGE (UI)</b>                                     | 440 V               |
| <b>RATED OPERATIONAL VOLTAGE (UE) - MAX</b>                              | 400 V               |
| <b>RATED SHORT-CIRCUIT BREAKING CAPACITY (IEC 60947-2)- ICU AT 230 V</b> | 20 kA               |
| <b>RATED SHORT-CIRCUIT BREAKING CAPACITY (IEC 60947-2)- ICU AT 400 V</b> | 20 kA               |
| <b>RATED SWITCHING CAPACITY (IEC/EN 60947-2)</b>                         | 20 kA               |
| <b>SELECTIVITY CLASS</b>                                                 | 3                   |
| <b>VOLTAGE RATING</b>                                                    | 230 V AC / 400 V AC |
| <b>VOLTAGE RATING AT DC</b>                                              | 60 V DC (per pole)  |
| <b>VOLTAGE TYPE</b>                                                      | AC                  |

## Technical data - mechanical

|                                                                |                                                |
|----------------------------------------------------------------|------------------------------------------------|
| <b>BUILT-IN DEPTH</b>                                          | 75 mm                                          |
| <b>CONNECTABLE CONDUCTOR CROSS SECTION (MULTI-WIRED) - MAX</b> | 50 mm <sup>2</sup>                             |
| <b>CONNECTABLE CONDUCTOR CROSS SECTION (MULTI-WIRED) - MIN</b> | 2.5 mm <sup>2</sup>                            |
| <b>CONNECTABLE CONDUCTOR CROSS SECTION (SOLID-CORE) - MAX</b>  | 50 mm <sup>2</sup>                             |
| <b>CONNECTABLE CONDUCTOR CROSS SECTION (SOLID-CORE) - MIN</b>  | 2.5 mm <sup>2</sup>                            |
| <b>DEGREE OF PROTECTION</b>                                    | IP40 (when fitted)<br>IP20                     |
| <b>ENCLOSURE WIDTH</b>                                         | 90 mm                                          |
| <b>FRAME</b>                                                   | 45 mm                                          |
| <b>MOUNTING METHOD</b>                                         | Top-hat rail IEC/EN 60715                      |
| <b>MOUNTING WIDTH</b>                                          | 27 mm                                          |
| <b>MOUNTING WIDTH PER POLE</b>                                 | 27 mm                                          |
| <b>TERMINAL CAPACITY (CONTROL CABLE)</b>                       | 2.5 mm <sup>2</sup> - 50 mm <sup>2</sup>       |
| <b>TERMINAL PROTECTION</b>                                     | Finger and hand touch safe, DGUV VS3, EN 50274 |
| <b>TERMINALS (TOP AND BOTTOM)</b>                              | Lift terminals                                 |
| <b>WIDTH IN NUMBER OF MODULAR SPACINGS</b>                     | 3                                              |

## Resources

|                            |                                                                                                                                                                                                                                                                   |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| APPLICATION NOTES          | <a href="#">eaton-maximum-cable-lengths-for-eatons-protective-devices-brochure-br034006en-en-us.pdf</a><br><a href="#">eaton-quality-standards-for-railway-applications-application-paper-ap003005en-en-us.pdf</a>                                                |
| BROCHURES                  | <a href="#">eaton-pdd-railrolling-stock-brochure-br011002en-en-us.pdf</a>                                                                                                                                                                                         |
| DECLARATIONS OF CONFORMITY | <a href="#">eaton-mcb-declaration-of-conformity-eu250431en.pdf</a>                                                                                                                                                                                                |
| DRAWINGS                   | <a href="#">eaton-mcb-xeffect-az-dimensions-003.eps</a><br><a href="#">eaton-az-mcb-dimensions.jpg</a><br><a href="#">eaton-mcb-faz-xeffect-faz-3d-drawing-002.eps</a>                                                                                            |
| ECAD MODEL                 | <a href="#">ETN.AZ-2-C100</a>                                                                                                                                                                                                                                     |
| INSTALLATION INSTRUCTIONS  | <a href="#">IL019148ZU</a>                                                                                                                                                                                                                                        |
| MCAD MODEL                 | <a href="#">eaton-non-selective-universal-mcb-mcad-3d-models-az-2p.stp</a><br><a href="#">eaton-non-selective-mcb-mcad-drawings-az-1pn-2p.dwg</a><br><a href="#">DA-CS-az_1pn_2p</a><br><a href="#">eaton-non-selective-universal-mcb-mcad-drawings-az-2p.dwg</a> |
| PEP ECO-PASSPORT           | <a href="#">eaton-non-selective-universal-mcb-pep-eato-00259-v0101-en.pdf</a>                                                                                                                                                                                     |

|                 |
|-----------------|
| PROJECT NAME:   |
| PROJECT NUMBER: |
| PREPARED BY:    |
| DATE:           |



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