

Manual Motor Controller / Circuit Breaker for Equipment thermal-magnetic, 2 poles



### Description

- Thermal-magnetic circuit breaker
- High short circuit performance
- Availability of AC and DC in the same frame size
- DIN-Rail Mounting

### Standards

- Approval Reference Type: AS168X
- VDE Certificate Number: IEC 60934
- UL File Number: UL508, UL1077
- CSA File Number: CSA C22.2

### Applications

- Industrial appliances

### Weblinks

[pdf-datasheet](#), [html-datasheet](#), [General Product Information](#), [Approvals](#), [CE declaration of conformity](#), [RoHS](#), [CHINA-RoHS](#), [REACH](#), [e-Shop](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#), [Detailed request for product](#), [Product News](#)

### Technical Data

#### General data

|  |   |
|--|---|
| Rated Voltage DC                             | IEC 240 V<br>UL/CSA 240/360 V   |
| Rated current                                | 0.5 - 50 A, see approbations  |
| Conditional short circuit capacity IEC 60934 | Icn: DC 240 V: 4.5 kA (no fuse)   |
| Conditional short circuit capacity UL 1077   | Icn: DC 240 V; DF/DG: 0.5A-40A: 10 kA (no fuse)<br>Icn: DC 240 V; DH: 0.5A-40A: 5 kA (no fuse)<br>Icn: DC 360 V; 0.5A-50A: 2 kA (no fuse) |
| Degree of Protection                         | from front side IP 40 acc. to IEC 60529   |
| Dielectric Strength                          | 50 Hz: > 2 kV<br>Impulse 1.2/50 $\mu$ s   |
| Vibration Resistance                         | $\pm$ 0.75 mm @ 5 - 60 Hz<br>acc. to IEC 60068-2-6, test Fc<br>10 G @ 60 - 500 Hz<br>acc. to IEC 60068-2-6, test Fc                       |
| Insulation Resistance                        | 250/440 VAC > 5 M $\Omega$  |
| Shock Resistance                             | 30 G / 18 ms<br>acc. to IEC 60068-2-27, test Ea   |
| Ambient temperature                          | -10°C to 55°C   |
| Weight                                       | 100 - 130 g   |

|                                |  |
|--------------------------------|--|
| Tripping Type                  | Thermal-Magnetic<br>Positively trip free |
| Actuation type                 | Manual ON/OFF                            |
| Permissible wire cross section | 1.5 - 25 mm <sup>2</sup> / 16 - 4 AWG    |

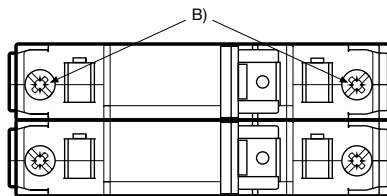
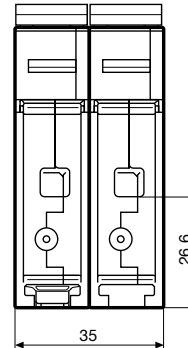
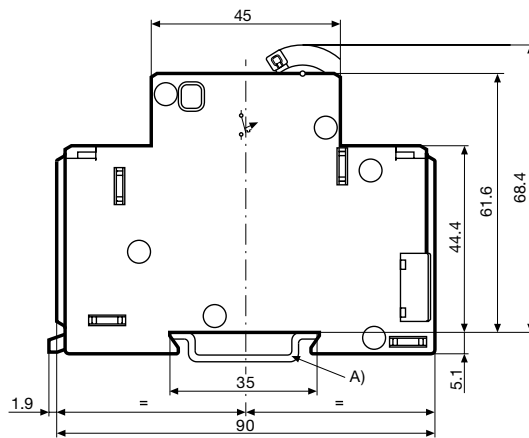
#### Switched neutral

|               |   |
|---------------|---|
| Rated Voltage | AC 277 V  |
| Rated current | AC/DC 65 A  |
| Function      | The switched neutral closes with manual closure of the poles and opens automatically with thermal magnetic tripping of the poles. |

#### Add-on modules

|                |  |
|----------------|--|
| Add-on modules | Technical data for the additional module see separate data sheet |
|----------------|--|

**Dimension**  
AS168X 2 pole

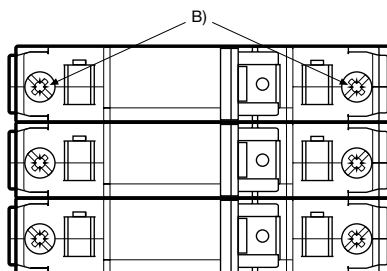
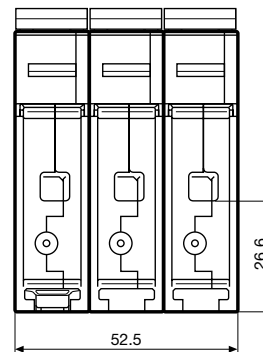
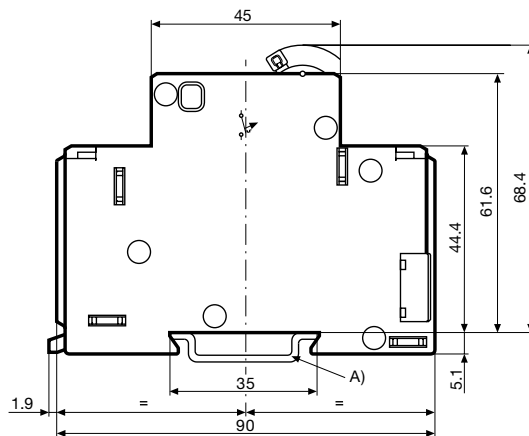


A) 35 mm DIN rail EN 50022

B) Max. torque

| Wire crosssection          | Max. torque     |
|----------------------------|-----------------|
| 1.5 ... 10 mm <sup>2</sup> | 2.5 Nm          |
| 16 ... 25 mm <sup>2</sup>  | 3.1 Nm          |
| AWG #16 ... 8              | 20 ... 22 lb-in |
| AWG #6 ... 4               | 26 ... 28 lb-in |

AS168X 2 pole and switched neutral pole



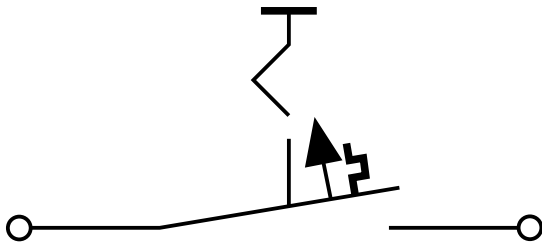
A) 35 mm DIN rail EN 50022

B) Max. torque

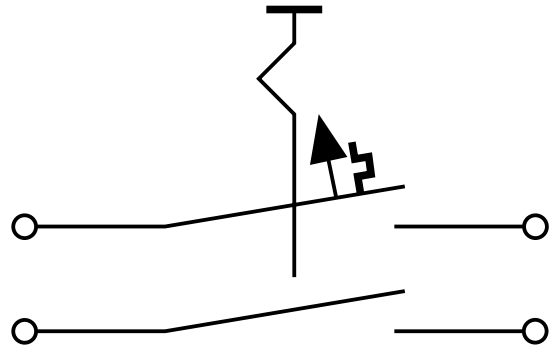
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Diagrams

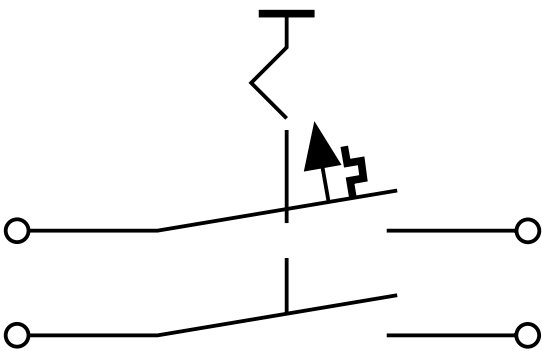
AS168X-CB1...



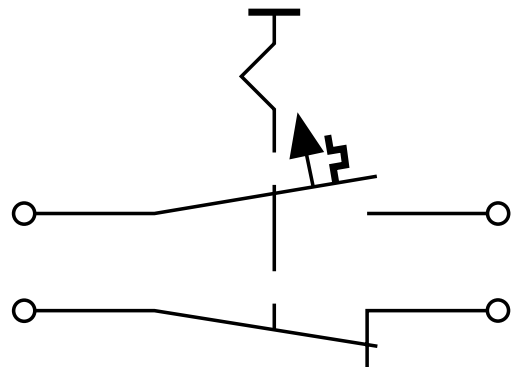
AS168X-CB1...N



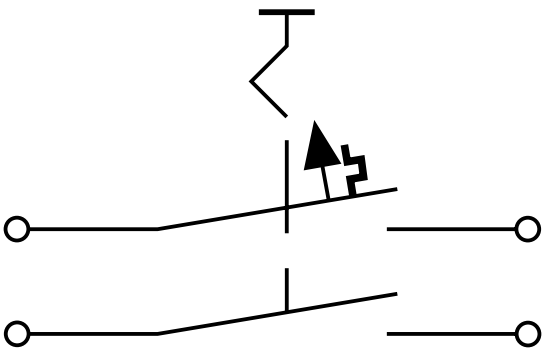
AS168X-CB1... / AS168X-ACBH1



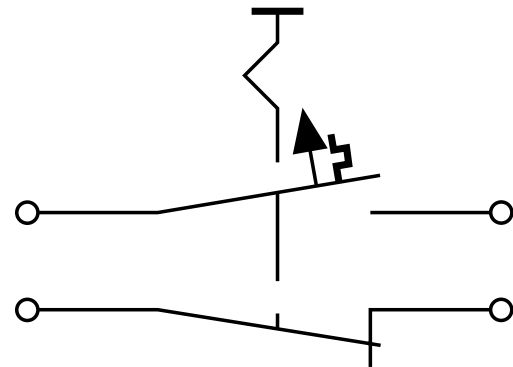
AS168X-CB1... / AS168X-ACBH2



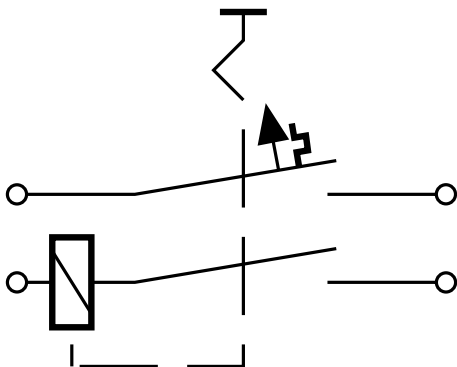
AS168X-CB1... / AS168X-ACBS1








AS168X-CB1... / AS168X-ACBS2



AS168X-CB1... / AS168X-ACBA



## Approvals

| Symbol   | Standard                   | Rated current  | Rated voltage DC | Conditional short circuit capacity Icn |
|--|----------------------------|--|------------------|--|
|  | UL 508<br>CSA C22.2 no. 14 | -  | -                | -                                      |
|  | UL 1077                    | 0.5 - 40 A   | 240 V            | 10 kA                                  |
|  | CSA C22.2 no. 235          | 0.5 - 50 A   | 360 V            | 2 kA                                   |
|  | EN 60934                   | 0.5 - 50 A   | 240 V            | 4.5 kA                                 |
|  | GB 17701                   | nur Art.-Nr.<br>4420.0386 (30 A)<br>4420.0367 (40 A) | 240 V            | 3 kA                                   |

## Effect of ambient temperature

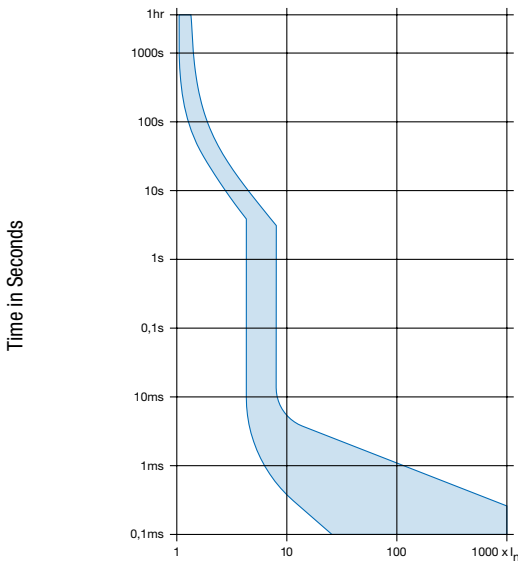
AC-breaker are calibrated for an ambient temperature of +40°C, DC-breakers for +23°C. To determine the rated current for a lower or higher ambient temperature, use a correction factor from the table below:

| Ambient temperature [°C] | Correction factor AC version | Correction factor DC version |
|--------------------------|------------------------------|------------------------------|
| -20                      | 0.78                         | 0.80                         |
| -5                       | 0.82                         | 0.87                         |
| 0                        | 0.83                         | 0.90                         |
| +10                      | 0.87                         | 0.95                         |
| +23                      | 0.91                         | 1.00                         |
| +30                      | 0.95                         | 1.05                         |
| +40                      | 1.00                         | 1.10                         |
| +50                      | 1.05                         | 1.20                         |
| +60                      | 1.11                         | 1.30                         |

Example DC version: Rated current = 10 A; Environmental temperature = 50 °C; --> Correction factor = 1.2; Resulting current = 12 A

## Time-Current-Curves

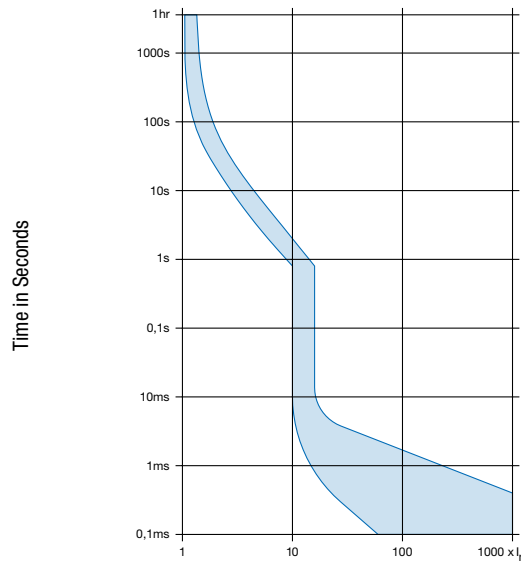
Version DF



Multiple of Rated Current  $I_n$

Reference Temperature +23°

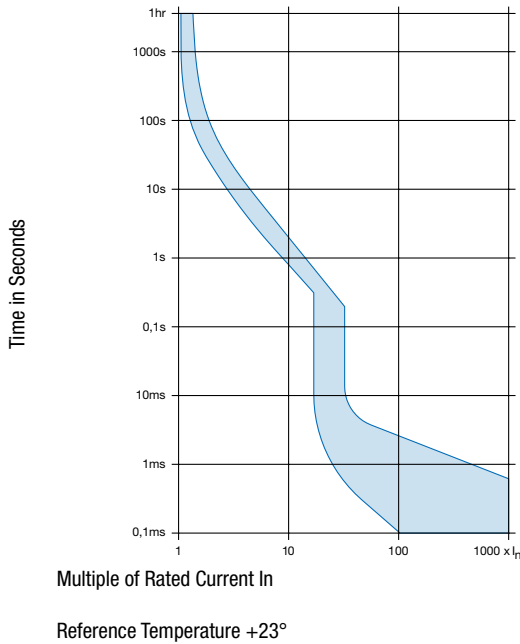
Version DG



Multiple of Rated Current  $I_n$

Reference Temperature +23°

Version DH



### Config. Code

AS168X-CB 1 DG 200 N

The characters are placeholders for the correspondingly keys of selections from the key tables.

#### AS168X-CB 1 DG 200 N = Number of Poles

| Number of Poles | Configuration key |
|-----------------|-------------------|
| 2               | 2                 |

#### AS168X-CB 1 DG 200 N = Tripping characteristics

| Tripping characteristics           | Configuration key |
|------------------------------------|-------------------|
| 1.05-1.35xIn / 4.5-8xIn / 0.5-50 A | DF                |
| 1.05-1.35xIn / 9-16xIn / 0.5-50 A  | DG                |
| 1.05-1.35xIn / 18-32xIn / 6.0-50 A | DH                |

#### AS168X-CB 1 DG 200 N = Rated current

| Rated current | Configuration key |
|---------------|-------------------|
| 0.05 A        | 005               |
| 1.0 A         | 010               |
| 1.5 A         | 015               |
| 2.0 A         | 020               |
| 3.0 A         | 030               |
| 4.0 A         | 040               |
| 5.0 A         | 050               |
| 6.0 A         | 060               |
| 7.0 A         | 070               |

Other rated currents on request

| Rated current | Configuration key |
|---------------|-------------------|
| 8.0 A         | 080               |
| 9.0 A         | 090               |
| 10.0 A        | 100               |
| 12.0 A        | 120               |
| 15.0 A        | 150               |
| 16.0 A        | 160               |
| 18.0 A        | 180               |
| 20.0 A        | 200               |
| 23.0 A        | 230               |
| 25.0 A        | 250               |
| 27.0 A        | 270               |
| 30.0 A        | 300               |
| 32.0 A        | 320               |
| 35.0 A        | 350               |
| 40.0 A        | 400               |
| 45.0 A        | 450               |
| 50.0 A        | 500               |

Other rated currents on request

#### AS168X-CB 1 DG 200 N = Switched neutral

| Switched neutral      | Configuration key |
|-----------------------|-------------------|
| Switched neutral pole | N                 |

## Variants

| Tripping characteristics           | Rated current | Switched neutral | Config. Code    | Order Number |
|------------------------------------|---------------|------------------|-----------------|--------------|
| 1.05-1.35xln / 9-16xln / 0.5-50 A  | 1.0 A         |                  | AS168X-CB2DG010 | 4420.0356    |
| 1.05-1.35xln / 9-16xln / 0.5-50 A  | 2.0 A         |                  | AS168X-CB2DG020 | 4420.0519    |
| 1.05-1.35xln / 9-16xln / 0.5-50 A  | 5.0 A         |                  | AS168X-CB2DG050 | 4420.0357    |
| 1.05-1.35xln / 9-16xln / 0.5-50 A  | 6.0 A         |                  | AS168X-CB2DG060 | 4420.0459    |
| 1.05-1.35xln / 9-16xln / 0.5-50 A  | 10.0 A        |                  | AS168X-CB2DG100 | 4420.0358    |
| 1.05-1.35xln / 9-16xln / 0.5-50 A  | 15.0 A        |                  | AS168X-CB2DG150 | 4420.0359    |
| 1.05-1.35xln / 9-16xln / 0.5-50 A  | 20.0 A        |                  | AS168X-CB2DG200 | 4420.0360    |
| 1.05-1.35xln / 9-16xln / 0.5-50 A  | 25.0 A        |                  | AS168X-CB2DG250 | 4420.0280    |
| 1.05-1.35xln / 9-16xln / 0.5-50 A  | 30.0 A        |                  | AS168X-CB2DG300 | 4420.0361    |
| 1.05-1.35xln / 9-16xln / 0.5-50 A  | 50.0 A        |                  | AS168X-CB2DG500 | 4420.0362    |
| 1.05-1.35xln / 18-32xln / 6.0-50 A | 15.0 A        |                  | AS168X-CB2DH150 | 4420.0394    |
| 1.05-1.35xln / 18-32xln / 6.0-50 A | 30.0 A        |                  | AS168X-CB2DH300 | 4420.0386    |

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