



## Miniature circuit breaker (MCB), 20A, 1p, B-Char, AC

Part no. **FAZT-B20/1**  
 Catalog No. **240796**  
 Eaton Catalog No. **FAZT-B20/1**

Similar to illustration

## Technical data

### Electrical

|                                                                                                     |            |      |                |
|-----------------------------------------------------------------------------------------------------|------------|------|----------------|
| Standards                                                                                           |            |      | IEC/EN 60947-2 |
| Rated voltage according to IEC/EN 60947-2                                                           | $U_n$      | V AC | 240            |
| Rated switching capacity acc. to IEC/EN 60947-2                                                     | $I_{cu}$   | kA   | 25             |
| Rated service short-circuit breaking capacity according to IEC/EN 60947-2                           | $I_{cs}$   |      | 12,5 kA        |
| Max operational voltage according to IEC/EN 60947-2                                                 |            | V AC | 254            |
| Rated switching capacity according to IEC/EN 60947-2 (max operational voltage)                      | $I_{cu}$   | kA   | 15             |
| Rated service short-circuit breaking capacity according to IEC/EN 60947-2 (max operational voltage) | $I_{cs}$   |      | 7,5 kA         |
| Max operational voltage DC according to IEC/EN 60947-2                                              |            | V DC | 60/pole        |
| Rated voltage according to IEC/EN 60898-1                                                           | $U_n$      | V AC | 240            |
| Rated switching capacity according to IEC/EN 60898-1                                                | $I_{cn}$   | kA   | 15             |
| Rated service short-circuit breaking capacity according to IEC/EN 60898-1                           | $I_{cs}$   |      | 7,5 kA         |
| Rated insulation voltage                                                                            | $U_i$      | V    | 440            |
| Rated frequency                                                                                     | f          | Hz   | 50/60          |
| Characteristic                                                                                      |            |      | B, C, D        |
| Direction of incoming supply                                                                        |            |      | as required    |
| lifespan                                                                                            |            |      |                |
| Electrical                                                                                          | Operations |      | ≥ 4000         |
| Mechanical                                                                                          | Operations |      | ≥ 10000        |

### Mechanical

|                                    |  |                 |                                                                       |
|------------------------------------|--|-----------------|-----------------------------------------------------------------------|
| Standard front dimension           |  | mm              | 45                                                                    |
| Enclosure height                   |  | mm              | 80                                                                    |
| Mounting width per pole            |  | mm              | 17.5                                                                  |
| Mounting                           |  |                 | Quick attachment with 3 latch positions for top-hat rail IEC/EN 60715 |
| Degree of Protection               |  |                 | IP20                                                                  |
| Terminals top and bottom           |  |                 | Twin-purpose terminals                                                |
| Terminal protection                |  |                 | Finger- and back-of-hand proof according to BGV A3 and ÖVE-EN 6       |
| Terminal capacities                |  | mm <sup>2</sup> | 1 - 25                                                                |
| Tightening torque of fixing screws |  | N/m             | max. 2.4                                                              |
| Thickness of busbar material       |  | mm              | 0.8 (except N 0.5 SU)                                                 |
| 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  | 3.2 |
| 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  |

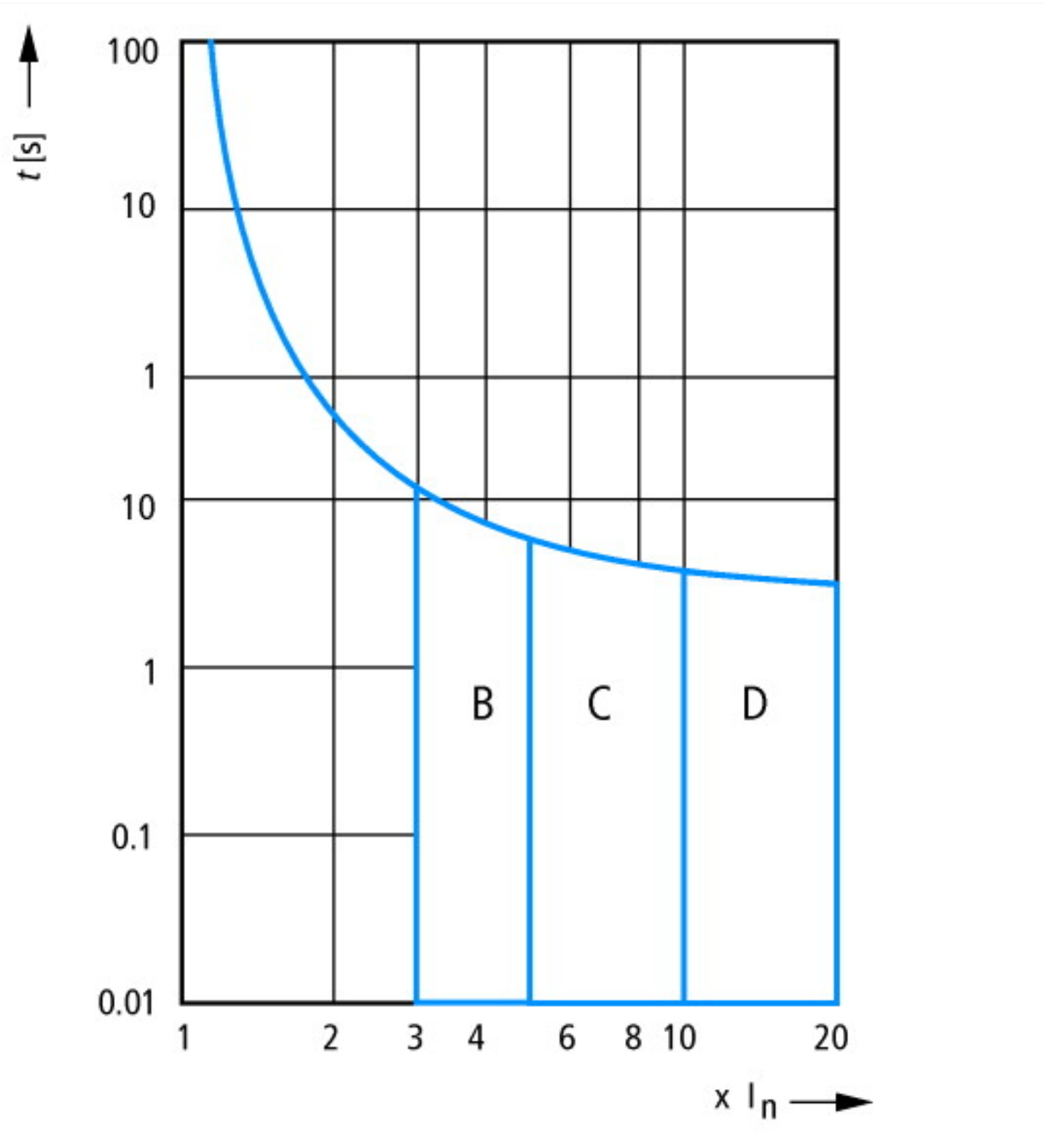
|                                                                                                                        |  |  |                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------|--|--|----------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                        |  |  | 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) (ec1@ss10.0.1-27-14-19-01 [AAB905014]) |  |    |          |
| Release characteristic                                                                                                                                                                                            |  |    | B        |
| Number of poles (total)                                                                                                                                                                                           |  |    | 1        |
| Number of protected poles                                                                                                                                                                                         |  |    | 1        |
| Rated current                                                                                                                                                                                                     |  | A  | 20       |
| Rated voltage                                                                                                                                                                                                     |  | V  | 240      |
| Rated insulation voltage Ui                                                                                                                                                                                       |  | V  | 440      |
| Rated impulse withstand voltage Uimp                                                                                                                                                                              |  | kV | 4        |
| Rated short-circuit breaking capacity Icn EN 60898 at 230 V                                                                                                                                                       |  | kA | 15       |
| Rated short-circuit breaking capacity Icn EN 60898 at 400 V                                                                                                                                                       |  | kA | 15       |
| Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V                                                                                                                                                    |  | kA | 20       |
| Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V                                                                                                                                                    |  | kA | 20       |
| 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 <sup>2</sup> | 1 - 25 |
| Connectable conductor cross section solid-core  | mm <sup>2</sup> | 1 - 25 |

**Characteristics**



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

## Dimensions

