

Circuit Breaker for Equipment thermal-magnetic, 1 pole



See below:

**Approvals and Compliances**

**Description**

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

**Applications**

- Industrial appliances

**References**

Last order possibility: 31.08.2018  
Last delivery date: 30.09.2018

**Weblinks**

[pdf datasheet](#), [html-datasheet](#), [General Product Information](#), [Distributor-Stock-Check](#), [Detailed request for product](#), [Product News](#)

**Technical Data**

**General data**

|                                              |                                                                                                                                           |
|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Rated Voltage DC                             | IEC 180 V<br>UL/CSA 120/180 V                                                                                                             |
| Rated current                                | 0.5 - 50 A , see approvals                                                                                                                |
| Conditional short circuit capacity IEC 60934 | Icn: DC 180 V: 4.5 kA (no fuse)                                                                                                           |
| Conditional short circuit capacity UL 1077   | Icn: DC 120 V; DF/DG: 0.5A-40A: 10 kA (no fuse)<br>Icn: DC 120 V; DH: 0.5A-40A: 5 kA (no fuse)<br>Icn: DC 180 V; 0.5A-50A: 2 kA (no fuse) |
| Degree of Protection                         | from front side IP 40 acc. to IEC 60529                                                                                                   |
| Lifetime                                     | 1 x Ir 6000 switching cycles                                                                                                              |
| Dielectric Strength                          | 50Hz: > 2kV<br>Impulse 1.2/50 µs                                                                                                          |
| Vibration Resistance                         | ± 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 MΩ                                                                                                                        |
| Shock Resistance                             | 30 G / 18ms<br>acc. to IEC 60068-2-27, test Ea                                                                                            |
| Ambient temperature                          | -10 °C to 55 °C                                                                                                                           |
| Weight                                       | 100 - 130 g                                                                                                                               |

|                                |                                       |
|--------------------------------|---------------------------------------|
| Tripping Type                  | 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 |
|----------------|------------------------------------------------------------------|

**Approvals and Compliances**

Detailed information on product approvals, code requirements, usage instructions and detailed test conditions can be looked up in [Details about Approvals](#)

**Approvals**

The approval mark is used by the testing authorities to certify compliance with the safety requirements placed on electronic products.

Approval Reference Type: AS168X

| Approval Logo                                                                    | Certificates                  | Certification Body | Description                              |
|----------------------------------------------------------------------------------|-------------------------------|--------------------|------------------------------------------|
|  | <a href="#">VDE Approvals</a> | VDE                | VDE Certificate Number: 40005743         |
|  | <a href="#">UL Approvals</a>  | UL                 | UL File Number: E216629 / E71572         |
|  | <a href="#">UL Approvals</a>  | UL                 | UL File Number: E216629 / E71572         |
|  | <a href="#">CQC Approvals</a> | CQC                | CCC Certificate Number: 2013010307594187 |

**Product standards**

Product standards that are referenced

| Organization                                                                     | Design                | Standard  | Description                                                           |
|----------------------------------------------------------------------------------|-----------------------|-----------|-----------------------------------------------------------------------|
|  | Designed according to | IEC 60934 | Circuit-breakers for equipment (CBE)                                  |
|  | Designed according to | UL 1077   | Standard for Supplementary Protectors for Use in Electrical Equipment |
|  | Designed according to | CSA C22.2 | Supplementary Protectors                                              |

**Application standards**

Application standards where the product can be used

| Organization                                                                      | Design                         | Standard     | Description                                                                                     |
|-----------------------------------------------------------------------------------|--------------------------------|--------------|-------------------------------------------------------------------------------------------------|
|  | Designed for applications acc. | IEC/UL 60950 | IEC 60950-1 includes the basic requirements for the safety of information technology equipment. |

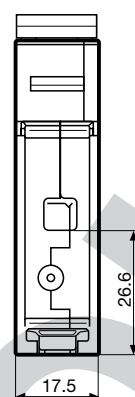
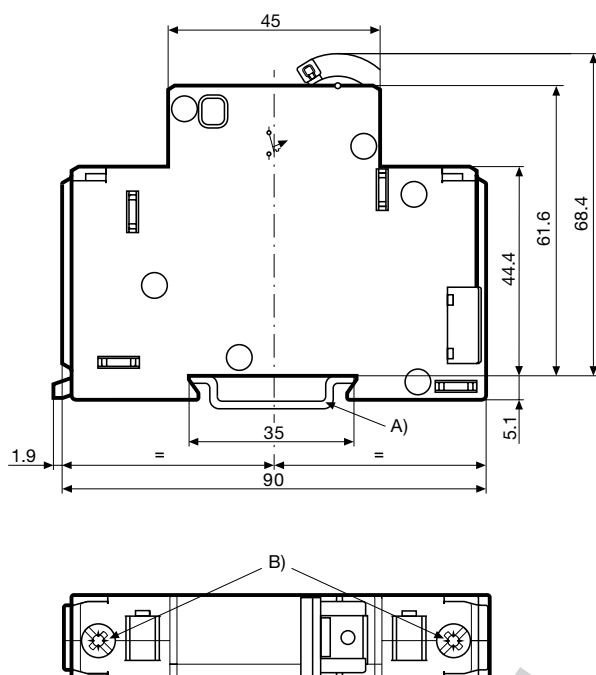
**Compliances**

The product complies with following Guide Lines

| Identification                                                                     | Details                                      | Initiator   | Description                                                                                                                                                                                           |
|------------------------------------------------------------------------------------|----------------------------------------------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <a href="#">CE declaration of conformity</a> | SCHURTER AG | The CE marking declares that the product complies with the applicable requirements laid down in the harmonisation of Community legislation on its affixing in accordance with EU Regulation 765/2008. |
|  | <a href="#">RoHS</a>                         | SCHURTER AG | EU Directive RoHS 2011/65/EU                                                                                                                                                                          |
|  | <a href="#">China RoHS</a>                   | SCHURTER AG | The law SJ / T 11363-2006 (China RoHS) has been in force since 1 March 2007. It is similar to the EU directive RoHS.                                                                                  |
|  | <a href="#">REACH</a>                        | SCHURTER AG | On 1 June 2007, Regulation (EC) No 1907/2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals 1 (abbreviated as "REACH") entered into force.                               |

# Dimension [mm]

AS168X 1 pole

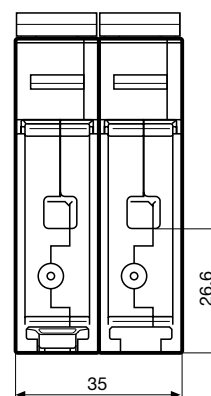
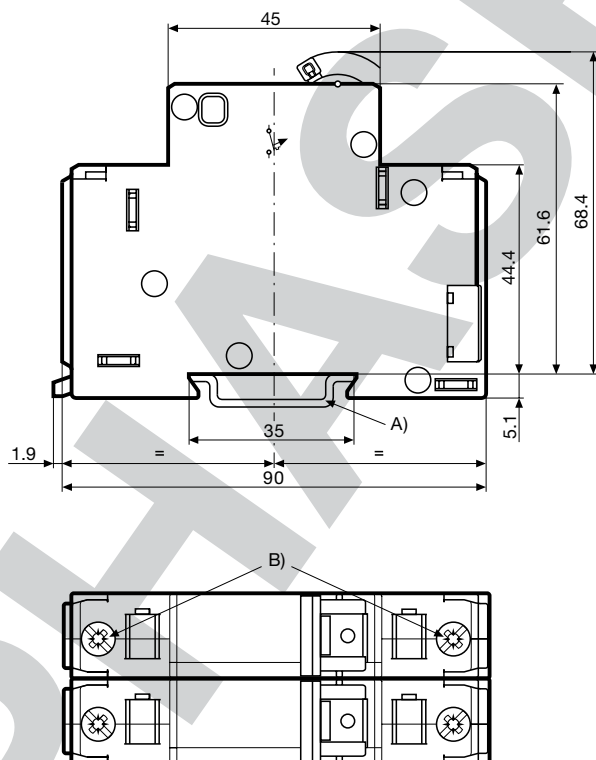


A) 35 mm DIN rail EN 50022

B) Max. torque

| Wire crossection           | 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 1 pole and switched neutral pole



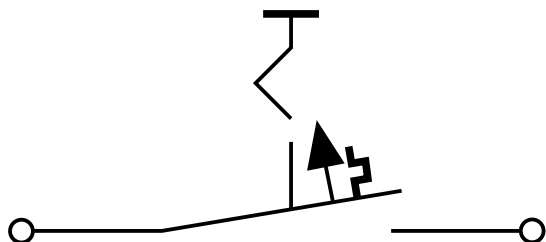
A) 35 mm DIN rail EN 50022

B) Max. torque

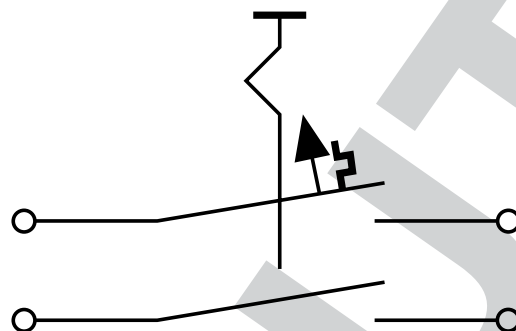
| Wire crossection           | Max. torque     |
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| AWG #16 ... 8              | 20 ... 22 lb-in |
| AWG #6 ... 4               | 26 ... 28 lb-in |

## Diagrams

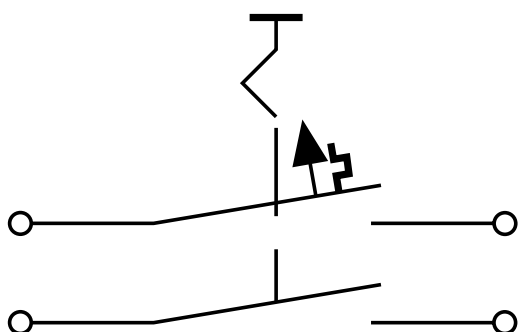
AS168X-CB1...



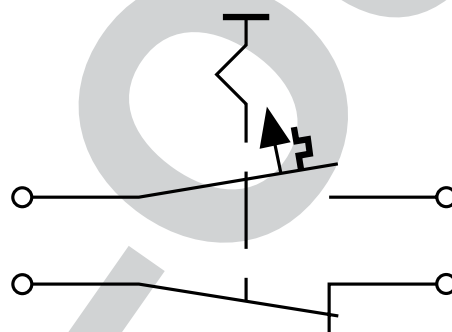
AS168X-CB1...N



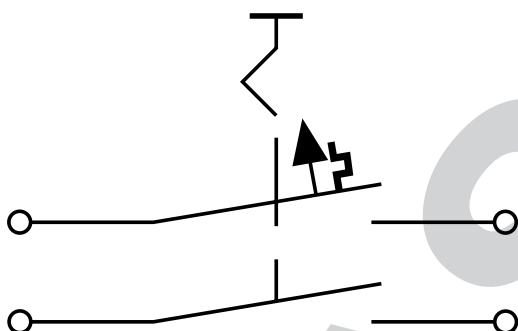
AS168X-CB1... / AS168X-ACBH1



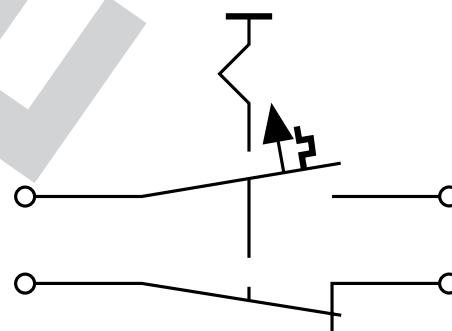
AS168X-CB1... / AS168X-ACBH2



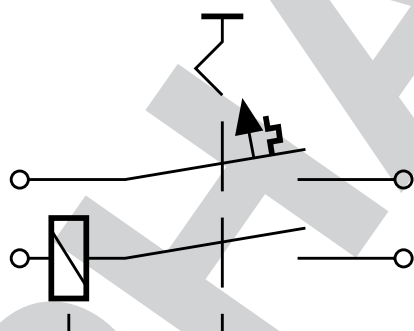
AS168X-CB1... / AS168X-ACBS1



AS168X-CB1... / AS168X-ACBS2



AS168X-CB1... / AS168X-ACBA



| 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                                                               | 120 V            | 10 kA                                  |
|                                                                                   | CSA C22.2 no. 235          | 0.5 - 50 A                                                               | 180 V            | 2 kA                                   |
|  | EN 60934                   | 0.5 - 50 A                                                               | 180 V            | 4.5 kV                                 |
|  | GB 17701                   | nur Art.-Nr.<br>4420.0386 (30 A)<br>4420.0526 (40 A)<br>4420.0897 (50 A) | 120 V            | 3 kA                                   |

## Effect of ambient temperature

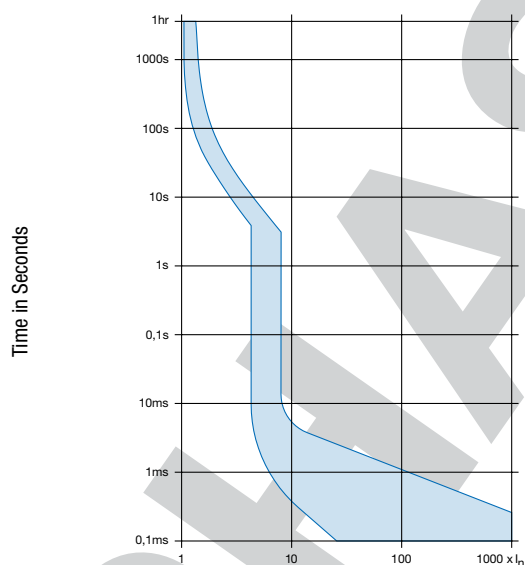
AC-breaker are calibrated for an ambient temperature of +40°C, DC-breakers for +23°C. To determine the rated current for a lower or higher ambient temperature, use a correction factor from the table below:

| 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

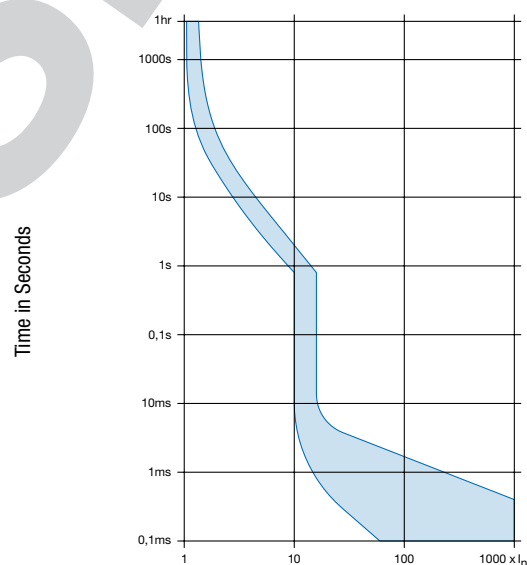
Version DF / Magnetic 4.5-8 xI<sub>n</sub>



Multiple of Rated Current In

Reference Temperature +23°

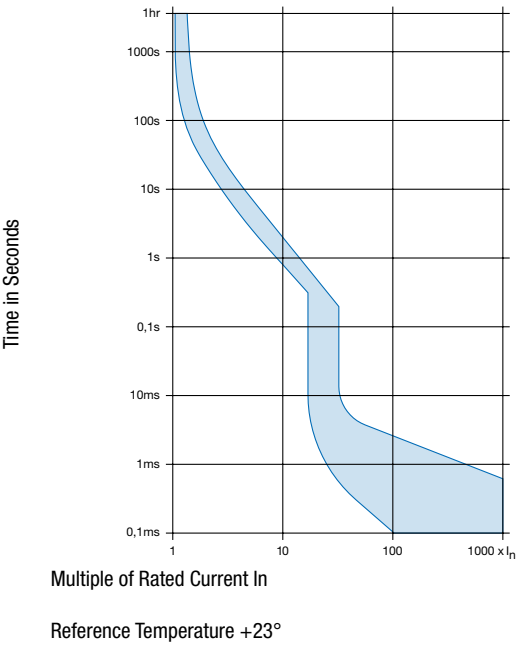
Version DG / Magnetic 9-16 xI<sub>n</sub>



Multiple of Rated Current In

Reference Temperature +23°

Version DH / Magnetic 18-32 xI<sub>n</sub>



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 |
|-----------------|-------------------|
| 1-pole          | 1                 |

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 |
|-----------------------------------|---------------|-----------------------|------------------|--------------|
| 1.05-1.35xIn / 9-16xIn / 0.5-50 A | 0.05 A        |                       | AS168X-CB1DG005  | 4420.0460    |
| 1.05-1.35xIn / 9-16xIn / 0.5-50 A | 1.0 A         |                       | AS168X-CB1DG010  | 4420.0625    |
| 1.05-1.35xIn / 9-16xIn / 0.5-50 A | 5.0 A         |                       | AS168X-CB1DG050  | 4420.0354    |
| 1.05-1.35xIn / 9-16xIn / 0.5-50 A | 10.0 A        |                       | AS168X-CB1DG100  | 4420.0324    |
| 1.05-1.35xIn / 9-16xIn / 0.5-50 A | 20.0 A        |                       | AS168X-CB1DG200  | 4420.0332    |
| 1.05-1.35xIn / 9-16xIn / 0.5-50 A | 20.0 A        | Switched neutral pole | AS168X-CB1DG200N | 4420.0823    |
| 1.05-1.35xIn / 9-16xIn / 0.5-50 A | 40.0 A        |                       | AS168X-CB1DG400  | 4420.0530    |

Availability for all products can be searched real-time: <https://www.schurter.com/en/Stock-Check/Stock-Check-SCHURTER>

**Packaging Unit** 1 Pcs

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- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
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