



Miniature circuit breaker (MCB), 20 A, 1p, characteristic: D

Part no. FAZ-D20/1
Catalog No. 278585
Alternate Catalog No. FAZ-D20/1
EL-Nummer (Norway) 1695217

Similar to illustration

Delivery program

| | | | |
|---|----------|----|--|
| Basic function | | | Miniature circuit-breakers |
| Number of poles | | | 1 pole |
| Tripping characteristic | | | D |
| Application | | | Switchgear for industrial and advanced commercial applications |
| Rated current | I_n | A | 20 |
| Rated switching capacity acc. to IEC/EN 60947-2 | I_{cu} | kA | 15 |
| Product range | | | FAZ |

Technical data

Electrical

| | | | |
|---|------------|---------|--------------------------------|
| Standards | | | IEC/EN 60947-2 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 | 15 |
| 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 ² | |
| | | mm ² | 1 x 25 |
| | | mm ² | 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 | 20 |
| Heat dissipation per pole, current-dependent | P_{vid} | W | 0 |

| | | | |
|--|------------|----|--|
| Equipment heat dissipation, current-dependent | P_{vid} | W | 2 |
| Static heat dissipation, non-current-dependent | P_{vs} | W | 0 |
| Heat dissipation capacity | P_{diss} | 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)
(ecl@ss10.0.1-27-14-19-01 [AAB905014])

| | | |
|---|----|---------|
| Release characteristic | | D |
| Number of poles (total) | | 1 |
| Number of protected poles | | 1 |
| Rated current | A | 20 |
| Rated voltage | V | 230 |
| Rated insulation voltage U_i | V | 440 |
| Rated impulse withstand voltage U_{imp} | kV | 4 |
| Rated short-circuit breaking capacity I_{cn} EN 60898 at 230 V | kA | 10 |
| Rated short-circuit breaking capacity I_{cn} EN 60898 at 400 V | kA | 10 |
| Rated short-circuit breaking capacity I_{cu} IEC 60947-2 at 230 V | kA | 15 |
| Rated short-circuit breaking capacity I_{cu} IEC 60947-2 at 400 V | kA | 15 |
| 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 | | 1 |
| 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 ² | 1 - 25 |
| Connectable conductor cross section solid-core | mm ² | 1 - 25 |

Approvals

| | | |
|----------------------------------|--|---|
| Product Standards | | IEC/EN 60947-2; IEC/EN 60898; EN 45545-2; IEC 61373; 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 | | 277 VAC; 48 VDC |
| Degree of Protection | | IEC: IP20; UL/CSA Type: - |

Characteristics



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





Let-through current i_p
According to IEC/EN 60898





Tripping characteristic at 30 °C:
 B, C, D to IEC/EN 60898

Dimensions



Additional product information (links)

Temperature dependency, derating

[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%20table%20FAZ.pdf)