



**Miniature circuit breaker (MCB), 1 A, 2p, characteristic: Z**

**Part no.** FAZ-Z1/2  
**Catalog No.** 278817  
**Alternate Catalog No.** FAZ-Z1/2  
**EL-Nummer (Norway)** 0001695262

Similar to illustration

**Delivery program**

|   |          |    |  |
|---|----------|----|--|
| Basic function                                  |          |    | Miniature circuit-breakers                                     |
| Number of poles                                 |          |    | 2 pole   |
| Tripping characteristic                         |          |    | Z  |
| Application                                     |          |    | Switchgear for industrial and advanced commercial applications |
| Rated current                                   | $I_n$    | A  | 1  |
| Rated switching capacity acc. to IEC/EN 60947-2 | $I_{cu}$ | kA | 10   |
| Product range                                   |          |    | FAZ  |

**Technical data**

**Electrical**

|   |            |         |                                |
|---|------------|---------|--------------------------------|
| Standards                                       |            |         | IEC/EN 60947-2<br>IEC/EN 60898 |
| Rated operational voltage                       | $U_e$      | V       |                                |
|   |            | V AC    | 240/415                        |
|   |            | V DC    | 60 (per pole)                  |
| Rated switching capacity acc. to IEC/EN 60947-2 | $I_{cu}$   | kA      | 10                             |
| Operational switching capacity                  |            | kA      | 7.5                            |
| Characteristic                                  |            |         | B, C, D, K, S, Z               |
| Max. back-up fuse                               |            | A gL/gG | 125                            |
| Selectivity Class                               |            |         | 3                              |
| lifespan  |            |         |                                |
| Lifespan  | Operations |         | > 10000                        |
| Direction of incoming supply                    |            |         | as required                    |

**Mechanical**

|                              |  |                 |   |
|------------------------------|--|-----------------|---|
| Standard front dimension     |  | mm              | 45                                      |
| Enclosure height             |  | mm              | 80                                      |
| Mounting width per pole      |  | mm              | 17.5                                    |
| Mounting                     |  |                 | IEC/EN 60715 top-hat rail               |
| Degree of Protection         |  |                 | IP20, IP40 (when fitted)                |
| Terminals top and bottom     |  |                 | Twin-purpose terminals                  |
| Terminal protection          |  |                 | Finger and back-of-hand proof to BGV A2 |
| Terminal capacities          |  | mm <sup>2</sup> |   |
|                              |  | mm <sup>2</sup> | 1 x 25                                  |
|                              |  | mm <sup>2</sup> | 2 x 10                                  |
| Thickness of busbar material |  | mm              | 0.8 ... 2                               |
| Mounting position            |  |                 | As required                             |

**Design verification as per IEC/EN 61439**

|  |           |   |     |
|--|-----------|---|-----|
| Technical data for design verification                   |           |   |     |
| Rated operational current for specified heat dissipation | $I_n$     | A | 1   |
| Heat dissipation per pole, current-dependent             | $P_{vid}$ | W | 0   |
| Equipment heat dissipation, current-dependent            | $P_{vid}$ | W | 7.1 |

|  |                   |    |   |
|--|-------------------|----|---|
| Static heat dissipation, non-current-dependent   | P <sub>vs</sub>   | W  | 0   |
| Heat dissipation capacity  | P <sub>diss</sub> | W  | 0   |
| Operating ambient temperature min.   |                   | °C | -40   |
| Operating ambient temperature max.   |                   | °C | 75  |
|  |                   |    | linear, per +1 °C, results in a 0.5% reduction of current carrying capacity |
| IEC/EN 61439 design verification   |                   |    |   |
| 10.2 Strength of materials and parts   |                   |    |   |
| 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 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric 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 Insulation properties   |                   |    |   |
| 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.                                   |                   |    |   |
| 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.                         |                   |    |   |

## Technical data ETIM 7.0

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) (ec1@ss10.0.1-27-14-19-01 [AAB905014])

|  |  |    |         |
|--|--|----|---------|
| Release characteristic   |  |    | Z       |
| Number of poles (total)  |  |    | 2       |
| Number of protected poles  |  |    | 2       |
| Rated current  |  | A  | 1       |
| Rated voltage  |  | V  | 400     |
| Rated insulation voltage U <sub>i</sub>                                    |  | V  | 440     |
| Rated impulse withstand voltage U <sub>imp</sub>                           |  | kV | 4       |
| Rated short-circuit breaking capacity I <sub>cn</sub> EN 60898 at 230 V    |  | kA | 0       |
| Rated short-circuit breaking capacity I <sub>cn</sub> EN 60898 at 400 V    |  | kA | 0       |
| Rated short-circuit breaking capacity I <sub>cu</sub> IEC 60947-2 at 230 V |  | kA | 10      |
| Rated short-circuit breaking capacity I <sub>cu</sub> IEC 60947-2 at 400 V |  | kA | 10      |
| Voltage type   |  |    | AC      |
| Frequency  |  | Hz | 50 - 60 |
| Current limiting class   |  |    | 3       |
| Suitable for flush-mounted installation                                    |  |    | No      |
| Concurrently switching N-neutral   |  |    | No      |
| Over voltage category  |  |    | 3       |
| Pollution degree   |  |    | 2       |

|   |                 |          |
|---|-----------------|----------|
| Additional equipment possible                   |                 | Yes      |
| Width in number of modular spacings             |                 | 2        |
| Built-in depth                                  | mm              | 70.5     |
| 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   |

## Approvals

|                                  |  |  |
|----------------------------------|--|--|
| Product Standards                |  | IEC/EN 60947-2; IEC/EN 60898; UL 1077; CSA-C22.2 No. 235; CE marking |
| UL File No.                      |  | E177451  |
| UL Category Control No.          |  | QVNU2, QVNU8   |
| CSA File No.                     |  | 204453   |
| CSA Class No.                    |  | 3215-30  |
| North America Certification      |  | UL recognized, CSA certified   |
| Conditions of Acceptability      |  | Supplementary Protector only   |
| Suitable for                     |  | Branch Circuits; not as BCPD   |
| Current Limiting Circuit-Breaker |  | No   |
| Max. Voltage Rating              |  | 480Y/277 VAC; 96 VDC   |
| Degree of Protection             |  | IEC: IP20; UL/CSA Type: -  |

# Characteristics



Let-through energy  $i^2t$   
According to IEC/EN 60898





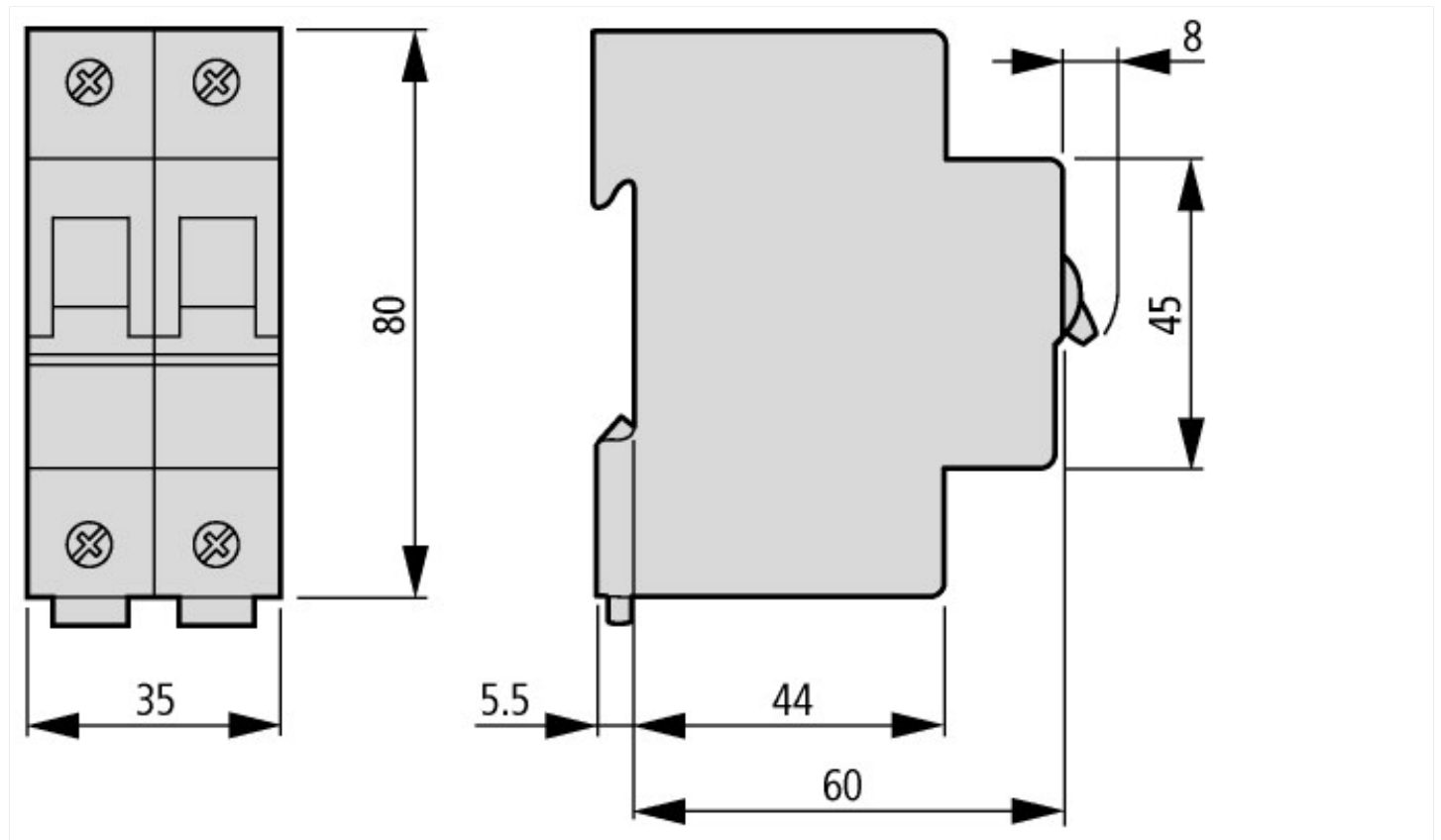




Tripping characteristic at 30 °C:  
 Z according to IEC/EN 60947



## Dimensions



## Additional product information (links)

|                                     |   |
|-------------------------------------|---|
| <b>AWA1220-1755 Circuit-breaker</b> |   |
| AWA1220-1755 Circuit-breaker        | <a href="https://es-assets.eaton.com/DOCUMENTATION/AWA_INSTRUCTIONS/17550701.pdf">https://es-assets.eaton.com/DOCUMENTATION/AWA_INSTRUCTIONS/17550701.pdf</a>   |
| Temperature dependency, derating    | <a href="https://www.eaton.com/content/dam/eaton/technicaldocumentation/technical-data-tables/Derating table FAZ.pdf">https://www.eaton.com/content/dam/eaton/technicaldocumentation/technical-data-tables/Derating table FAZ.pdf</a> |