

# System pro M compact® Miniature Circuit Breaker S 200/S 200 M



2CDC021023S0012



2CDC021038S0012

The miniature circuit breakers of the System pro M compact® series S 200 and S 200 M provide state-of-the-art safety and comfort. They stand out due to their high performance and the wide range of accessories and approvals.

## Features

- Clear contact position indication in red/green ("real CPI")
- Unique, patented twin terminal with captive screws and an increased opening for cables up to max. 35 mm<sup>2</sup>, finger-proof (IP20)
- Busbar slot in the back for best visibility during installation
- High performance at an increased rated voltage for marine and industrial applications: 10 kA/15 kA at  $U_n = 440$  V AC acc. to IEC/EN 60947-2
- Individual product identification code
- Approved acc. to IEC/EN 60898-1, IEC/EN 60947-2 and UL 1077/CSA 22.2 No. 235 for global use

# Miniature Circuit Breaker S 200/S 200 M

## Technical data

|                                                                | S 200                                                                                                                                                                                | S 200 M                                                     |
|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
| General Data                                                   |                                                                                                                                                                                      |                                                             |
| Standards                                                      | IEC/EN 60898-1, IEC/EN 60947-2<br>UL 1077                                                                                                                                            | IEC/EN 60898-1, IEC/EN 60947-2<br>UL 1077, CSA 22.2 No. 235 |
| Poles                                                          | 1P, 2P, 3P, 4P, 1P+N, 3P+N                                                                                                                                                           |                                                             |
| Tripping Characteristics                                       | B, C, D, K, Z                                                                                                                                                                        |                                                             |
| Rated current I <sub>n</sub>                                   | 0.5 up to 63 A                                                                                                                                                                       |                                                             |
| Rated frequency                                                | 50/60 Hz                                                                                                                                                                             |                                                             |
| Rated insulation voltage U <sub>i</sub>                        | 250 V AC (phase to ground), 500 V AC (phase to phase)                                                                                                                                |                                                             |
| Overvoltage Category                                           | III                                                                                                                                                                                  |                                                             |
| Pollution Degree                                               | 3                                                                                                                                                                                    |                                                             |
| IEC/EN 60898-1                                                 |                                                                                                                                                                                      |                                                             |
| Rated operational voltage U <sub>n</sub>                       | 1P: 230/400 V AC; 1P+N: 230 V AC; 2P, 3P, 4P: 400 V AC; 3P+N: 400 V AC                                                                                                               |                                                             |
| Max. power frequency recovery voltage U <sub>max</sub>         | 1P: 253 V AC; 1P+N: 253 V AC; 2P, 3P, 4P: 440 V AC; 3P+N: 440 V AC;<br>1P: 72 V DC; 2P: 125 V DC                                                                                     |                                                             |
| Min. operating voltage                                         | 12 V AC, 12 V DC                                                                                                                                                                     |                                                             |
| Rated short-circuit capacity I <sub>cn</sub>                   | 6 kA                                                                                                                                                                                 | 10 kA                                                       |
| Energy limiting class (B, C up to 40 A)                        | 3                                                                                                                                                                                    |                                                             |
| Rated impulse withstand voltage U <sub>imp</sub> (1.2/50 μs)   | 4 kV (test voltage 6.2 kV at sea level, 5 kV at 2,000 m)                                                                                                                             |                                                             |
| Dielectric test voltage                                        | 2.0 kV (50/60 Hz, 1 min)                                                                                                                                                             |                                                             |
| Reference temperature for tripping characteristics             | B, C, D: 30 °C                                                                                                                                                                       |                                                             |
| Electrical endurance                                           | I <sub>n</sub> < 32 A: 20,000 ops. (AC), 1,000 ops. (DC); one cycle 2 s - ON, 13 s - OFF<br>I <sub>n</sub> ≥ 32 A: 10,000 ops. (AC), 1,000 ops. (DC); one cycle 2 s - ON, 28 s - OFF |                                                             |
| IEC/EN 60947-2                                                 |                                                                                                                                                                                      |                                                             |
| Rated operational voltage U <sub>e</sub>                       | 1P: 230 V AC; 1P+N: 230 V AC; 2P, 3P, 4P: 440 V AC; 3P+N: 440 V AC                                                                                                                   |                                                             |
| Max. power frequency recovery voltage U <sub>max</sub>         | 1P: 253 V AC; 1P+N: 253 V AC; 2P, 3P,4P: 462 V AC; 3P+N: 462 V AC;<br>1P: 72 V DC; 2P: 125 V DC                                                                                      |                                                             |
| Min. operating voltage                                         | 12 V AC, 12 V DC                                                                                                                                                                     |                                                             |
| Rated ultimate short-circuit breaking capacity I <sub>cu</sub> | 10 kA                                                                                                                                                                                | 15 kA                                                       |
| Rated service short-circuit breaking capacity I <sub>cs</sub>  | 7.5 kA                                                                                                                                                                               | ≤ 40 A: 11.25 kA<br>50, 63 A: 7.5 kA                        |
| Rated impulse withstand voltage U <sub>imp</sub> (1.2/50 μs)   | 4 kV (test voltage 6.2 kV at sea level, 5 kV at 2,000 m)                                                                                                                             |                                                             |
| Dielectric test voltage                                        | 2.0 kV (50/60 Hz, 1 min)                                                                                                                                                             |                                                             |
| Reference temperature for tripping characteristics             | B, C, D: 55 °C; K, Z: 20 °C                                                                                                                                                          |                                                             |
| Electrical endurance                                           | I <sub>n</sub> < 32 A: 20,000 ops. (AC), 1,000 ops. (DC); one cycle 2 s - ON, 13 s - OFF<br>I <sub>n</sub> ≥ 32 A: 10,000 ops. (AC), 1,000 ops. (DC); one cycle 2 s - ON, 28 s - OFF |                                                             |
| UL/CSA                                                         |                                                                                                                                                                                      |                                                             |
| Rated voltage                                                  | 1P: 277 V AC, 60 V DC<br>2...4P: 480 Y/277 V AC, 110 V DC                                                                                                                            | 1P: 277 V AC, 60 V DC<br>2...4P: 480 Y/277 V AC, 125 V DC   |
| Rated interrupting capacity                                    | 6 kA (AC), 10 kA (DC)                                                                                                                                                                |                                                             |
| Application                                                    | Suppl. prot. for general use. Application Codes: TC2, OL0, SC: U1                                                                                                                    |                                                             |
| Reference temperature for tripping characteristic              | B, C, D, K, Z: 25 °C                                                                                                                                                                 |                                                             |
| Electrical endurance                                           | 6,000 ops. (AC), 6,000 ops. (DC); one cycle 1 s - ON, 9 s - OFF                                                                                                                      |                                                             |
| Mechanical data                                                |                                                                                                                                                                                      |                                                             |
| Housing                                                        | Insulation group II, RAL 7035                                                                                                                                                        | Insulation group I, RAL 7035                                |
| Toggle                                                         | Insulation group II, black, sealable                                                                                                                                                 |                                                             |
| Contact position indication                                    | Marking on toggle (I ON/O OFF), Real CPI (red ON/green OFF)                                                                                                                          |                                                             |
| Protection degree acc. to EN 60529                             | IP20 <sup>1)</sup> , IP40 in enclosure with cover                                                                                                                                    |                                                             |
| Mechanical endurance                                           | 20,000 ops.                                                                                                                                                                          |                                                             |
| Shock resistance acc. to IEC/EN 60068-2-27                     | 25 g, 2 shocks, 13 ms                                                                                                                                                                |                                                             |
| Vibration resistance acc. to IEC/EN 60068-2-6                  | 5 g, 20 cycles at 5...150...5 Hz with load 0.8 I <sub>n</sub>                                                                                                                        |                                                             |
| Environmental conditions acc. to IEC/EN 60068-2-30             | 28 cycles with 55 °C/90-96 % and 25 °C/95-100 %                                                                                                                                      |                                                             |
| Ambient temperature                                            | -25 ... +55 °C                                                                                                                                                                       |                                                             |
| Storage temperature                                            | -40 ... +70 °C                                                                                                                                                                       |                                                             |

<sup>1)</sup> Also fulfilling the requirements acc. to the protection degree IPXXB

# Miniature Circuit Breaker S 200/S 200 M

## Technical data and tripping characteristics

|                                          | S 200                                                                                     | S 200 M |
|------------------------------------------|-------------------------------------------------------------------------------------------|---------|
| Installation                             |                                                                                           |         |
| Terminal                                 | Failsafe bi-directional cylinder-lift terminal                                            |         |
| Cross-section of conductors (top/bottom) | solid, stranded: 35 mm² / 35 mm²<br>flexible: 25 mm² / 25 mm²<br>14 – 4 AWG <sup>1)</sup> |         |
| Cross-section of busbars (top/bottom)    | 10 mm² / 10 mm²<br>14 – 8 AWG <sup>2)</sup>                                               |         |
| Torque                                   | 2.8 Nm<br>18 in.-lbs.                                                                     |         |
| Screwdriver                              | No. 2 Pozidrive                                                                           |         |
| Mounting                                 | On DIN rail 35 mm acc. to EN 60715 by fast clip                                           |         |
| Mounting position                        | any                                                                                       |         |
| Supply                                   | optional                                                                                  |         |
| Dimensions and weight                    |                                                                                           |         |
| Mounting dimensions acc. to DIN 43880    | Mounting dimension 1                                                                      |         |
| Pole dimensions (H x D x W)              | 88 x 69 x 17.5                                                                            |         |
| Pole weight                              | approx. 115 g                                                                             |         |
| Combination with auxiliary elements      |                                                                                           |         |
| Auxiliary contact                        | Yes                                                                                       |         |
| Signal/auxiliary contact                 | Yes                                                                                       |         |
| Shunt trip                               | Yes                                                                                       |         |
| Undervoltage release                     | Yes                                                                                       |         |
| Motor Operating Device                   | Yes                                                                                       |         |

<sup>1)</sup> AWG 18 – 4 acc. to UL 486A – 486B    <sup>2)</sup> AWG 18 – 8 acc. to UL 486A – 486B

## Tripping characteristics

| Acc. to        | Tripping characteristics | Rated current<br>$I_n$ | Thermal release <sup>3)</sup>                                 |                                              |                                         | Electromagnetic release <sup>4)</sup> |                                                                                                                     |  |
|----------------|--------------------------|------------------------|---------------------------------------------------------------|----------------------------------------------|-----------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------------------------------------|--|
|                |                          |                        | Currents:<br>conventional<br>non-tripping<br>current<br>$I_1$ | conventional<br>tripping<br>current<br>$I_2$ | Tripping<br>time                        | Range of<br>instantaneous<br>tripping | Tripping time                                                                                                       |  |
| IEC/EN 60898-1 | B                        | 6 to 63 A              | $1.13 \cdot I_n$                                              | $1.45 \cdot I_n$                             | $> 1 \text{ h}$<br>$< 1 \text{ h}^{5)}$ | $3 \cdot I_n$<br>$5 \cdot I_n$        | $0.1 \dots 45 \text{ s} (I_n \leq 32 \text{ A}) / 0.1 \dots 90 \text{ s} (I_n > 32 \text{ A})$<br>$< 0.1 \text{ s}$ |  |
|                | C                        | 0.5 to 63 A            | $1.13 \cdot I_n$                                              | $1.45 \cdot I_n$                             | $> 1 \text{ h}$<br>$< 1 \text{ h}^{5)}$ | $5 \cdot I_n$<br>$10 \cdot I_n$       | $0.1 \dots 15 \text{ s} (I_n \leq 32 \text{ A}) / 0.1 \dots 30 \text{ s} (I_n > 32 \text{ A})$<br>$< 0.1 \text{ s}$ |  |
|                | D                        | 0.5 to 63 A            | $1.13 \cdot I_n$                                              | $1.45 \cdot I_n$                             | $> 1 \text{ h}$<br>$< 1 \text{ h}^{5)}$ | $10 \cdot I_n$<br>$20 \cdot I_n$      | $0.1 \dots 4 \text{ s} (I_n \leq 32 \text{ A}) / 0.1 \dots 8 \text{ s} (I_n > 32 \text{ A})$<br>$< 0.1 \text{ s}$   |  |
| IEC/EN 60947-2 | K                        | 0.5 to 63 A            | $1.05 \cdot I_n$                                              | $1.2 \cdot I_n$                              | $> 1 \text{ h}$<br>$< 1 \text{ h}^{5)}$ | $10 \cdot I_n$<br>$14 \cdot I_n$      | $> 0.2 \text{ s}$<br>$< 0.2 \text{ s}$                                                                              |  |
|                | Z                        | 0.5 to 63 A            | $1.05 \cdot I_n$                                              | $1.2 \cdot I_n$                              | $> 1 \text{ h}$<br>$< 1 \text{ h}^{5)}$ | $2 \cdot I_n$<br>$3 \cdot I_n$        | $> 0.2 \text{ s}$<br>$< 0.2 \text{ s}$                                                                              |  |

<sup>3)</sup> The thermal releases are calibrated to a nominal reference ambient temperature; for B, C, D the reference value is 30 °C, for K and Z the reference value is 20 °C. In the case of higher ambient temperatures, the current values fall by approx. 6 % for each 10 K temperature rise.

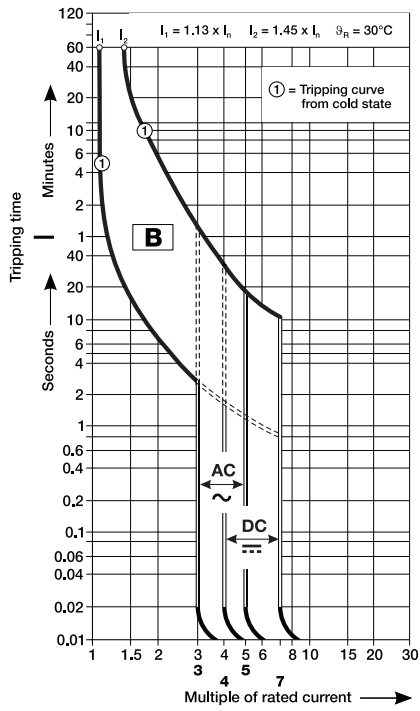
<sup>4)</sup> The indicated tripping values of electromagnetic tripping devices apply to a frequency of 50/60 Hz. The thermal release operates independent of frequency.

<sup>5)</sup> As from operating temperature (after  $I_1 > 1 \text{ h}$ )

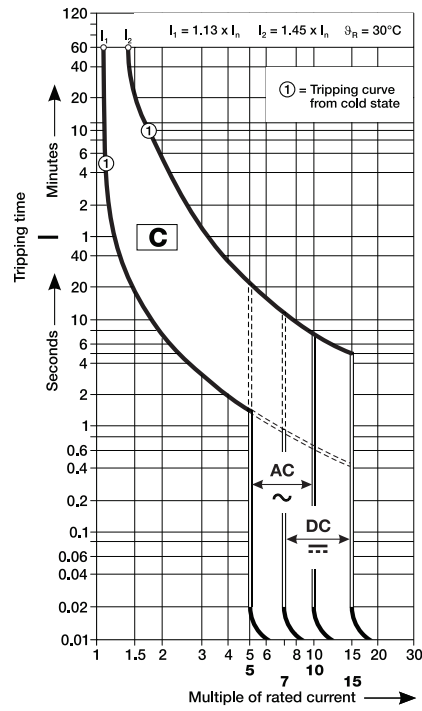
# Miniature Circuit Breaker S 200/S 200 M

## Tripping characteristics

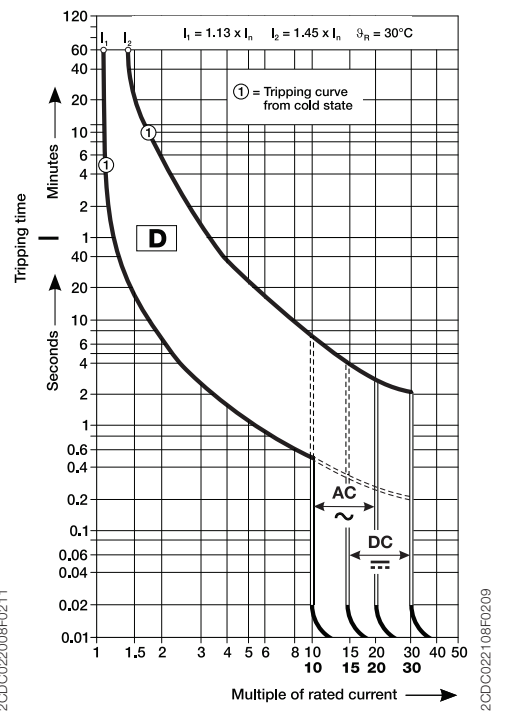
**B characteristic**



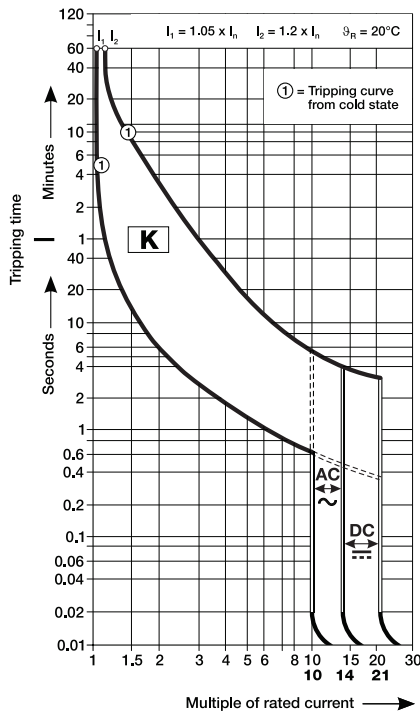
**C characteristic**



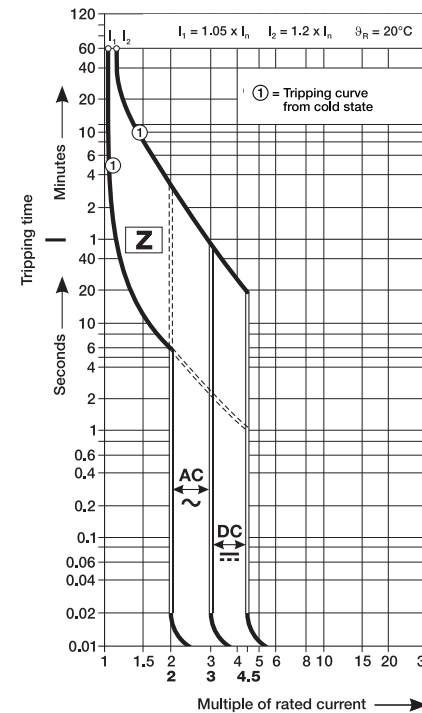
**D characteristic**



**K characteristic**



**Z characteristic**



# Miniature Circuit Breaker S 200/S 200 M

## Derating

### Deviating ambient temperature

For installations of miniature circuit breakers at other temperatures than the reference value derating factors have to be considered.

The rated value of the current of a miniature circuit breaker refers to a reference ambient temperature of 30 °C for circuit

breakers with the characteristics B, C and D and 20 °C for circuit breakers with the characteristics K and Z. The following table contains the derating of the load capability at ambient temperatures from -40 °C to 70 °C for the characteristics B, C, D, K and Z.

| Tripping characteristics | Rated current $I_n$<br>A | Maximum operating current at ambient temperature T |         |         |         |      |       |       |       |       |       |       |       |
|--------------------------|--------------------------|----------------------------------------------------|---------|---------|---------|------|-------|-------|-------|-------|-------|-------|-------|
|                          |                          | - 40 °C                                            | - 30 °C | - 20 °C | - 10 °C | 0 °C | 10 °C | 20 °C | 30 °C | 40 °C | 50 °C | 60 °C | 70 °C |
| B, C, D                  | 0.5                      | 0.67                                               | 0.65    | 0.62    | 0.60    | 0.58 | 0.55  | 0.53  | 0.50  | 0.47  | 0.44  | 0.41  | 0.37  |
|                          | 1.0                      | 1.33                                               | 1.29    | 1.25    | 1.20    | 1.15 | 1.11  | 1.05  | 1.00  | 0.94  | 0.88  | 0.82  | 0.75  |
|                          | 1.6                      | 2.13                                               | 2.07    | 2.00    | 1.92    | 1.85 | 1.77  | 1.69  | 1.60  | 1.51  | 1.41  | 1.31  | 1.19  |
|                          | 2.0                      | 2.67                                               | 2.58    | 2.49    | 2.40    | 2.31 | 2.21  | 2.11  | 2.00  | 1.89  | 1.76  | 1.63  | 1.49  |
|                          | 3.0                      | 4.0                                                | 3.9     | 3.7     | 3.6     | 3.5  | 3.3   | 3.2   | 3.0   | 2.8   | 2.6   | 2.4   | 2.2   |
|                          | 4.0                      | 5.3                                                | 5.2     | 5.0     | 4.8     | 4.6  | 4.4   | 4.2   | 4.0   | 3.8   | 3.5   | 3.3   | 3.0   |
|                          | 6.0                      | 8.0                                                | 7.7     | 7.5     | 7.2     | 6.9  | 6.6   | 6.3   | 6.0   | 5.7   | 5.3   | 4.9   | 4.5   |
|                          | 8.0                      | 10.7                                               | 10.3    | 10.0    | 9.6     | 9.2  | 8.8   | 8.4   | 8.0   | 7.5   | 7.1   | 6.5   | 6.0   |
|                          | 10.0                     | 13.3                                               | 12.9    | 12.5    | 12.0    | 11.5 | 11.1  | 10.5  | 10.0  | 9.4   | 8.8   | 8.2   | 7.5   |
|                          | 13.0                     | 17.3                                               | 16.8    | 16.2    | 15.6    | 15.0 | 14.4  | 13.7  | 13.0  | 12.3  | 11.5  | 10.6  | 9.7   |
|                          | 16.0                     | 21.3                                               | 20.7    | 20.0    | 19.2    | 18.5 | 17.7  | 16.9  | 16.0  | 15.1  | 14.1  | 13.1  | 11.9  |
|                          | 20.0                     | 26.7                                               | 25.8    | 24.9    | 24.0    | 23.1 | 22.1  | 21.1  | 20.0  | 18.9  | 17.6  | 16.3  | 14.9  |
|                          | 25.0                     | 33.3                                               | 32.3    | 31.2    | 30.0    | 28.9 | 27.6  | 26.4  | 25.0  | 23.6  | 22.0  | 20.4  | 18.6  |
|                          | 32.0                     | 42.7                                               | 41.3    | 39.9    | 38.5    | 37.0 | 35.4  | 33.7  | 32.0  | 30.2  | 28.2  | 26.1  | 23.9  |
|                          | 40.0                     | 53.3                                               | 51.6    | 49.9    | 48.1    | 46.2 | 44.2  | 42.2  | 40.0  | 37.7  | 35.3  | 32.7  | 29.8  |
| K, Z                     | 50.0                     | 66.7                                               | 64.5    | 62.4    | 60.1    | 57.7 | 55.3  | 52.7  | 50.0  | 47.1  | 44.1  | 40.8  | 37.3  |
|                          | 63.0                     | 84.0                                               | 81.3    | 78.6    | 75.7    | 72.7 | 69.6  | 66.4  | 63.0  | 59.4  | 55.6  | 51.4  | 47.0  |
|                          | 0.5                      | 0.66                                               | 0.64    | 0.61    | 0.59    | 0.56 | 0.53  | 0.50  | 0.47  | 0.43  | 0.40  | 0.35  | 0.31  |
|                          | 1.0                      | 1.32                                               | 1.27    | 1.22    | 1.17    | 1.12 | 1.06  | 1.00  | 0.94  | 0.87  | 0.79  | 0.71  | 0.61  |
|                          | 1.6                      | 2.12                                               | 2.04    | 1.96    | 1.88    | 1.79 | 1.70  | 1.60  | 1.50  | 1.39  | 1.26  | 1.13  | 0.98  |
|                          | 2.0                      | 2.65                                               | 2.55    | 2.45    | 2.35    | 2.24 | 2.12  | 2.00  | 1.87  | 1.73  | 1.58  | 1.41  | 1.22  |
|                          | 3.0                      | 4.0                                                | 3.8     | 3.7     | 3.5     | 3.4  | 3.2   | 3.0   | 2.8   | 2.6   | 2.4   | 2.1   | 1.8   |
|                          | 4.0                      | 5.3                                                | 5.1     | 4.9     | 4.7     | 4.5  | 4.2   | 4.0   | 3.7   | 3.5   | 3.2   | 2.8   | 2.4   |
|                          | 6.0                      | 7.9                                                | 7.6     | 7.3     | 7.0     | 6.7  | 6.4   | 6.0   | 5.6   | 5.2   | 4.7   | 4.2   | 3.7   |
|                          | 8.0                      | 10.8                                               | 10.2    | 9.8     | 9.4     | 8.9  | 8.5   | 8.0   | 7.5   | 6.9   | 6.3   | 5.7   | 4.9   |
|                          | 10.0                     | 13.2                                               | 12.7    | 12.2    | 11.7    | 11.2 | 10.6  | 10.0  | 9.4   | 8.7   | 7.9   | 7.1   | 6.1   |
|                          | 13.0                     | 17.2                                               | 16.6    | 15.9    | 15.2    | 14.5 | 13.8  | 13.0  | 12.2  | 11.3  | 10.3  | 9.2   | 8.0   |
|                          | 16.0                     | 21.2                                               | 20.4    | 19.6    | 18.8    | 17.9 | 17.0  | 16.0  | 15.0  | 13.9  | 12.6  | 11.3  | 9.8   |
|                          | 20.0                     | 26.5                                               | 25.5    | 24.5    | 23.5    | 22.4 | 21.2  | 20.0  | 18.7  | 17.3  | 15.8  | 14.1  | 12.2  |
|                          | 25.0                     | 33.1                                               | 31.9    | 30.6    | 29.3    | 28.0 | 26.5  | 25.0  | 23.4  | 21.7  | 19.8  | 17.7  | 15.3  |
|                          | 32.0                     | 42.3                                               | 40.8    | 39.2    | 37.5    | 35.8 | 33.9  | 32.0  | 29.9  | 27.7  | 25.3  | 22.6  | 19.6  |
|                          | 40.0                     | 52.9                                               | 51.0    | 49.0    | 46.9    | 44.7 | 42.4  | 40.0  | 37.4  | 34.6  | 31.6  | 28.3  | 24.5  |
|                          | 50.0                     | 66.1                                               | 63.7    | 61.2    | 58.6    | 55.9 | 53.0  | 50.0  | 46.8  | 43.3  | 39.5  | 35.4  | 30.6  |
|                          | 63.0                     | 83.3                                               | 80.3    | 77.2    | 73.9    | 70.4 | 66.8  | 63.0  | 58.9  | 54.6  | 49.8  | 44.5  | 38.6  |

### Influence of adjacent devices

If several miniature circuit breakers are installed directly side by side with high load on all poles, a correction factor has to be applied to the rated current (see table). If distance pieces are used, the factor is not to be considered.

| No. of adjacent devices | Factor F |
|-------------------------|----------|
| 1                       | 1        |
| 2, 3                    | 0.9      |
| 4, 5                    | 0.8      |
| ≥ 6                     | 0.75     |

### Example

Installation of 8 adjacent miniature circuit breakers S201-C16 at 40 °C ambient temperature

Rated current  $I_n = 16$  A

Max. operating current at 40 °C = 15.1 A (see table above)

Factor F = 0.75 (see left table)

$I_n = 15.1 \text{ A} \times 0.75 = 11.33 \text{ A}$

Result: The operating current can only add up to max. 11.33 A

# Miniature Circuit Breaker S 200/S 200 M

## Internal resistance and power loss

### Internal resistance and power loss per pole

| Rated<br>current<br><br>$I_n$<br>A | Tripping characteristic<br>B, C <sup>1)</sup> |            | D                      |            | K                      |            | Z                      |            |
|------------------------------------|-----------------------------------------------|------------|------------------------|------------|------------------------|------------|------------------------|------------|
|                                    | Internal<br>resistance                        | Power loss | Internal<br>resistance | Power loss | Internal<br>resistance | Power loss | Internal<br>resistance | Power loss |
|                                    | $R_i$<br>mΩ                                   | $P_v$<br>W | $R_i$<br>mΩ            | $P_v$<br>W | $R_i$<br>mΩ            | $P_v$<br>W | $R_i$<br>mΩ            | $P_v$<br>W |
| 0.5                                | 5500                                          | 1.4        | 4300                   | 1.1        | 4300                   | 1.1        | 8100                   | 2.4        |
| 1.0                                | 1440                                          | 1.4        | 1250                   | 1.25       | 1250                   | 1.25       | 2100                   | 2.3        |
| 1.6                                | 630                                           | 1.6        | 600                    | 1.5        | 600                    | 1.5        | 1000                   | 2.8        |
| 2.0                                | 460                                           | 1.8        | 410                    | 1.6        | 410                    | 1.65       | 619                    | 2.5        |
| 3.0                                | 150                                           | 1.3        | 130                    | 1.2        | 130                    | 1.2        | 235                    | 2.4        |
| 4.0                                | 110                                           | 1.8        | 105                    | 1.7        | 105                    | 1.7        | 149                    | 2.4        |
| 6.0                                | 55                                            | 2.0        | 52                     | 1.9        | 52                     | 1.9        | 75                     | 3.2        |
| 8.0                                | 23                                            | 1.5        | 24                     | 1.5        | 24                     | 1.5        | 27                     | 2.0        |
| 10.0                               | 19                                            | 2.1        | 16                     | 1.6        | 13.5                   | 1.4        | 24                     | 2.7        |
| 13.0                               | 14                                            | 2.3        | 14                     | 2.2        | 13.5                   | 1.4        | —                      | —          |
| 16.0                               | 8.5                                           | 2.5        | 8.5                    | 2.5        | 7.7                    | 2.0        | 10.9                   | 2.8        |
| 20.0                               | 6.25                                          | 2.5        | 6.1                    | 2.3        | 6.7                    | 2.7        | 6.0                    | 2.4        |
| 25.0                               | 5.0                                           | 3.2        | 4.3                    | 3.1        | 4.6                    | 2.9        | 4.5                    | 3.3        |
| 32.0                               | 3.6                                           | 3.7        | 3.5                    | 3.6        | 3.5                    | 3.6        | 3.5                    | 3.6        |
| 40.0                               | 3.0                                           | 4.8        | 2.2                    | 4.2        | 2.2                    | 4.2        | 2.5                    | 4.1        |
| 50.0                               | 1.3                                           | 3.25       | 1.25                   | 2.9        | 1.25                   | 3.1        | 1.5                    | 4.1        |
| 63.0                               | 1.2                                           | 4.8        | 1.2                    | 4.8        | 1.0                    | 4.4        | 1.3                    | 5.2        |

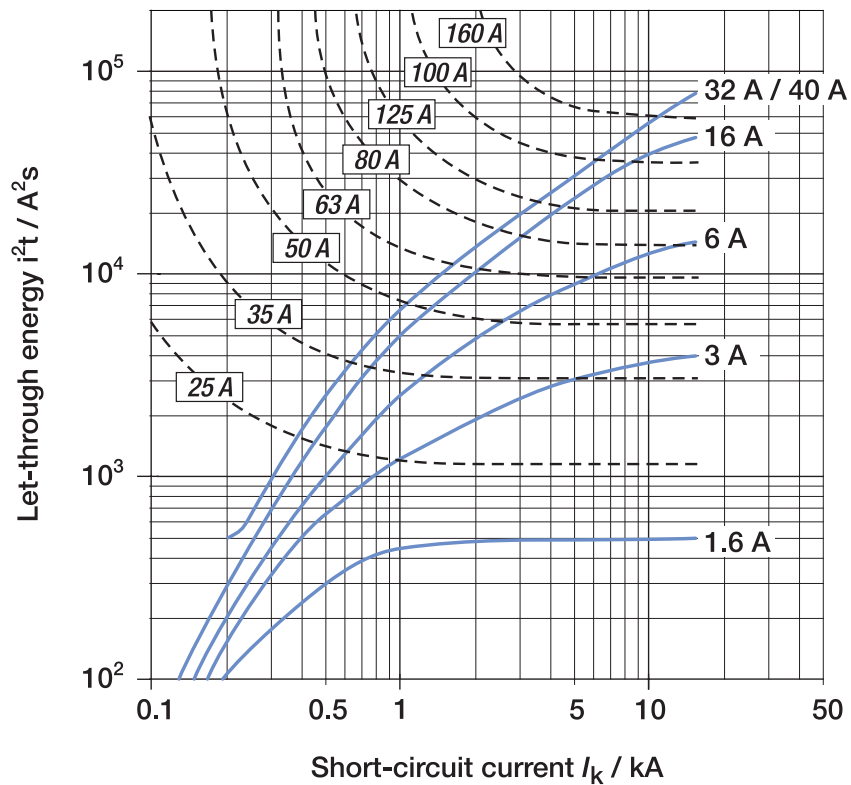
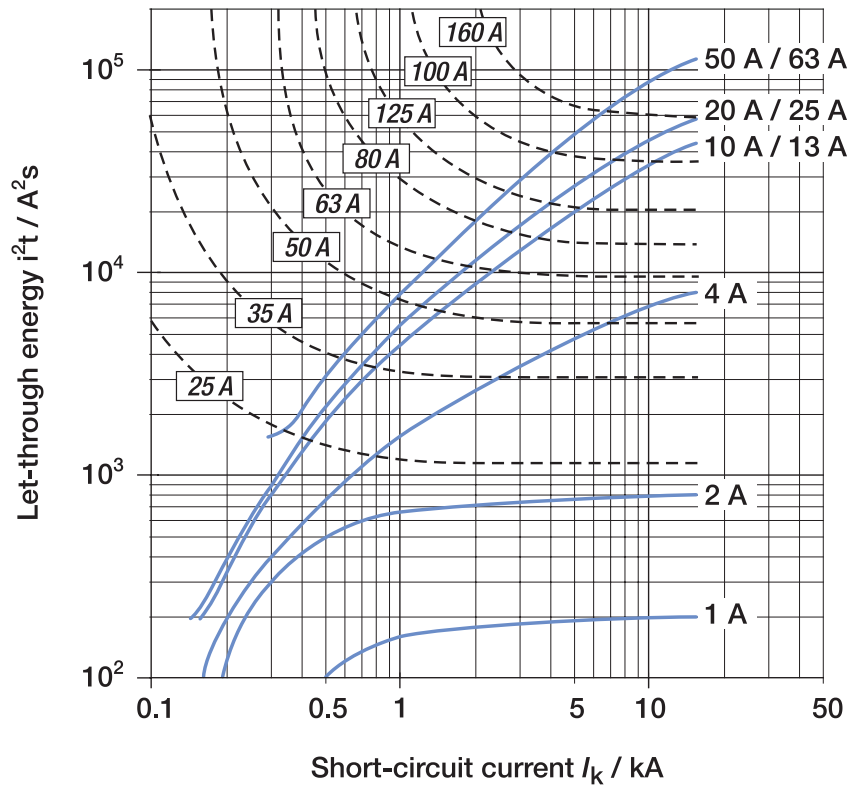
<sup>1)</sup> Current ratings 0.5 – 4 A, 8 A apply to C characteristic only

Internal resistances are subject to application-specific and environment-specific conditions and are therefore to be considered as typical values.

# Miniature Circuit Breaker S 200/S 200 M

## Let-through energy $I^2t$

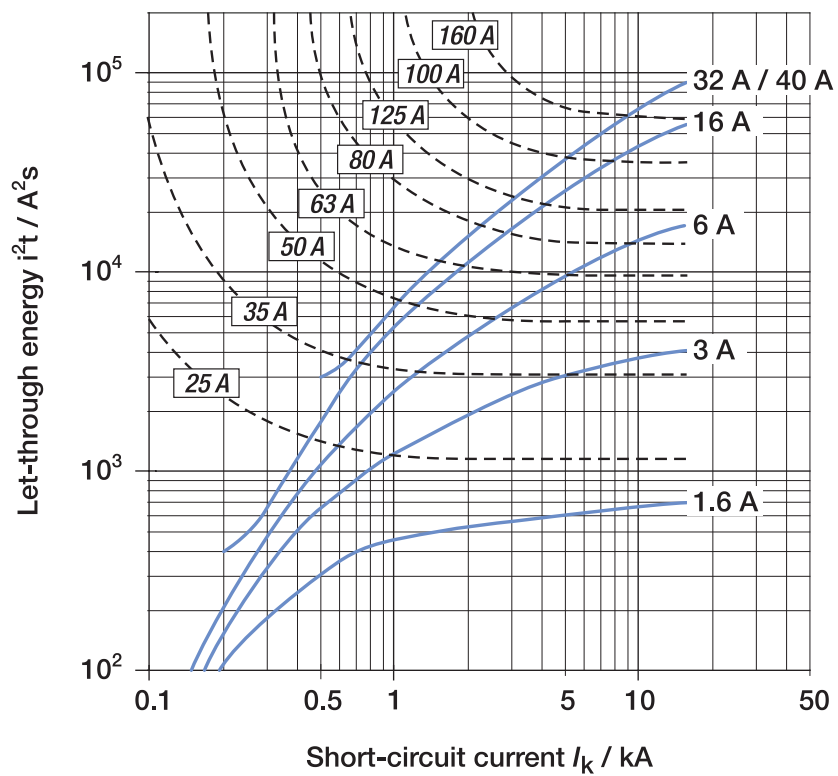
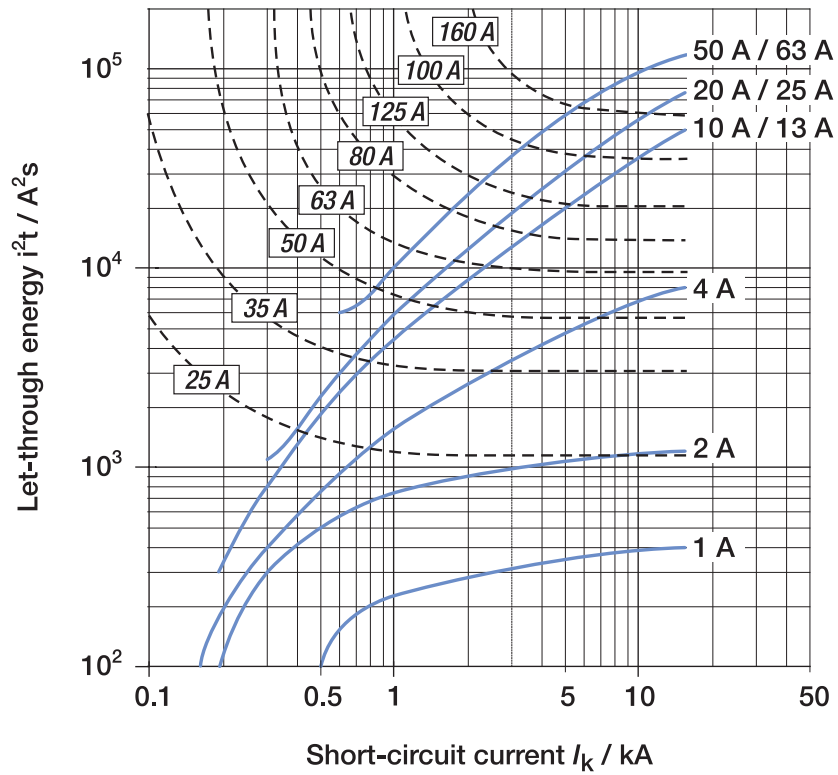
Characteristics B, C - 230/400 V let-through energy



# Miniature Circuit Breaker S 200/S 200 M

## Let-through energy $I^2t$

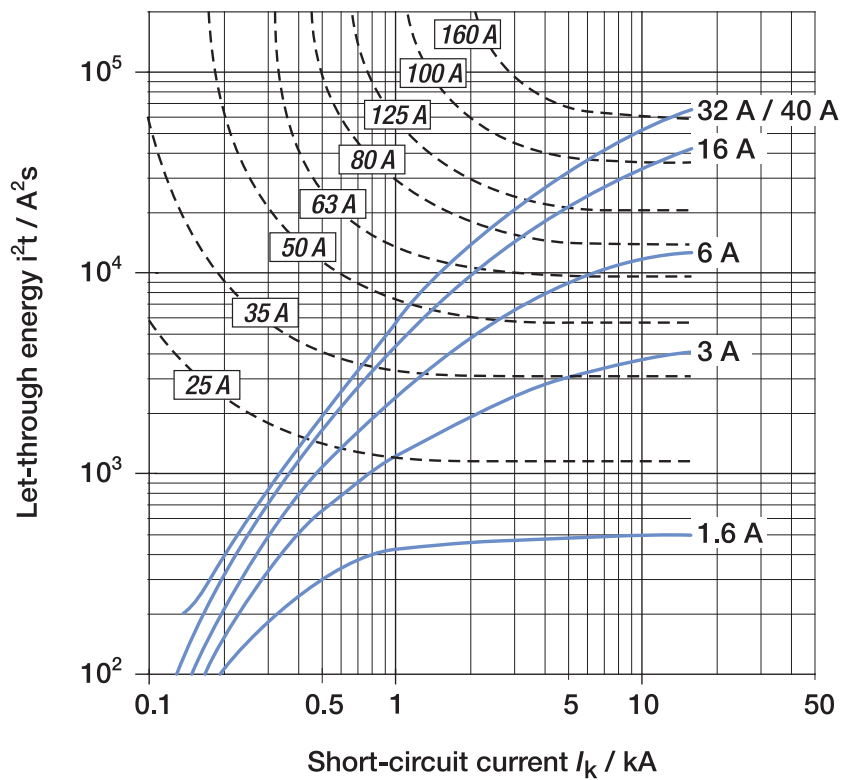
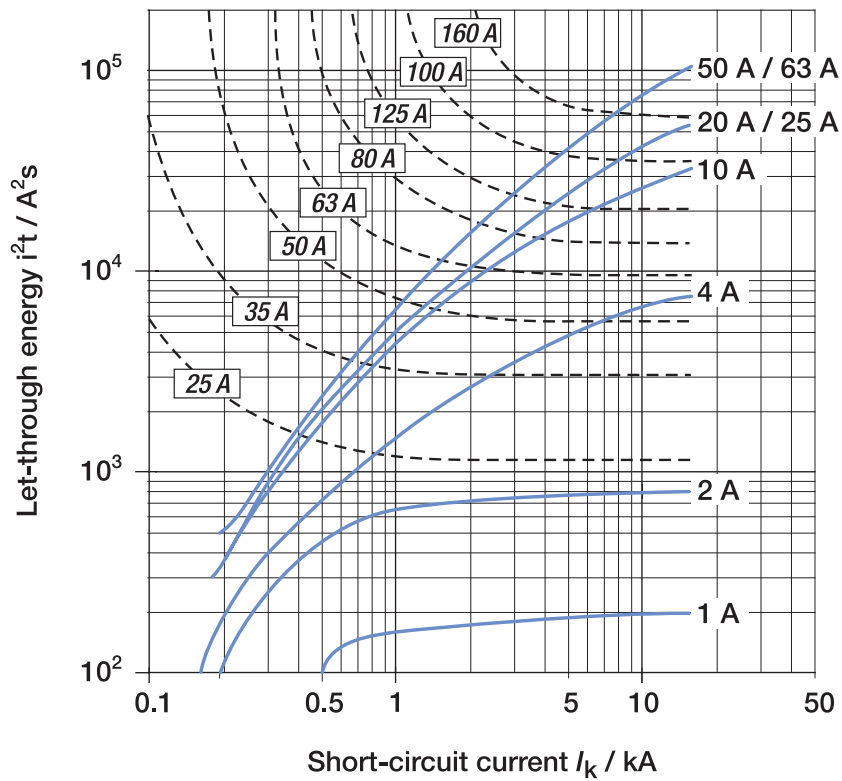
Characteristics D, K - 230/400 V let-through energy



# Miniature Circuit Breaker S 200/S 200 M

## Let-through energy $I^2t$

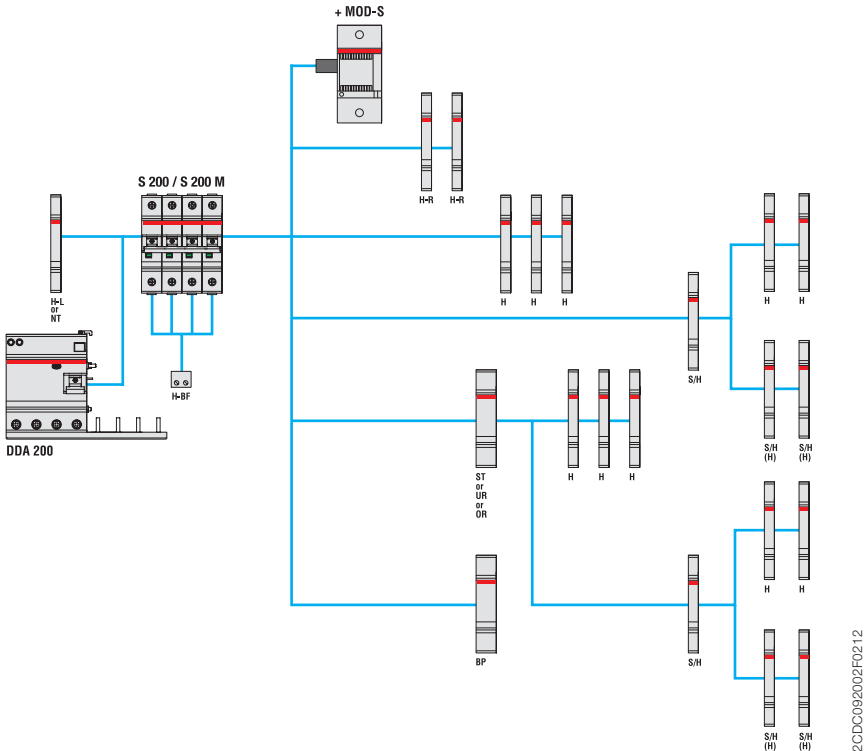
Characteristic Z - 230/400 V let-through energy



# Miniature Circuit Breaker S 200/S 200 M

## Accessories and dimensional drawing

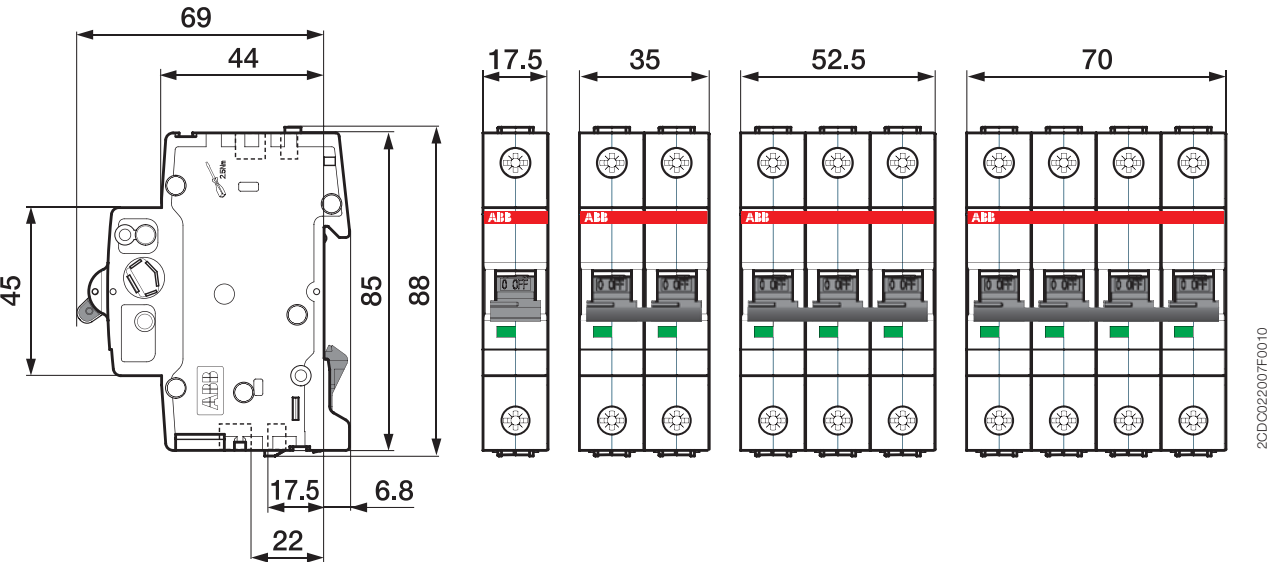
### Accessory overview



|         |                                                       |             |                     |                                                      |                    |
|---------|-------------------------------------------------------|-------------|---------------------|------------------------------------------------------|--------------------|
| H       | Auxiliary contact<br>(change-over contact)            | S2C-H6R     | H-L                 | Auxiliary contact                                    | S2C-H...L          |
| H-R     | Auxiliary contact                                     | S2C-H6-...R | H-BF                | Auxiliary contact for bottom fitting<br>(1 per pole) | S2C-H01<br>S2C-H10 |
| S/H     | Signal/Auxiliary contact                              | S2C-S/H6R   | BP                  | Mechanical tripping device                           | S2C-BP             |
| S/H (H) | Signal/Auxiliary contact<br>used as auxiliary contact | S2C-S/H6R   | NT                  | Neutral disconnector                                 | S2C-Nt             |
| ST      | Shunt trip                                            | S2C-A...    | MOD-S <sup>1)</sup> | Motor operating device                               | S2C-CM             |
| UR      | Undervoltage release                                  | S2C-UA      | DDA 200             | RCD-block                                            | DDA 20...          |
| OR      | Overvoltage release                                   | S2C-OVP     |                     |                                                      |                    |

<sup>1)</sup> In case of using S 200/S 200 M coupled with DDA 200, MOD-S does not operate in case of earth-leakage fault.

### Dimensional drawing



# Miniature Circuit Breaker S 200/S 200 M Approvals

## Country approvals

| Approval mark                                                                       | Description | Country               |
|-------------------------------------------------------------------------------------|-------------|-----------------------|
|    | RCM         | Australia             |
|    | ÖVE         | Austria               |
|    | CEBEC       | Belgium               |
|    | CSA         | Canada (S 200 M only) |
|    | CCC         | China                 |
|    | EZU         | Czech Republic        |
|    | DEMKO       | Denmark               |
|    | FIMKO       | Finland               |
|    | NF          | France                |
|   | VDE         | Germany               |
|  | IMQ         | Italy                 |
|  | SIRIM       | Malaysia              |
|  | KEMA        | Netherlands           |
|  | NEMKO       | Norway                |
|  | BBJ         | Poland                |
|  | CERTIF      | Portugal              |
|  | GOST        | Russia                |
|  | GOST Fire   |                       |
|  | HDB         | Singapore             |
|  | SIQ         | Slovenia              |
|  | AENOR       | Spain                 |
|  | SEMKO       | Sweden                |
|  | S+          | Switzerland           |
|  | UL1077      | USA                   |

## Ship approvals

| Approval mark                                                                     | Description | Country |
|-----------------------------------------------------------------------------------|-------------|---------|
|  | BV          | France  |
|  | GL          | Germany |
|  | RINA        | Italy   |
|  | ABS         | USA     |

Not all approvals are printed on the MCBs.

The indicated approvals generally cover all available approvals worldwide. To verify the approval status in your country please get in touch with your ABB contact person.

# Contact us

## **ABB STOTZ-KONTAKT GmbH**

Eppelheimer Straße 82  
69123 Heidelberg, Germany  
Phone: +49 (0) 6221 7 01-0  
Fax: +49 (0) 6221 7 01-13 25  
E-Mail: [info.desto@de.abb.com](mailto:info.desto@de.abb.com)

You can find the address of your  
local sales organization on the  
ABB home page  
<http://www.abb.com/contacts>  
-> Low Voltage Products and Systems

## **Note:**

We reserve the right to make technical changes or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. ABB AG does not accept any responsibility whatsoever for potential errors or possible lack of information in this document.

We reserve all rights in this document and in the subject matter and illustrations contained therein. Any reproduction, disclosure to third parties or utilization of its contents – in whole or in parts – is forbidden without prior written consent of ABB AG.

Copyright© 2012 ABB  
All rights reserved

Brochure number 2CDC002157D0202 (08/12-0.5-ZVD)