

## Eaton 170885

Eaton Moeller series xEffect - FRBm6/M RCBO - residual-current circuit breaker with overcurrent protection. RCD/MCB, 40A, 30mA, MCB trip type B, 2p, RCCB trip type: A, G

|                             |                                                                                                            |
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|                             |                                                                                                            |
| <b>PRODUCT NAME</b>         | Eaton Moeller series xEffect - FRBm6/M RCBO - residual-current circuit breaker with overcurrent protection |
| <b>CATALOG NUMBER</b>       | 170885                                                                                                     |
| <b>PRODUCT LENGTH/DEPTH</b> | 80 mm                                                                                                      |
| <b>PRODUCT HEIGHT</b>       | 75.5 mm                                                                                                    |
| <b>PRODUCT WIDTH</b>        | 35 mm                                                                                                      |
| <b>PRODUCT WEIGHT</b>       | 0.25 kg                                                                                                    |
| <b>COMPLIANCES</b>          | CE Marked<br>RoHS conform                                                                                  |
| <b>CERTIFICATIONS</b>       | CE<br>EN45545-2<br>IEC 61373                                                                               |

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|                                                                                         |                                                                                                                                  |
| <b>AMPERAGE RATING</b>                                                                  | 40 A                                                                                                                             |
| <b>VOLTAGE RATING</b>                                                                   | 240 V - 240 V                                                                                                                    |
| <b>SURGE CURRENT CAPACITY</b>                                                           | 0.25 kA                                                                                                                          |
| <b>VOLTAGE TYPE</b>                                                                     | AC                                                                                                                               |
| <b>WIDTH IN NUMBER OF MODULAR SPACINGS</b>                                              | 2                                                                                                                                |
| <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</b>                                                                | Does not apply, since the                                                                                                        |

|                                                                       |
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| <a href="#">xEffect FR RCCB FAZ%20MCB.pdf</a>                         |
| <a href="#">eaton-xeffect-frbm6-rcbo-catalog-ca003015en-en-us.pdf</a> |
| <a href="#">eaton-xeffect-frbm6m-dimensions-002.jpg</a>               |
| <a href="#">eaton-xeffect-frbm6m-wiring-diagram-003.jpg</a>           |

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| <b>IMPACT</b>                                                        | 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>OPERATING AMBIENT TEMPERATURE - MAX</b>                           | 40 °C                                                              |
| <b>OPERATING AMBIENT TEMPERATURE - MIN</b>                           | -25 °C                                                             |
| <b>PRODUCT RANGE</b>                                                 | FRBm6                                                              |
| <b>RATED CURRENT</b>                                                 | 40 A                                                               |
| <b>RATED FAULT CURRENTS OF PRODUCT RANGE</b>                         | 30, 100, 300 MilliAmpere                                           |
| <b>RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)</b> | 40 A                                                               |
| <b>RATED SWITCHING CAPACITY (IEC/EN 61009)</b>                       | 6 kA                                                               |
| <b>STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT</b>                | 0 W                                                                |
| <b>TRIPPING CHARACTERISTIC</b>                                       | B                                                                  |
| <b>BUILT-IN DEPTH</b>                                                | 75.5 mm                                                            |
| <b>CURRENT LIMITING</b>                                              | 3                                                                  |

|                                                                    |                                                                   |
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| <b>CLASS</b>                                                       |                                                                   |
| <b>RATED SHORT-CIRCUIT<br/>BREAKING CAPACITY (EN<br/>60947-2)</b>  | 0 kA                                                              |
| <b>AMBIENT OPERATING<br/>TEMPERATURE - MAX</b>                     | 40 °C                                                             |
| <b>AMBIENT OPERATING<br/>TEMPERATURE - MIN</b>                     | -25 °C                                                            |
| <b>FAULT CURRENT RATING</b>                                        | 0.03 A                                                            |
| <b>HEAT DISSIPATION<br/>CAPACITY</b>                               | 0 W                                                               |
| <b>HEAT DISSIPATION PER<br/>POLE, CURRENT-<br/>DEPENDENT</b>       | 0 W                                                               |
| <b>NUMBER OF POLES<br/>(PROTECTED)</b>                             | 2                                                                 |
| <b>NUMBER OF POLES<br/>(TOTAL)</b>                                 | 2                                                                 |
| <b>RATED OPERATIONAL<br/>VOLTAGE (UE) - MAX</b>                    | 240 V                                                             |
| <b>RATED SHORT-CIRCUIT<br/>BREAKING CAPACITY (IEC<br/>60947-2)</b> | 0 kA                                                              |
| <b>RATED SWITCHING<br/>CAPACITY</b>                                | 6 kA                                                              |
| <b>BASIC FUNCTION</b>                                              | Combined RCD/MCB<br>devices                                       |
| <b>MOUNTING METHOD</b>                                             | DIN rail                                                          |
| <b>EQUIPMENT HEAT<br/>DISSIPATION, CURRENT-<br/>DEPENDENT</b>      | 6.7 W                                                             |
| <b>RATED IMPULSE<br/>WITHSTAND VOLTAGE<br/>(UIMP)</b>              | 4 kV                                                              |
| <b>DEGREE OF PROTECTION</b>                                        | IP20                                                              |
| <b>OPERATING AMBIENT<br/>TEMPERATURE HINT</b>                      | Keep in mind the derating<br>at temperatures higher<br>than 40 °C |
| <b>TRIPPING</b>                                                    | Non-delayed                                                       |
| <b>OVERVOLTAGE<br/>CATEGORY</b>                                    | III                                                               |
| <b>POLLUTION DEGREE</b>                                            | 2                                                                 |
| <b>IMPULSE WITHSTAND<br/>CURRENT</b>                               | Partly surge-proof, 250 A                                         |
| <b>LEAKAGE CURRENT TYPE</b>                                        | A                                                                 |
| <b>RELEASE<br/>CHARACTERISTIC</b>                                  | B                                                                 |

|                                                                |                                                                |
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| <b>SENSITIVITY TYPE</b>                                        | Pulse-current sensitive                                        |
| <b>FREQUENCY RATING</b>                                        | 50 Hz                                                          |
| <b>RATED INSULATION VOLTAGE (UI)</b>                           | 500 V                                                          |
| <b>CONNECTABLE CONDUCTOR CROSS SECTION (SOLID-CORE) - MIN</b>  | 1 mm <sup>2</sup>                                              |
| <b>CONNECTABLE CONDUCTOR CROSS SECTION (SOLID-CORE) - MAX</b>  | 25 mm <sup>2</sup>                                             |
| <b>CONNECTABLE CONDUCTOR CROSS SECTION (MULTI-WIRED) - MIN</b> | 1 mm <sup>2</sup>                                              |
| <b>CONNECTABLE CONDUCTOR CROSS SECTION (MULTI-WIRED) - MAX</b> | 25 mm <sup>2</sup>                                             |
| <b>RATED SHORT-CIRCUIT BREAKING CAPACITY (EN 61009)</b>        | 6 kA                                                           |
| <b>RATED SHORT-CIRCUIT BREAKING CAPACITY (EN 61009-1)</b>      | 6 kA                                                           |
| <b>NUMBER OF POLES</b>                                         | Two-pole                                                       |
| <b>DISCONNECTION CHARACTERISTIC</b>                            | Undelayed                                                      |
| <b>TYPE</b>                                                    | RCBO                                                           |
| <b>APPLICATION</b>                                             | Switchgear for industrial and advanced commercial applications |

**PROJECT NAME:**

**PROJECT NUMBER:**

**PREPARED BY:**

:



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