



Miniature circuit breaker (MCB), 20A, 2p, C-Char

Part no. **AZ-2-C20**  
 Catalog No. **211770**  
 Alternate Catalog No. **AZ-2-C20**

Similar to illustration

**Delivery program**

|   |          |    |  |
|---|----------|----|--|
| Basic function                                  |          |    | Miniature circuit-breakers                                     |
| Number of poles                                 |          |    | 2 pole   |
| Tripping characteristic                         |          |    | C  |
| 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 | 25   |
| Product range                                   |          |    | AZ   |

**Technical data**

**Electrical**

|   |          |            |                        |
|---|----------|------------|------------------------|
| Standards                                       |          |            | IEC/EN 60947-2         |
| Rated operational voltage                       | $U_e$    | V          |                        |
|   | $U_e$    | V AC       | 230/400                |
|   | $U_e$    | V DC       | 60 (per pole)          |
| Rated switching capacity acc. to IEC/EN 60947-2 | $I_{cu}$ | kA         | 25                     |
| Operational switching capacity                  |          | kA         | 20                     |
| Characteristic                                  |          |            | Similar: D, C          |
| Max. back-up fuse                               |          | A gL/gG    | 200                    |
| Selectivity Class                               |          |            | Compliant with Class 3 |
| lifespan  |          |            |                        |
|   | Lifespan | Operations | > 10000                |
| Direction of incoming supply                    |          |            | as required            |

**Mechanical**

|                          |  |                 |   |
|--------------------------|--|-----------------|---|
| Standard front dimension |  | mm              | 45                                      |
| Enclosure height         |  | mm              | 90                                      |
| Mounting width per pole  |  | mm              | 27                                      |
| Mounting                 |  |                 | IEC/EN 60715 top-hat rail               |
| Degree of Protection     |  |                 | IP20, IP40 (when fitted)                |
| Terminals top and bottom |  |                 | Lift terminals                          |
| Terminal protection      |  |                 | Finger and back-of-hand proof to BGV A2 |
| Terminal capacities      |  | mm <sup>2</sup> |   |
|                          |  | mm <sup>2</sup> | 2.5 ... 50                              |

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

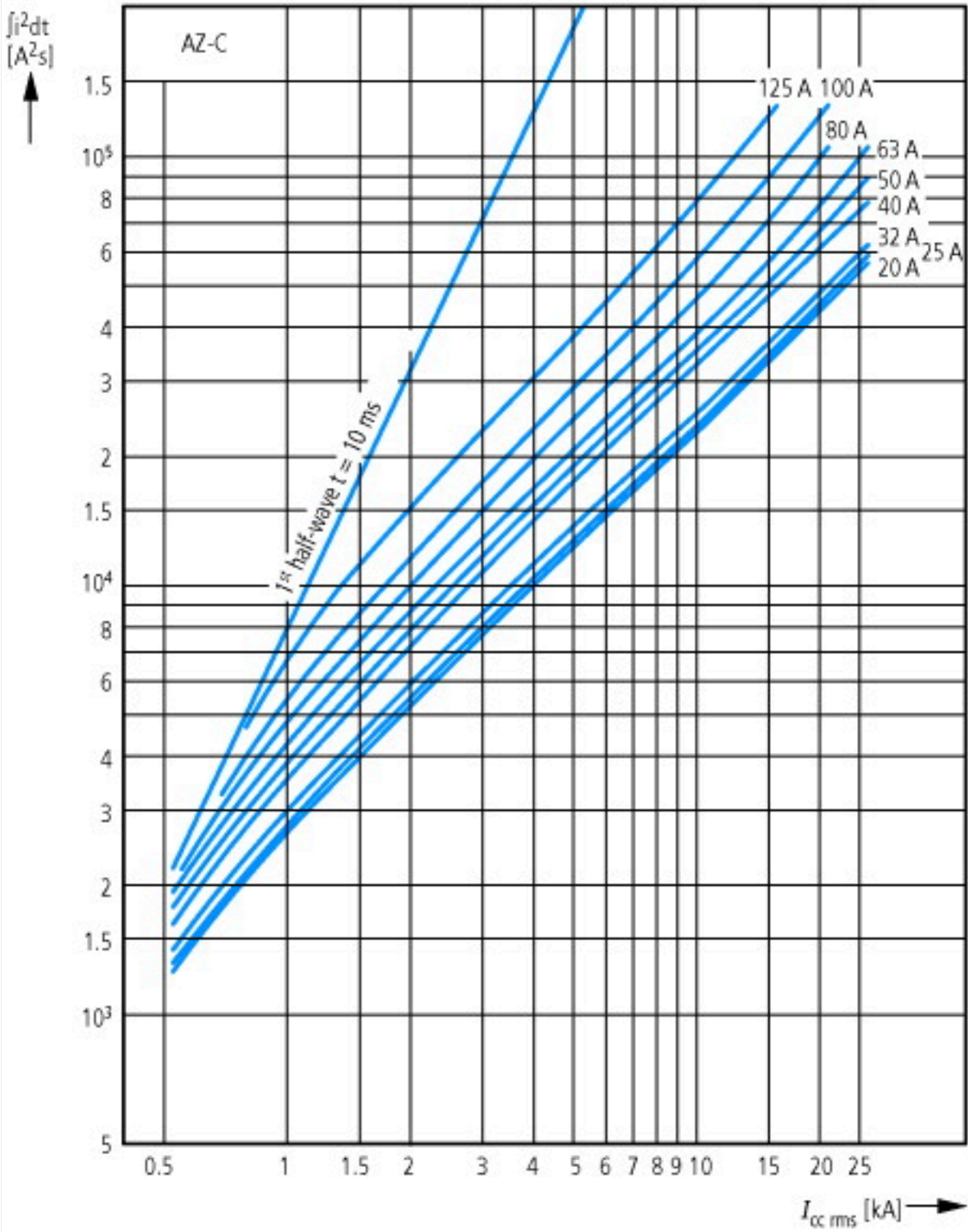
|  |            |    |   |
|--|------------|----|---|
| Technical data for design verification                   |            |    |   |
| Rated operational current for specified heat dissipation | $I_n$      | A  | 20  |
| Heat dissipation per pole, current-dependent             | $P_{vid}$  | W  | 0   |
| Equipment heat dissipation, current-dependent            | $P_{vid}$  | W  | 5.42  |
| Static heat dissipation, non-current-dependent           | $P_{vs}$   | W  | 0   |
| Heat dissipation capacity                                | $P_{diss}$ | W  | 0   |
| Operating ambient temperature min.                       |            | °C | -25   |
| Operating ambient temperature max.                       |            | °C | 55  |
|  |            |    | 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) (ec@ss10.0.1-27-14-19-01 [AAB905014]) |                 |          |
| Release characteristic   |                 | C        |
| Number of poles (total)  |                 | 2        |
| Number of protected poles  |                 | 2        |
| Rated current  | A               | 20       |
| Rated voltage  | V               | 400      |
| 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              | 0        |
| Rated short-circuit breaking capacity $I_{cn}$ EN 60898 at 400 V   | kA              | 0        |
| Rated short-circuit breaking capacity $I_{cu}$ IEC 60947-2 at 230 V  | kA              | 25       |
| Rated short-circuit breaking capacity $I_{cu}$ IEC 60947-2 at 400 V  | kA              | 25       |
| 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  |                 | 3        |
| Built-in depth   | mm              | 75       |
| Degree of protection (IP)  |                 | IP20     |
| Ambient temperature during operating   | °C              | -25 - 55 |
| Connectable conductor cross section multi-wired  | mm <sup>2</sup> | 2.5 - 50 |
| Connectable conductor cross section solid-core   | mm <sup>2</sup> | 2.5 - 50 |

# Characteristics



Let-through energy  $I^2t$





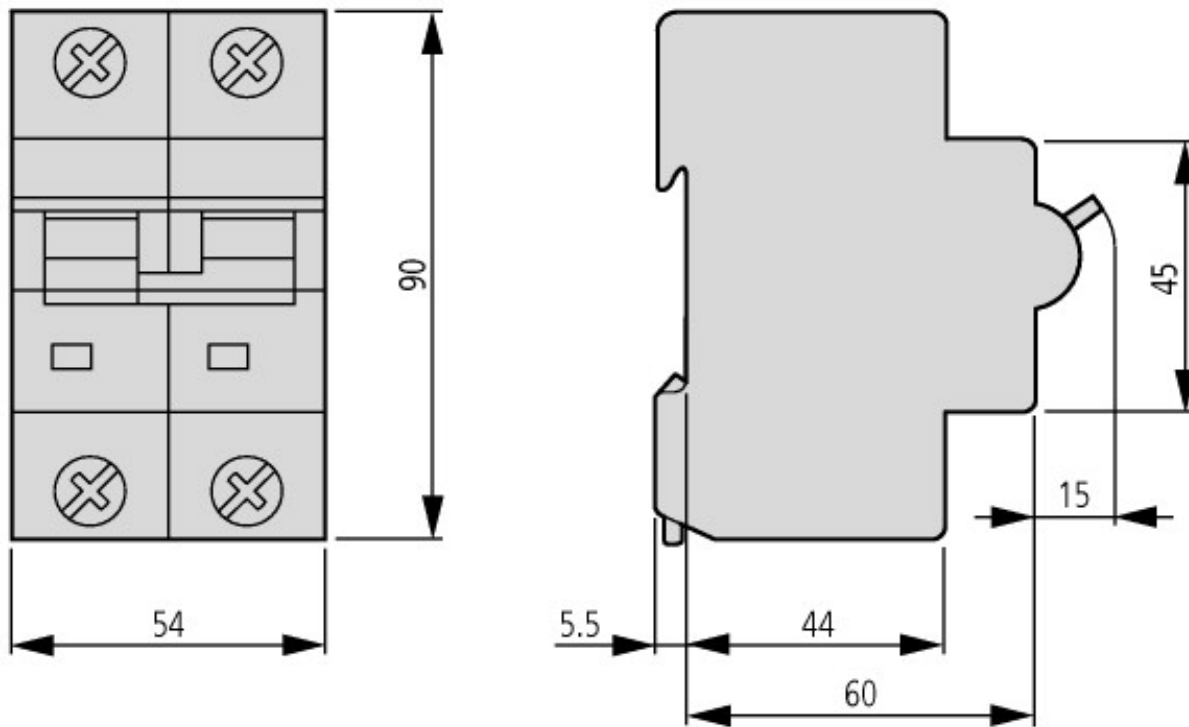
Let-through current  $i_D$





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

## Dimensions



## Additional product information (links)

### AWA1220-1755 Miniature circuit-breakers

AWA1220-1755 Miniature circuit-breakers

[https://es-assets.eaton.com/DOCUMENTATION/AWA\\_INSTRUCTIONS/17550701.pdf](https://es-assets.eaton.com/DOCUMENTATION/AWA_INSTRUCTIONS/17550701.pdf)