

## Eaton 171174

Eaton Moeller series xEffect - FRCmM-125  
Type A RCCB. Residual current circuit  
breaker (RCCB), 125A, 4p, 30mA, type A

|                                 |                                                            |
|---------------------------------|------------------------------------------------------------|
|                                 |                                                            |
| <b>PRODUCT NAME</b>             | Eaton Moeller series<br>xEffect - FRCmM-125 Type<br>A RCCB |
| <b>CATALOG NUMBER</b>           | 171174                                                     |
| <b>PRODUCT<br/>LENGTH/DEPTH</b> | 76 mm                                                      |
| <b>PRODUCT HEIGHT</b>           | 80 mm                                                      |
| <b>PRODUCT WIDTH</b>            | 70 mm                                                      |
| <b>PRODUCT WEIGHT</b>           | 0.41 kg                                                    |
| <b>COMPLIANCES</b>              | RoHS conform                                               |
| <b>CERTIFICATIONS</b>           | IEC/EN 61008                                               |

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| <b>USED WITH</b>                                                                        | FRCmM-125<br>Type A<br>Residual current circuit breakers                                                                         |
| <b>AMPERAGE RATING</b>                                                                  | 125 A                                                                                                                            |
| <b>FEATURES</b>                                                                         | Residual current circuit breaker<br>Additional equipment possible                                                                |
| <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.                                                               |

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| <b>MCAD MODEL</b> | <a href="#">eaton-residual-current-circuit-breakers-3d-models-dfs-4.stp</a> |
|                   | <a href="#">eaton-residual-current-circuit-breakers-drawings-dfs-4.dwg</a>  |
|                   | <a href="#">eaton-frcm-wiring-diagram.jpg</a>                               |
|                   | <a href="#">eaton-xeffect-frcmm-125-rccb-catalog-ca003020en-us.pdf</a>      |
|                   | <a href="#">eaton-frcm-dimensions.jpg</a>                                   |

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| <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 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.                             |
| <b>FITTED WITH:</b>                                             | Interlocking device                                                |
| <b>FRAME</b>                                                    | 45 mm                                                              |
| <b>FREQUENCY RATING</b>                                         | 50 Hz                                                              |
| <b>POLLUTION DEGREE</b>                                         | 2                                                                  |
| <b>MOUNTING METHOD</b>                                          | Quick attachment for DIN-rail EN 50022<br>DIN rail                 |
| <b>CLIMATIC PROOFING</b>                                        | 25-55 °C / 90-95% relative humidity according to IEC 60068-2       |
| <b>EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT</b>            | 22.5 W                                                             |
| <b>RATED IMPULSE WITHSTAND VOLTAGE (UIMP)</b>                   | 4 kV                                                               |
| <b>RATED SHORT-TIME WITHSTAND CURRENT (ICW)</b>                 | 10 kA                                                              |

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| <b>ADMISSIBLE BACK-UP FUSE OVERLOAD - MAX</b>                  | 80 A gG/gL                                     |
| <b>BUILT-IN WIDTH (NUMBER OF UNITS)</b>                        | 70 mm (4 SU)                                   |
| <b>BUSBAR MATERIAL THICKNESS</b>                               | 0.8 mm - 2 mm                                  |
| <b>SHORT-CIRCUIT RATING</b>                                    | 125 A (max. admissible back-up fuse)           |
| <b>STATUS INDICATION</b>                                       | Toggle-center position                         |
| <b>TERMINAL PROTECTION</b>                                     | Finger and hand touch safe, DGUV VS3, EN 50274 |
| <b>TERMINALS (TOP AND BOTTOM)</b>                              | Twin-purpose terminals                         |
| <b>TEST CIRCUIT RANGE</b>                                      | 184 V AC - 440 V AC                            |
| <b>AMBIENT OPERATING TEMPERATURE - MAX</b>                     | 60 °C                                          |
| <b>AMBIENT OPERATING TEMPERATURE - MIN</b>                     | -25 °C                                         |
| <b>BUILT-IN DEPTH</b>                                          | 70.5 mm                                        |
| <b>CONNECTABLE CONDUCTOR CROSS SECTION (MULTI-WIRED) - MAX</b> | 16 mm <sup>2</sup>                             |
| <b>CONNECTABLE CONDUCTOR CROSS SECTION (MULTI-WIRED) - MIN</b> | 1.5 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>  | 1.5 mm <sup>2</sup>                            |
| <b>FAULT CURRENT RATING</b>                                    | 30 mA                                          |
| <b>HEAT DISSIPATION CAPACITY</b>                               | 0 W                                            |
| <b>HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT</b>            | 0 W                                            |
| <b>PERMITTED STORAGE AND TRANSPORT TEMPERATURE - MAX</b>       | 60 °C                                          |
| <b>PERMITTED STORAGE AND TRANSPORT TEMPERATURE - MIN</b>       | -25 °C                                         |
| <b>CONTACT POSITION</b>                                        | Red / green                                    |

|                                                |                                                                                                                                                                                                                                          |
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| <b>INDICATOR COLOR</b>                         |                                                                                                                                                                                                                                          |
| <b>MOUNTING POSITION</b>                       | As required                                                                                                                                                                                                                              |
| <b>LIFESPAN, MECHANICAL</b>                    | 10000 operations                                                                                                                                                                                                                         |
| <b>DEGREE OF PROTECTION</b>                    | IP20, IP40 with suitable enclosure<br>IP20                                                                                                                                                                                               |
| <b>IMPULSE WITHSTAND CURRENT</b>               | Partly surge-proof 250 A<br>250 A (8/20 µs) surge-proof                                                                                                                                                                                  |
| <b>NUMBER OF POLES</b>                         | Four-pole                                                                                                                                                                                                                                |
| <b>LEAKAGE CURRENT TYPE</b>                    | A                                                                                                                                                                                                                                        |
| <b>LIFESPAN, ELECTRICAL</b>                    | 4000 operations                                                                                                                                                                                                                          |
| <b>TYPE</b>                                    | <ul style="list-style-type: none"> <li>• FRCmM-125</li> <li>• Residual current circuit breakers</li> <li>• Type A</li> </ul>                                                                                                             |
| <b>SPECIAL FEATURES</b>                        | <ul style="list-style-type: none"> <li>• Current test marks as per inscription</li> <li>• Maximum operating temperature is 60 °C: Starting at 40 °C, the max. permissible continuous current decreases by 2.2% for every 1 °C</li> </ul> |
| <b>APPLICATION</b>                             | <ul style="list-style-type: none"> <li>• Switchgear for industrial and advanced commercial applications</li> <li>• xEffect - Switchgear for industrial and advanced commercial applications</li> </ul>                                   |
| <b>SENSITIVITY TYPE</b>                        | Pulse-current sensitive                                                                                                                                                                                                                  |
| <b>RATED FAULT CURRENT - MAX</b>               | 0.03 A                                                                                                                                                                                                                                   |
| <b>RATED FAULT CURRENT - MIN</b>               | 0.03 A                                                                                                                                                                                                                                   |
| <b>RATED INSULATION VOLTAGE (UI)</b>           | 440 V                                                                                                                                                                                                                                    |
| <b>RATED OPERATIONAL CURRENT FOR SPECIFIED</b> | 125 A                                                                                                                                                                                                                                    |

|                                                       |                                                                                           |
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| <b>HEAT DISSIPATION (IN)</b>                          |                                                                                           |
| <b>RATED OPERATIONAL VOLTAGE (UE) - MAX</b>           | 415 V                                                                                     |
| <b>RATED RESIDUAL MAKING AND BREAKING CAPACITY</b>    | 1250 A                                                                                    |
| <b>STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT</b> | 0 W                                                                                       |
| <b>SURGE CURRENT CAPACITY</b>                         | 0.25 kA                                                                                   |
| <b>WIDTH IN NUMBER OF MODULAR SPACINGS</b>            | 4                                                                                         |
| <b>VOLTAGE RATING (IEC/EN 60947-2)</b>                | 240 V AC / 415 V AC                                                                       |
| <b>VOLTAGE TYPE</b>                                   | AC                                                                                        |
| <b>TERMINAL CAPACITY (SOLID WIRE)</b>                 | 1.5 mm <sup>2</sup> - 16 mm <sup>2</sup> (2x)<br>1.5 mm <sup>2</sup> - 50 mm <sup>2</sup> |
| <b>TRIPPING TIME</b>                                  | Non-delayed                                                                               |
| <b>RATED SHORT-CIRCUIT STRENGTH</b>                   | 10 kA with back-up fuse                                                                   |
| <b>TERMINAL CAPACITY (STRANDED CABLE)</b>             | 1.5 mm <sup>2</sup> - 5 mm <sup>2</sup><br>1.5 mm <sup>2</sup> - 16 mm <sup>2</sup> (2x)  |
| <b>RAL-NUMBER</b>                                     | 7035                                                                                      |
| <b>COLOR</b>                                          | Gray                                                                                      |

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|------------------------|
| <b>PROJECT NAME:</b>   |
| <b>PROJECT NUMBER:</b> |
| <b>PREPARED BY:</b>    |
| :                      |



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