

Circuit Breaker for Equipment thermal-magnetic, 1 pole



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

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 UL/CSA 120/180 V
Rated current	0.5 - 50 A , see approbations
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) Icn: DC 120 V; DH: 0.5A-40A: 5 kA (no fuse) 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 6000switching cycles
Dielectric Strength	50Hz: > 2kV Impulse 1.2/50 µs
Vibration Resistance	± 0.75 mm @ 5 - 60 Hz acc. to IEC 60068-2-6, test Fc 10 G @ 60 - 500 Hz acc. to IEC 60068-2-6, test Fc
Insulation Resistance	250/440 VAC > 5 MΩ
Shock Resistance	30 G / 18 ms acc. to IEC 60068-2-27, test Ea
Ambient temperature	-10°C to 55°C
Weight	100 - 130g

Tripping Type	Positively trip free
Actuation Type	Manual ON/OFF
Permissible wire cross section	1.5 - 25 mm <sup>2</sup> / 16 - 4 AWG
<b>Switched neutral</b>	
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.
<b>Add-on modules</b>	
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:
	<a href="#">UL Approvals</a>	UL	UL File Number:
	<a href="#">UL Approvals</a>	UL	UL File Number:
	<a href="#">CQC Approvals</a>	CQC	CCC File Number:




## 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.

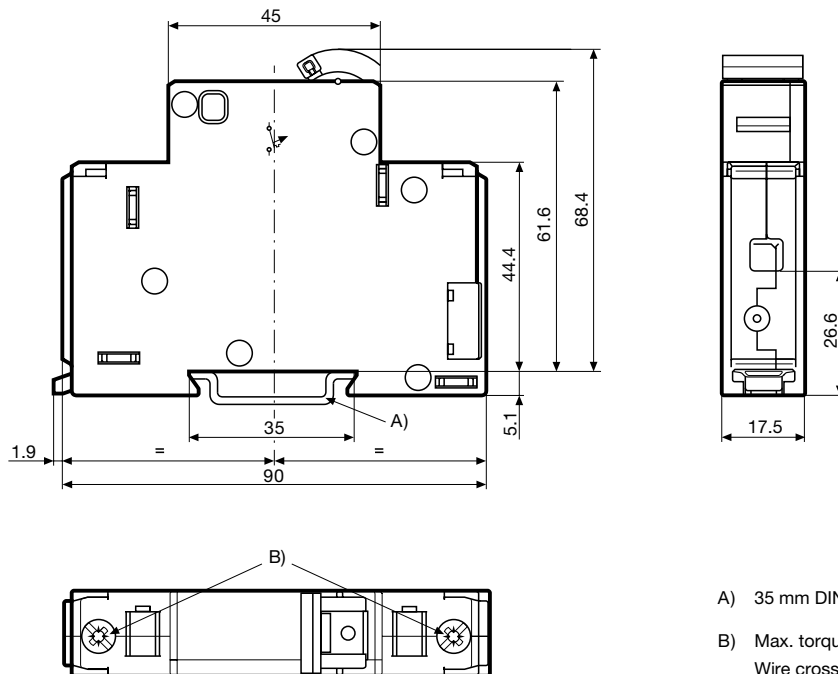
## Compliances

The product complies with following Guide Lines

Identification	Details	Initiator	Description
	RoHS	SCHURTER AG	EU Directive RoHS 2011/65/EU
	China RoHS	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.
	REACH	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

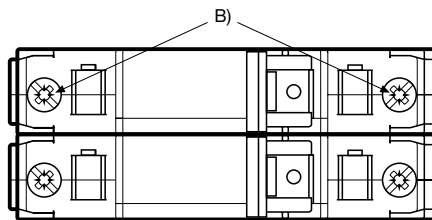
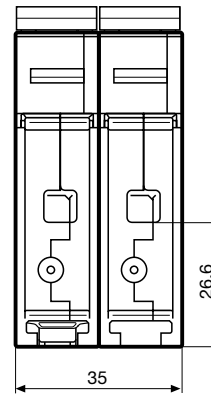
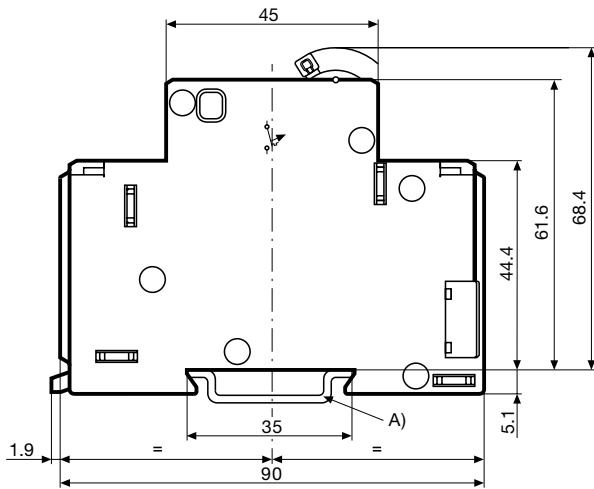


A) 35 mm DIN rail EN 50022

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



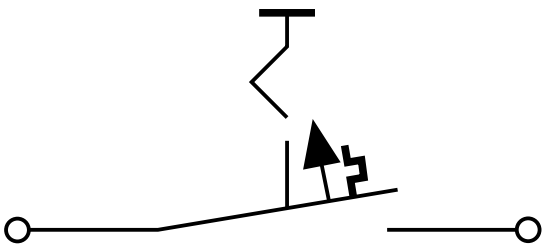
A) 35 mm DIN rail EN 50022

B) Max. torque

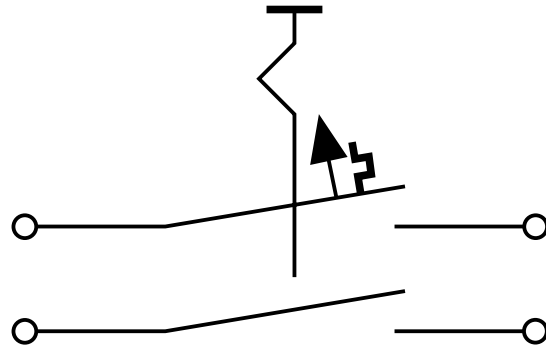
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## Diagrams

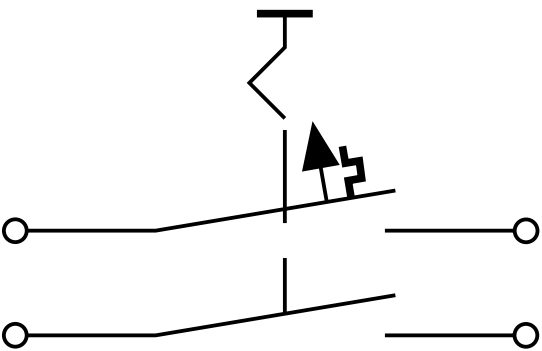
AS168X-CB1...



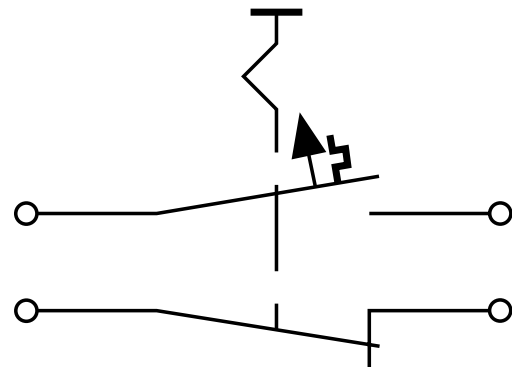
AS168X-CB1...N



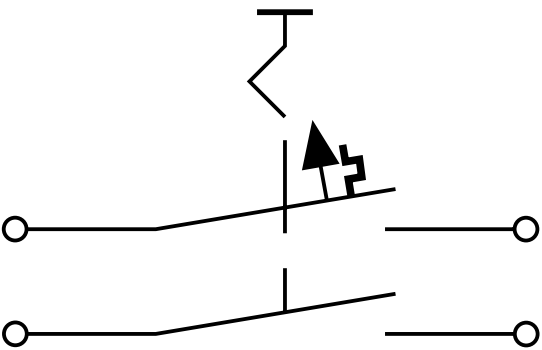
AS168X-CB1... / AS168X-ACBH1



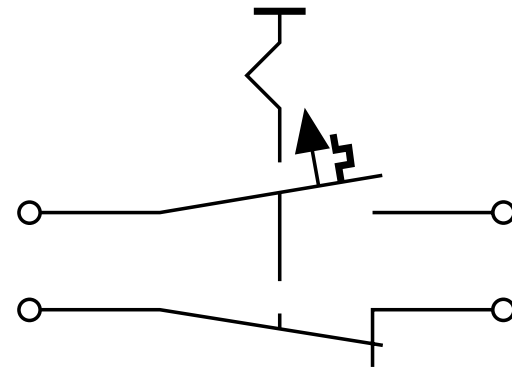
AS168X-CB1... / AS168X-ACBH2



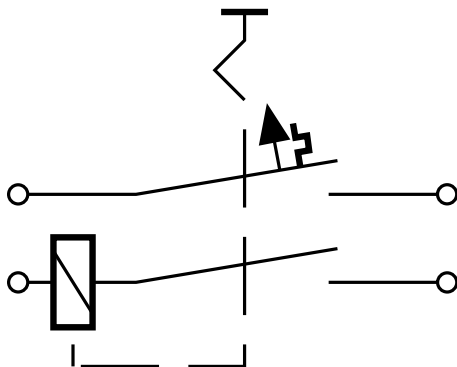
AS168X-CB1... / AS168X-ACBS1







AS168X-CB1... / AS168X-ACBS2



AS168X-CB1... / AS168X-ACBA



Symbol	Standard	Rated current	Rated voltage DC	Conditional short circuit capacity Icn
	UL 508 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. 4420.0386 (30 A) 4420.0526 (40 A) 4420.0897 (50 A)	120 V	3 kA

### Effect of ambient temperature

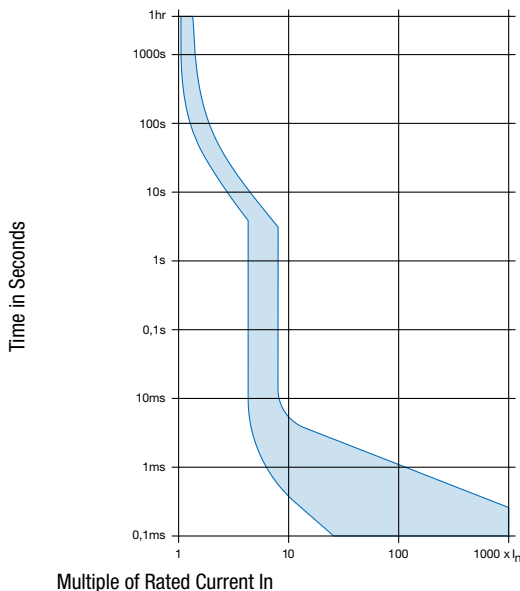
AC-breaker are calibrated for an ambient temperature of +40°C, DC-breakers for +23°C. To determine the rated current for a lower or higher ambient temperature, use a correction factor from the table below:

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

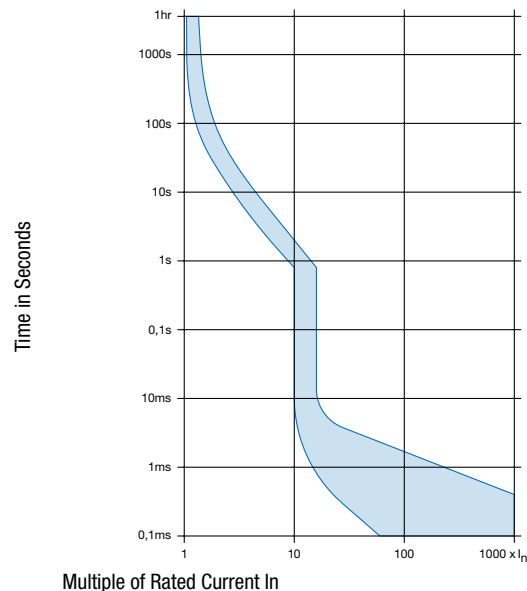
Version DF / Magnetic 4.5-8  $xI_n$



Multiple of Rated Current  $I_n$

Reference Temperature +23°

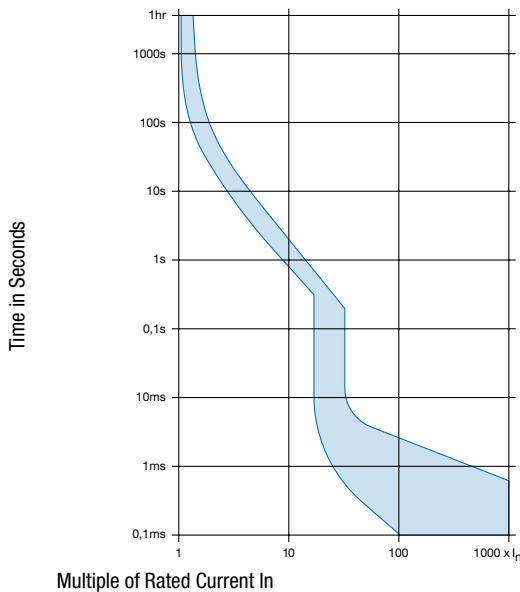
Version DG / Magnetic 9-16  $xI_n$



Multiple of Rated Current  $I_n$

Reference Temperature +23°

Version DH / Magnetic 18-32 x I<sub>n</sub>



Reference Temperature +23°

### 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
1.05-1.35xI <sub>n</sub> / 4.5-8xI <sub>n</sub> / 0.5-50 A	DF
1.05-1.35xI <sub>n</sub> / 9-16xI <sub>n</sub> / 0.5-50 A	DG
1.05-1.35xI <sub>n</sub> / 18-32xI <sub>n</sub> / 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

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