



## Miniature circuit breaker (MCB), 6 A, 1p, characteristic: Z



**Part no.** FAZ-Z6/1  
**Catalog No.** 278623  
**Alternate Catalog No.** FAZ-Z6/1  
**EL-Nummer (Norway)** 1695251

Similar to illustration

## Delivery program

|                                                 |          |    |                                                                |
|-------------------------------------------------|----------|----|----------------------------------------------------------------|
| Basic function                                  |          |    | Miniature circuit-breakers                                     |
| Number of poles                                 |          |    | 1 pole                                                         |
| Tripping characteristic                         |          |    | Z                                                              |
| Application                                     |          |    | Switchgear for industrial and advanced commercial applications |
| Rated current                                   | $I_n$    | A  | 6                                                              |
| 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       |                                |
|                                                 | $U_e$      | 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 | 6 |
| Heat dissipation per pole, current-dependent             | $P_{vid}$ | W | 0 |

|                                                                                                                        |                   |    |                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------|-------------------|----|----------------------------------------------------------------------------------------------------------------------------------|
| Equipment heat dissipation, current-dependent                                                                          | P <sub>vid</sub>  | W  | 2.8                                                                                                                              |
| 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

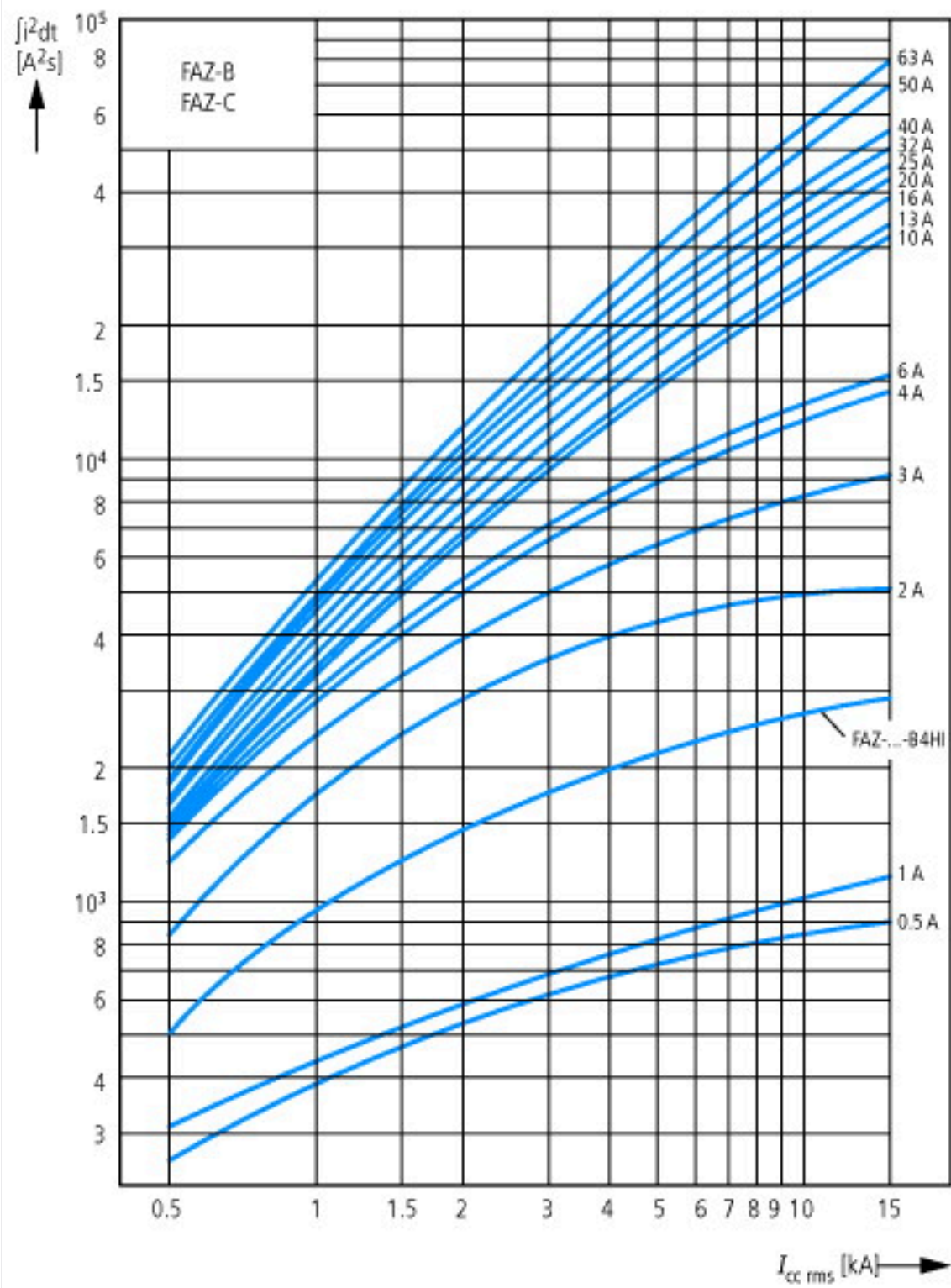
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|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----|---------|
| Circuit breakers 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) (ecI@ss10.0.1-27-14-19-01 [AAB905014]) |  |    |         |
| Release characteristic                                                                                                                                                                                            |  |    | Z       |
| Number of poles (total)                                                                                                                                                                                           |  |    | 1       |
| Number of protected poles                                                                                                                                                                                         |  |    | 1       |
| Rated current                                                                                                                                                                                                     |  | A  | 6       |
| Rated voltage                                                                                                                                                                                                     |  | V  | 230     |
| 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             |  |                 | 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   |

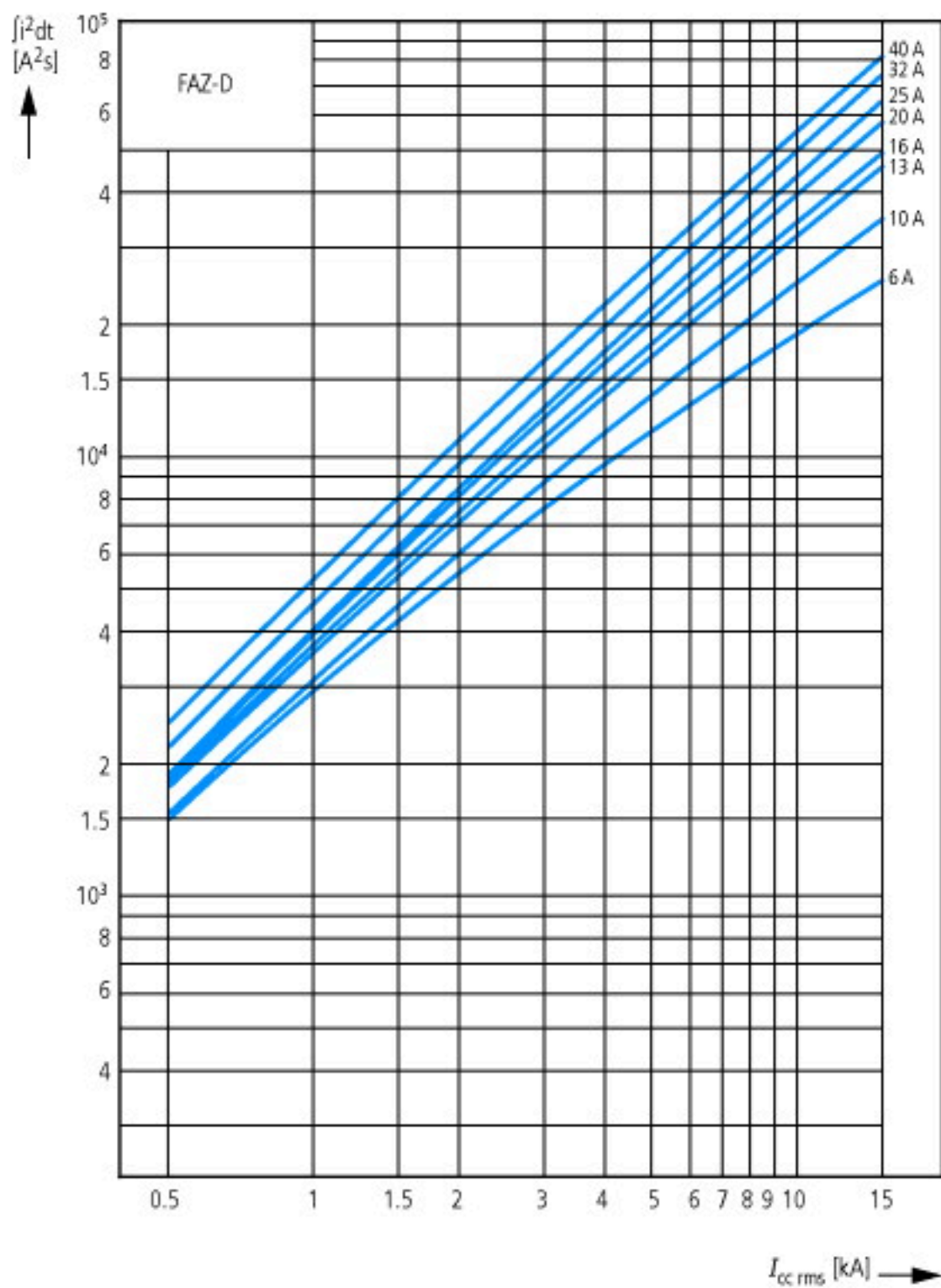
## Approvals

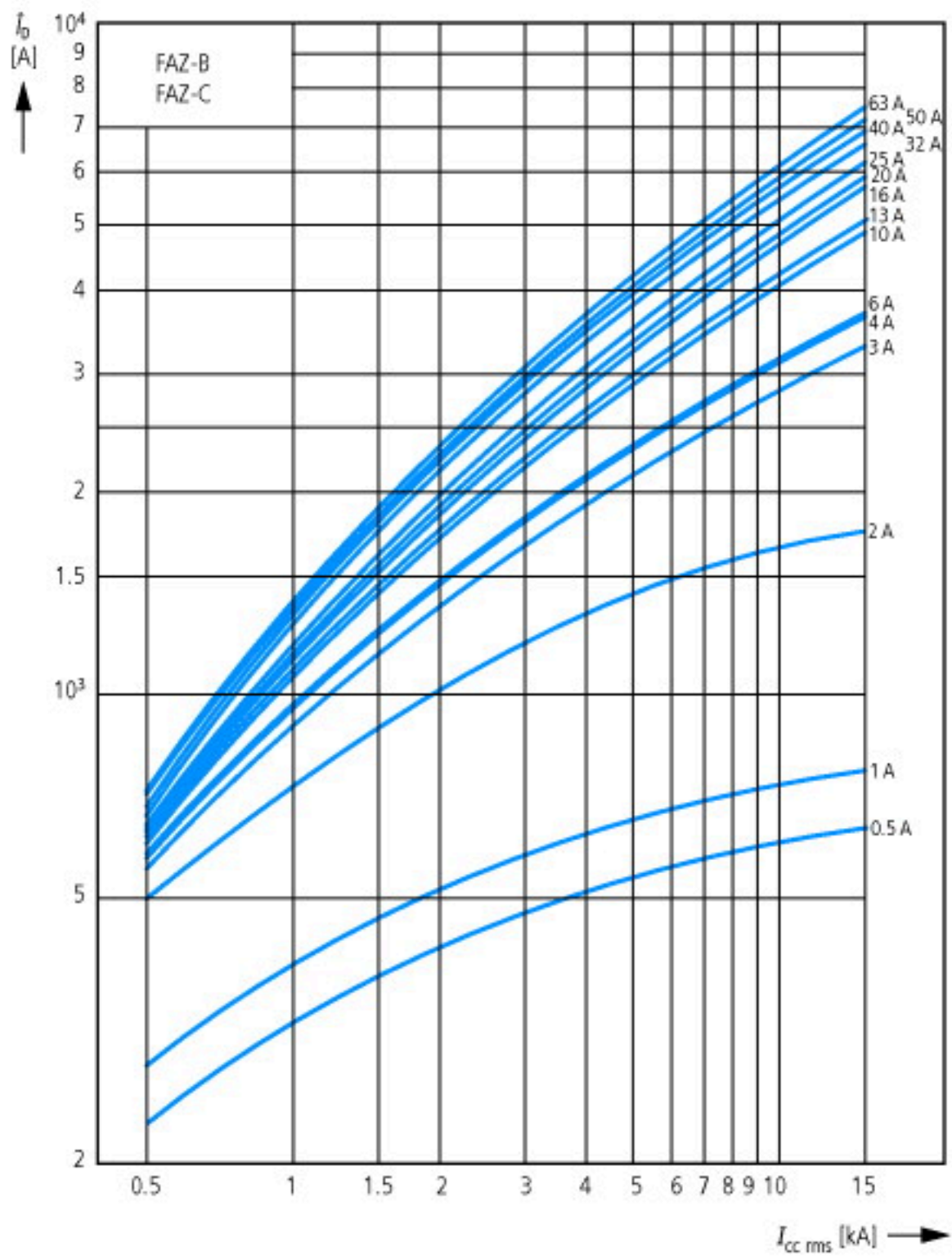
|                                  |  |  |                                                                                             |
|----------------------------------|--|--|---------------------------------------------------------------------------------------------|
| Product Standards                |  |  | 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

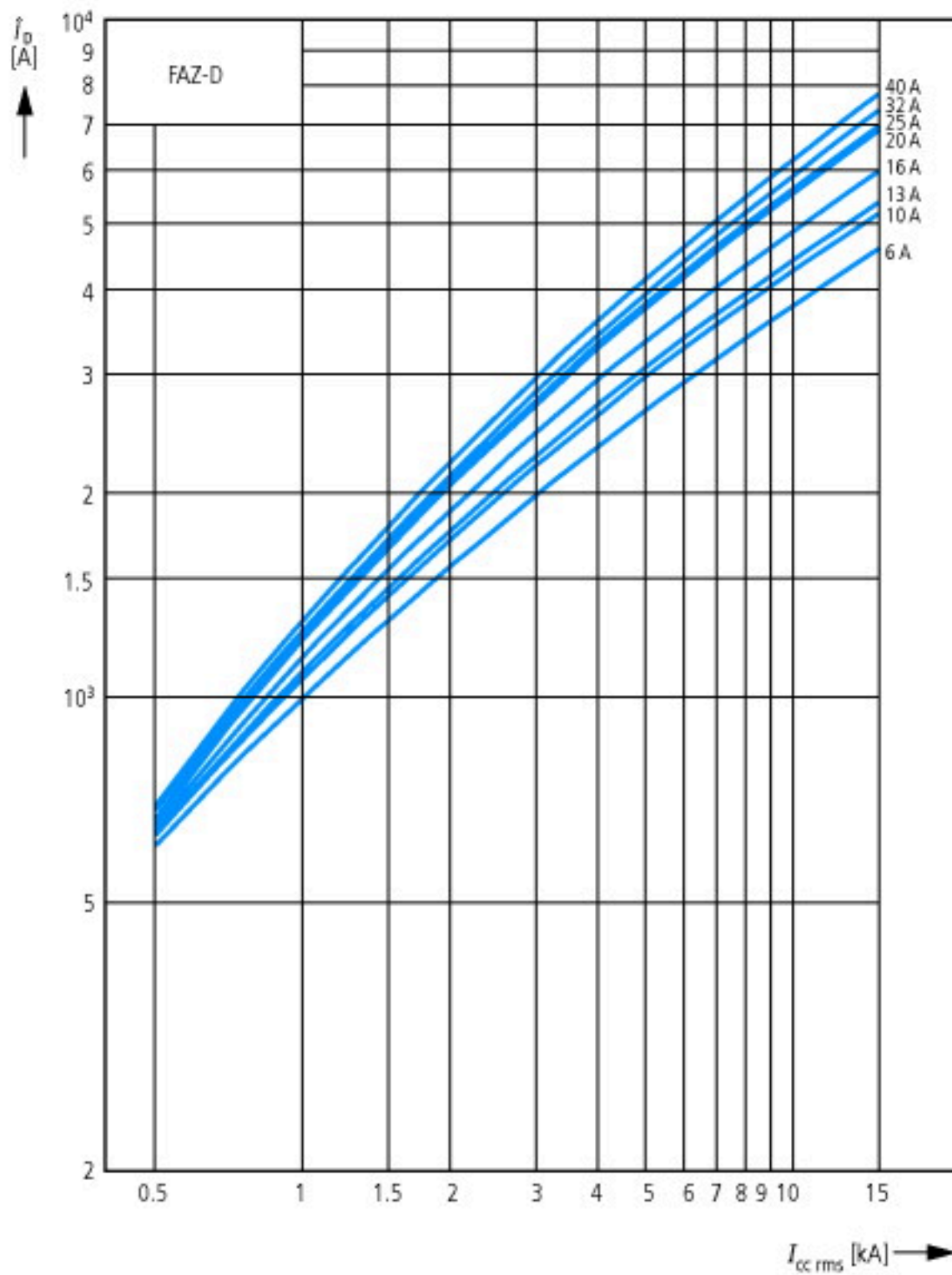


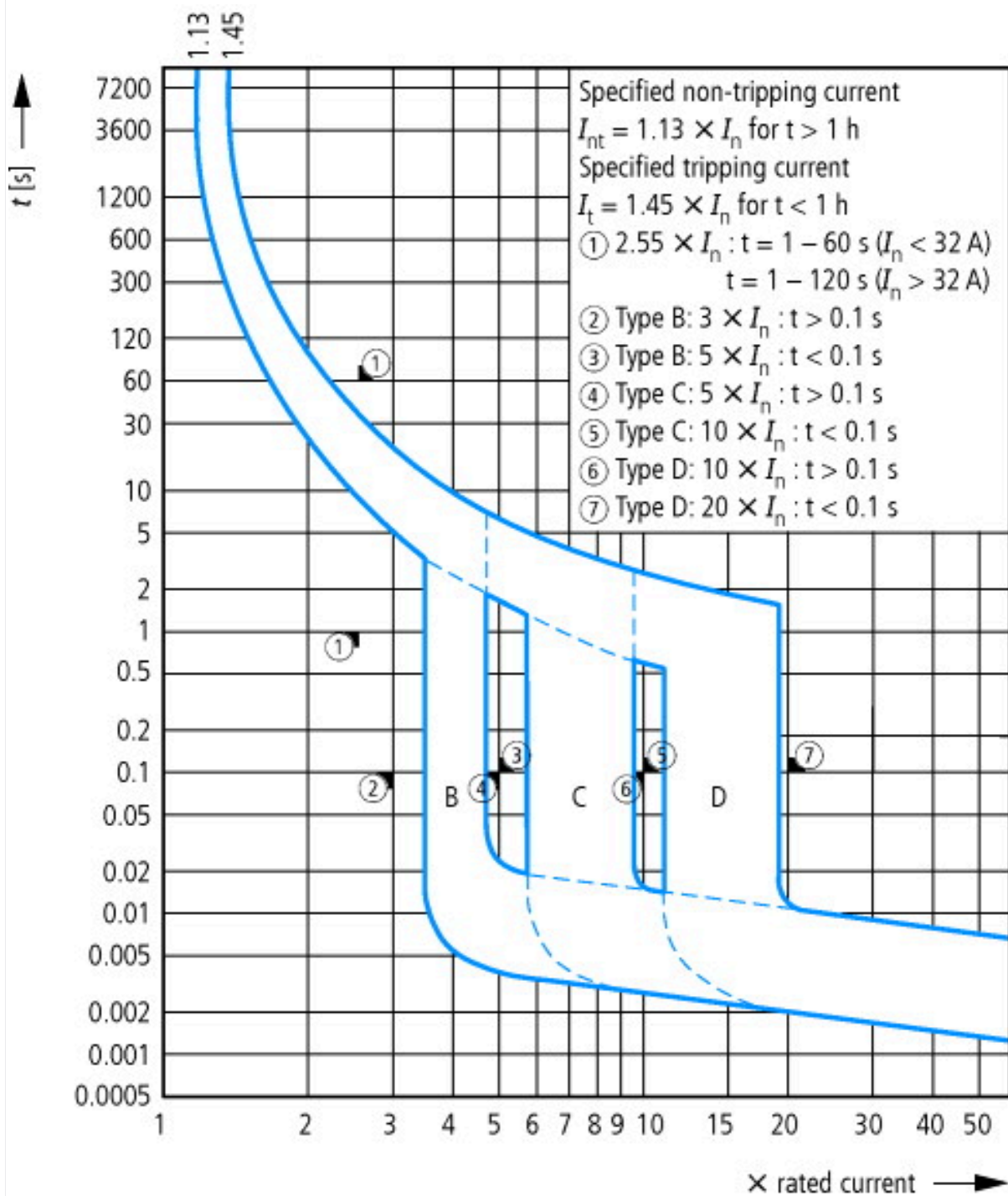
Let-through energy  $i^2t$   
According to IEC/EN 60898





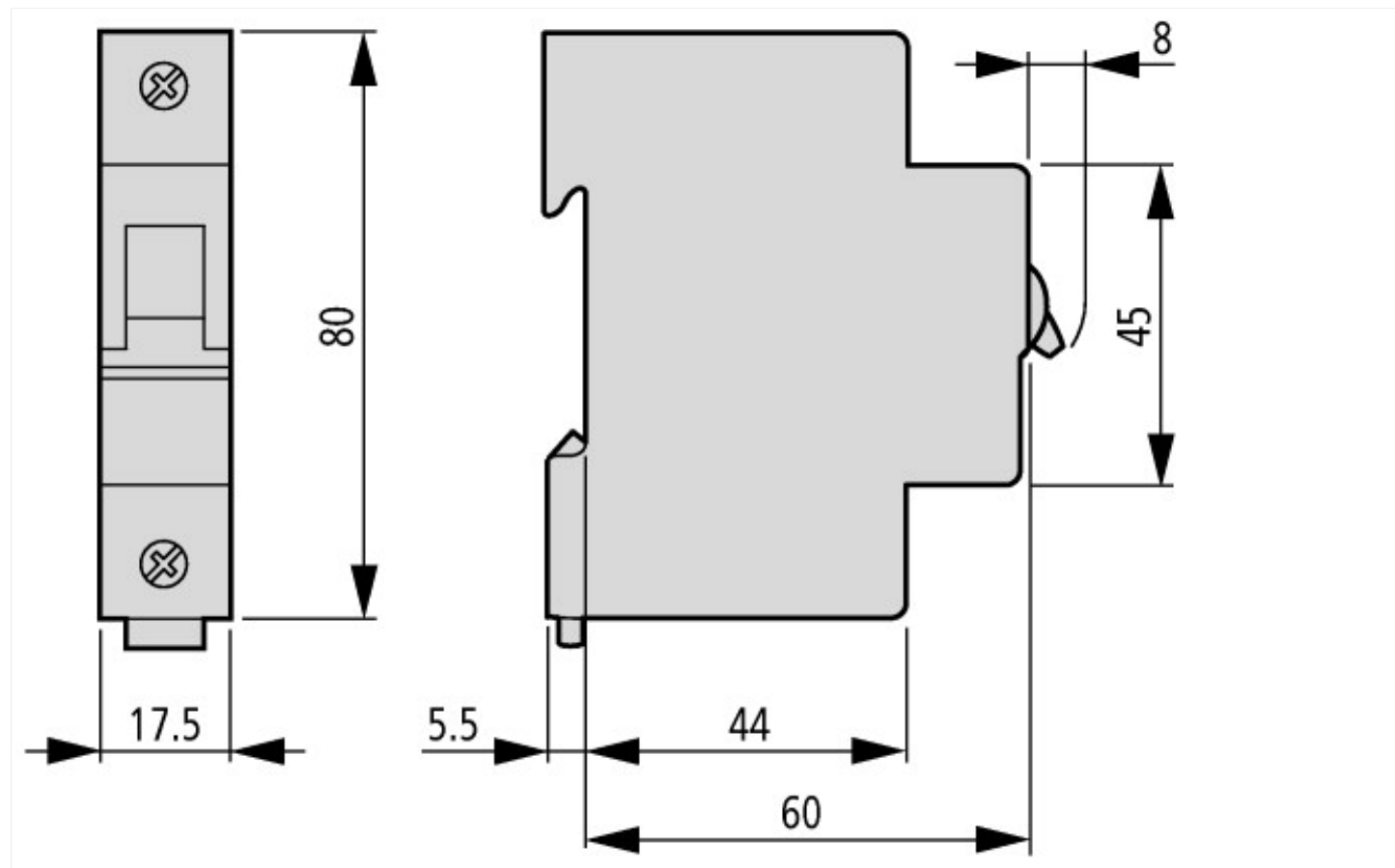
Let-through current  $i_p$   
According to IEC/EN 60898





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

## 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)