

## Miniature circuit breaker (MCB), 4 A, 1p, characteristic: Z

**Part no.** FAZ-Z4/1  
**278622**  
**EL Number** 1695250  
**(Norway)**

| General specifications                                       |  |  |
|--|--|--|
| Product name   |  | Eaton Moeller series xEffect - FAZ MCB   |
| Part no.   |  | FAZ-Z4/1   |
| EAN  |  | 4015082786229  |
| Product Length/Depth   |  | 80 millimetre  |
| Product height   |  | 75.5 millimetre  |
| Product width  |  | 17.7 millimetre  |
| Product weight   |  | 0.112 kilogram   |
| Compliances  |  | UL CSA09 (with supplementary protector only)<br>RoHS conform   |
| Certifications   |  | CSA (File No. 204453)<br>UL (Category Control Number QVNU2, QVNU8)<br>CSA-C22.2 No. 235<br>CE marking<br>IEC/EN 60947-2<br>UL (File No. E177451)<br>North America (UL recognized, CSA certified)<br>CSA (Class No. 3215-30)<br>UL 1077<br>IEC/EN 60898<br>EN45545-2<br>IEC 61373 |
| Product Tradename  |  | xEffect - FAZ  |
| Product Type   |  | MCB  |
| Product Sub Type   |  | None   |
| Delivery program   |  |  |
| Application  |  | Branch circuits, not as BCPD<br>Switchgear for industrial and advanced commercial applications<br>xEffect - Switchgear for industrial and advanced commercial applications   |
| Number of poles  |  | Single-pole  |
| Number of poles (total)                                      |  | 1  |
| Number of poles (protected)                                  |  | 1  |
| Tripping characteristic                                      |  | Z  |
| Release characteristic                                       |  | Z  |
| Amperage Rating  |  | 4 A  |
| Type   |  | FAZ<br>Miniature circuit breaker   |
| Technical Data - Electrical                                  |  |  |
| Voltage type   |  | AC   |
| Voltage rating   |  | 240 V AC / 415 V AC  |
| Voltage rating at DC   |  | 60 V DC (per pole)   |
| Voltage rating (UL CSA 13)                                   |  | 277 V AC; 48 V DC  |
| Rated operational voltage (Ue) - max                         |  | 230 V  |
| Rated insulation voltage (Ui)                                |  | 440 V  |
| Rated impulse withstand voltage (Uimp)                       |  | 4 kV   |
| Frequency rating - min                                       |  | 50 Hz  |
| Frequency rating - max                                       |  | 60 Hz  |
| Rated switching capacity (IEC/EN 60947-2)                    |  | 10 kA  |
| Operational switching capacity                               |  | 7.5 kA   |
| Rated short-circuit breaking capacity (EN 60898) at 230 V    |  | 0 kA   |
| Rated short-circuit breaking capacity (EN 60898) at 400 V    |  | 0 kA   |
| Rated short-circuit breaking capacity (IEC 60947-2) at 230 V |  | 10 kA  |
| Rated short-circuit breaking capacity (IEC 60947-2) at 400 V |  | 10 kA  |
| Admissible back-up fuse - max                                |  | 125 A gL/gG  |

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| Selectivity class  |  | 3  |
| Lifespan, electrical   |  | 10000 operations   |
| Overvoltage category   |  | III  |
| Pollution degree   |  | 2  |
| Direction of incoming supply   |  | As required  |
| <b>Technical Data - Mechanical</b>   |  |  |
| Frame  |  | 45 mm  |
| Enclosure width  |  | 80 mm  |
| Width in number of modular spacings  |  | 1  |
| Built-in depth   |  | 70.5 mm  |
| Mounting width per pole  |  | 17.5 mm  |
| Mounting width   |  | 17.5 mm  |
| Mounting Method  |  | Top-hat rail IEC/EN 60715  |
| Mounting position  |  | As required  |
| Degree of protection   |  | IP40 (when fitted)<br>UL/CSA Type: -<br>IP20 (IEC)<br>IP20   |
| Terminals (top and bottom)   |  | Twin-purpose terminals   |
| Connectable conductor cross section (solid-core) - min                           |  | 1 mm <sup>2</sup>  |
| Connectable conductor cross section (solid-core) - max                           |  | 25 mm <sup>2</sup>   |
| Connectable conductor cross section (multi-wired) - min                          |  | 1 mm <sup>2</sup>  |
| Connectable conductor cross section (multi-wired) - max                          |  | 25 mm <sup>2</sup>   |
| Terminal capacity of screw terminals for main cable                              |  | 10 mm <sup>2</sup> (2x)  |
| Terminal capacity (control cable)  |  | 25 mm <sup>2</sup> (1x)  |
| Terminal protection  |  | Finger and hand touch safe, DGUV VS3, EN 50274   |
| Busbar material thickness  |  | 0.8 mm - 2 mm  |
| <b>Design verification as per IEC/EN 61439 - technical data</b>                  |  |  |
| Rated operational current for specified heat dissipation (In)                    |  | 4 A  |
| Heat dissipation per pole, current-dependent                                     |  | 0 W  |
| Equipment heat dissipation, current-dependent                                    |  | 4 W  |
| Static heat dissipation, non-current-dependent                                   |  | 0 W  |
| Heat dissipation capacity  |  | 0 W  |
| Ambient operating temperature - min  |  | -25 °C   |
| Ambient operating temperature - max  |  | 75 °C  |
| <b>Design verification as per IEC/EN 61439</b>                                   |  |  |
| 10.2.2 Corrosion resistance  |  | Meets the product standard's requirements.   |
| 10.2.3.1 Verification of thermal stability of enclosures                         |  | Meets the product standard's requirements.   |
| 10.2.3.2 Verification of resistance of insulating materials to normal heat       |  | Meets the product standard's requirements.   |
| 10.2.3.3 Resist. of insul. mat. to abnormal heat/fire by internal elect. effects |  | Meets the product standard's requirements.   |
| 10.2.4 Resistance to ultra-violet (UV) radiation                                 |  | Meets the product standard's requirements.   |
| 10.2.5 Lifting   |  | Does not apply, since the entire switchgear needs to be evaluated.   |
| 10.2.6 Mechanical impact   |  | Does not apply, since the entire switchgear needs to be evaluated.   |
| 10.2.7 Inscriptions  |  | Meets the product standard's requirements.   |
| 10.3 Degree of protection of assemblies  |  | Does not apply, since the entire switchgear needs to be evaluated.   |
| 10.4 Clearances and creepage distances   |  | Meets the product standard's requirements.   |
| 10.5 Protection against electric shock   |  | Does not apply, since the entire switchgear needs to be evaluated.   |
| 10.6 Incorporation of switching devices and components                           |  | Does not apply, since the entire switchgear needs to be evaluated.   |
| 10.7 Internal electrical circuits and connections                                |  | Is the panel builder's responsibility.   |
| 10.8 Connections for external conductors   |  | Is the panel builder's responsibility.   |
| 10.9.2 Power-frequency electric strength   |  | Is the panel builder's responsibility.   |
| 10.9.3 Impulse withstand voltage   |  | Is the panel builder's responsibility.   |
| 10.9.4 Testing of enclosures made of insulating material                         |  | Is the panel builder's responsibility.   |
| 10.10 Temperature rise   |  | The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices. |
| 10.11 Short-circuit rating   |  | Is the panel builder's responsibility. The specifications for the switchgear must be observed.                                   |

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|-------------------------------------|--|---|
| 10.12 Electromagnetic compatibility |  | Is the panel builder's responsibility. The specifications for the switchgear must be observed.            |
| 10.13 Mechanical function           |  | The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.  |
| <b>Additional information</b>       |  |   |
| 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 |

## Technical data ETIM 9.0

Circuit breakers and fuses (EG000020) / Miniature circuit breaker (MCB) (EC000042)

Electric engineering, automation, process control engineering / Electrical installation, device / Miniature circuit breaker system (MCB) / Miniature circuit breaker (MCB) (ecl@ss13-27-14-19-01 [AAB905019])

|   |                 |          |
|---|-----------------|----------|
| Built-in depth  | mm              | 70.5     |
| Release characteristic  |                 | Z        |
| Number of poles (total)   |                 | 1        |
| Number of protected poles   |                 | 1        |
| Rated current   | A               | 4        |
| Rated voltage   | V               | 230      |
| Rated insulation voltage Ui   | V               | 440      |
| Rated impulse withstand voltage Uimp  | kV              | 4        |
| Rated short-circuit breaking capacity Icn according to EN 60898 at 230 V    | kA              | 0        |
| Voltage type  |                 | AC       |
| Rated short-circuit breaking capacity Icn according to EN 60898 at 400 V    | kA              | 0        |
| Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V | kA              | 10       |
| Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V | kA              | 10       |
| Frequency   | Hz              | 50 - 60  |
| Power loss  | W               | 4        |
| Current limiting class  |                 | 3        |
| Flush-mounted installation  |                 | No       |
| Concurrently switching neutral conductor                                    |                 | No       |
| Over voltage category   |                 | 3        |
| Pollution degree  |                 | 2        |
| Additional equipment possible   |                 | Yes      |
| Width in number of modular spacings   |                 | 1        |
| Degree of protection (IP)   |                 | IP20     |
| Ambient temperature during operating  | °C              | -25 - 75 |
| Connectable conductor cross section multi-wired                             | mm <sup>2</sup> | 1 - 25   |
| Connectable conductor cross section solid-core                              | mm <sup>2</sup> | 1 - 25   |
| Explosion-proof   |                 | No       |