

## Eaton 170599

Eaton Moeller series xEffect - FRBm6/M  
RCBO - residual-current circuit breaker with  
overcurrent protection. RCD/MCB, 16A,  
300mA, MCB trip type D, 1-phase+N, RCCB  
trip type: A

|                                 |                                                                                                                        |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------|
|                                 |                                                                                                                        |
| <b>PRODUCT NAME</b>             | Eaton Moeller series<br>xEffect - FRBm6/M RCBO -<br>residual-current circuit<br>breaker with overcurrent<br>protection |
| <b>CATALOG NUMBER</b>           | 170599                                                                                                                 |
| <b>PRODUCT<br/>LENGTH/DEPTH</b> | 80 mm                                                                                                                  |
| <b>PRODUCT HEIGHT</b>           | 75 mm                                                                                                                  |
| <b>PRODUCT WIDTH</b>            | 35 mm                                                                                                                  |
| <b>PRODUCT WEIGHT</b>           | 0.188 kg                                                                                                               |
| <b>COMPLIANCES</b>              | CE Marked<br>RoHS conform                                                                                              |
| <b>CERTIFICATIONS</b>           | CE<br>EN45545-2<br>IEC 61373                                                                                           |

|                                                           |                                  |
|-----------------------------------------------------------|----------------------------------|
|                                                           |                                  |
| <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>FEATURES</b>                                           | Concurrently switching N-neutral |
| <b>OPERATING AMBIENT TEMPERATURE - MAX</b>                | 40 °C                            |
| <b>OPERATING AMBIENT TEMPERATURE - MIN</b>                | -25 °C                           |
| <b>PRODUCT RANGE</b>                                      | FRBmM                            |
| <b>RATED CURRENT</b>                                      | 16 A                             |
| <b>RATED FAULT CURRENTS OF PRODUCT RANGE</b>              | 10, 30, 100, 300 MilliAmpere     |
| <b>RATED SWITCHING CAPACITY (IEC/EN 61009)</b>            | 10 kA                            |
| <b>STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT</b>     | 0 W                              |
| <b>TRIPPING CHARACTERISTIC</b>                            | D                                |
| <b>BUILT-IN DEPTH</b>                                     | 75.5 mm                          |
| <b>CURRENT LIMITING CLASS</b>                             | 3                                |
| <b>RATED SHORT-CIRCUIT BREAKING CAPACITY (EN 60947-2)</b> | 15 kA                            |
| <b>AMBIENT OPERATING TEMPERATURE - MAX</b>                | 40 °C                            |
| <b>AMBIENT OPERATING TEMPERATURE - MIN</b>                | -25 °C                           |
| <b>FAULT CURRENT RATING</b>                               | 0.3 A                            |
| <b>HEAT DISSIPATION CAPACITY</b>                          | 0 W                              |
| <b>HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT</b>       | 0 W                              |
| <b>NUMBER OF POLES (PROTECTED)</b>                        | 1                                |
| <b>NUMBER OF POLES (TOTAL)</b>                            | 2                                |
| <b>RATED OPERATIONAL VOLTAGE (UE) - MAX</b>               | 240 V                            |

|                                                                       |  |
|-----------------------------------------------------------------------|--|
|                                                                       |  |
| <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-3d-drawing-007.jpg</a>               |  |
| <a href="#">eaton-xeffect-frbm6m-dimensions.jpg</a>                   |  |
| <a href="#">eaton-xeffect-frbm6m-wiring-diagram.jpg</a>               |  |
| <a href="#">eaton-xeffect-frbm6m-characteristic-curve.jpg</a>         |  |

|                                                                            |                                                                   |
|----------------------------------------------------------------------------|-------------------------------------------------------------------|
| <b>RATED SHORT-CIRCUIT<br/>BREAKING CAPACITY (IEC<br/>60947-2)</b>         | 15 kA                                                             |
| <b>RATED SWITCHING<br/>CAPACITY</b>                                        | 10 kA                                                             |
| <b>BASIC FUNCTION</b>                                                      | Combined RCD/MCB<br>devices                                       |
| <b>MOUNTING METHOD</b>                                                     | DIN rail                                                          |
| <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>                                          | D                                                                 |
| <b>SENSITIVITY TYPE</b>                                                    | Pulse-current sensitive                                           |
| <b>FREQUENCY RATING</b>                                                    | 50 Hz                                                             |
| <b>RATED INSULATION<br/>VOLTAGE (UI)</b>                                   | 500 V                                                             |
| <b>CONNECTABLE<br/>CONDUCTOR CROSS<br/>SECTION (SOLID-CORE) -<br/>MIN</b>  | 1 mm <sup>2</sup>                                                 |
| <b>CONNECTABLE<br/>CONDUCTOR CROSS<br/>SECTION (SOLID-CORE) -<br/>MAX</b>  | 25 mm <sup>2</sup>                                                |
| <b>CONNECTABLE<br/>CONDUCTOR CROSS<br/>SECTION (MULTI-WIRED)<br/>- MIN</b> | 1 mm <sup>2</sup>                                                 |
| <b>CONNECTABLE<br/>CONDUCTOR CROSS<br/>SECTION (MULTI-WIRED)<br/>- MAX</b> | 25 mm <sup>2</sup>                                                |
| <b>RATED SHORT-CIRCUIT<br/>BREAKING CAPACITY (EN<br/>61009)</b>            | 10 kA                                                             |
| <b>RATED SHORT-CIRCUIT</b>                                                 | 10 kA                                                             |

|                                |                                                                |
|--------------------------------|----------------------------------------------------------------|
| BREAKING CAPACITY (EN 61009-1) |                                                                |
| NUMBER OF POLES                | Single-pole + N                                                |
| DISCONNECTION CHARACTERISTIC   | Undelayed                                                      |
| TYPE                           | RCBO                                                           |
| APPLICATION                    | Switchgear for industrial and advanced commercial applications |

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



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