AS168XAC3

Manual Motor Controller / Circuit Breaker for Equipment thermal-magnetic, 3 poles

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 AC	IEC : 420 V Y / 240 V; 50/60 Hz UL/CSA : 480 V Y / 277 V; 50/60 Hz
Rated Voltage DC	65 V
Rated current	0.5 - 52 A , see approbations
Conditional short circuit capacity IEC 60934	Icn: AC 420 V Y/240 V / DC 65 V: 5 kA (no fuse)
Conditional short circuit capacity UL 1077	Inc: AC 480 V Y/277 V: 10 kA (with fuse class H/J, 4x rated current (min. 15 A)) Icn: AC 480 V Y/277 V: 5 kA (no fuse) Icn: DC 65 V: 2 kA (no fuse)
Conditional short circuit capacity UL 508	Icn: AC 480 V Y/277 V: 5 kA (no fuse)
Degree of Protection	from front side IP 40 acc. to IEC 60529
Lifetime	1 x Ir 6000 switching cycles
Dielectric Strength	50 Hz: > 2 kV 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 - 130 g

Tripping Type	Positively trip free
Actuation Type	Manual ON/OFF
Permissible wire cross section	1.5 - 25 mm² / 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
	VDE Approvals	VDE	VDE Certificate Number:
	UL Approvals	UL	UL File Number:
	UL Approvals	UL	UL File Number:

Application standards

Application standards where the product can be used

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

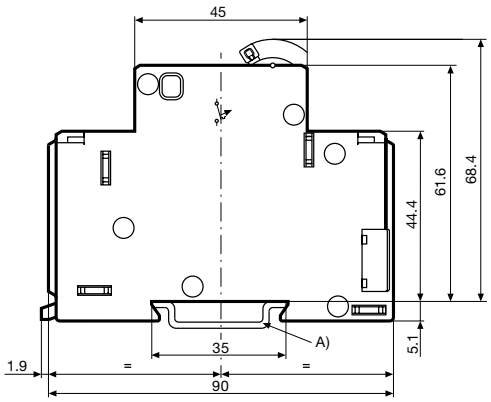
Compliances

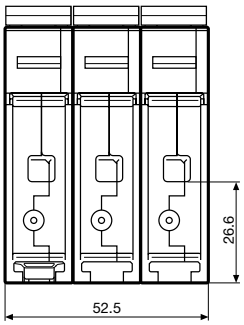
The product complies with following Guide Lines

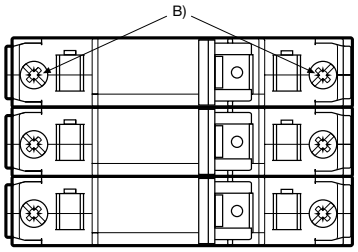
Identification	Details	Initiator	Description
RoHS	RoHS	SCHURTER AG	EU Directive RoHS 2011/65/EU
50	China RoHS	SCHURTER AG	The law SJ / T 11363-2006 (China RoHS) has been in force since 1 March 2007. It is similar to the EU directive RoHS.
REACH	REACH	SCHURTER AG	On 1 June 2007, Regulation (EC) No 1907/2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals 1 (abbreviated as "REACH") entered into force.

Dimension [mm]

AS168X 3 pole





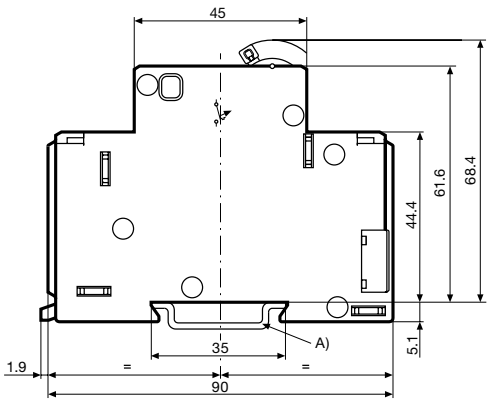


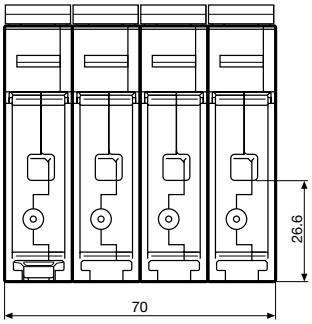
A) 35 mm DIN rail EN 50022

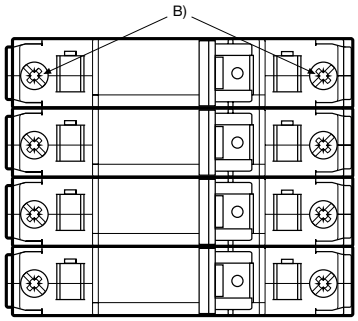
B) Max. torque

Wire crosssection	Max. torque
1.5 ... 10 mm²	2.5 Nm
16 ... 25 mm²	3.1 Nm
AWG #16 ... 8	20 ... 22 lb–in
AWG #6 ... 4	26 ... 28 lb–in

AS168X 3 pole and switched neutral pole







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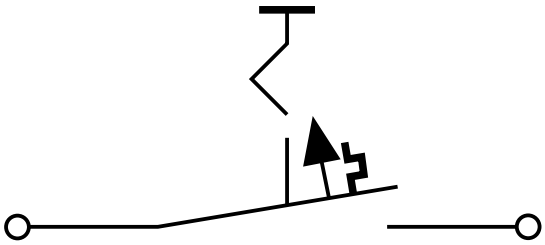
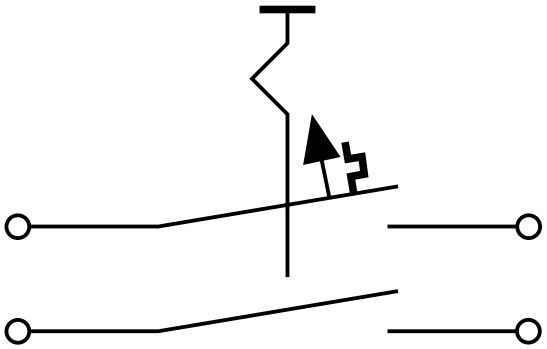
Diagrams

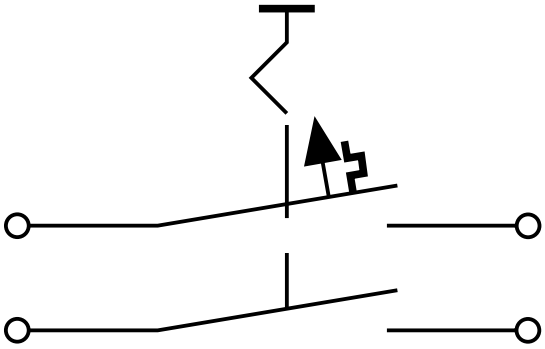
AS168X-CB1...



AS168X-CB1...N



AS168X-CB1... / AS168X-ACBH1



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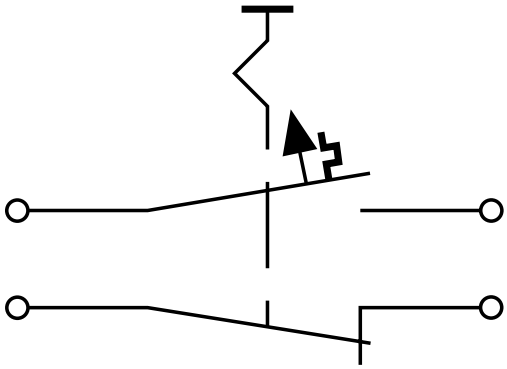
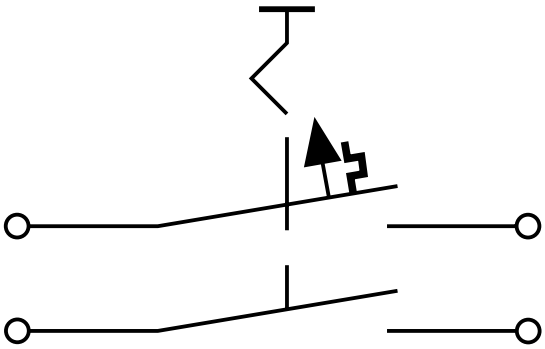


AS168X-CB1... / AS168X-ACBS1



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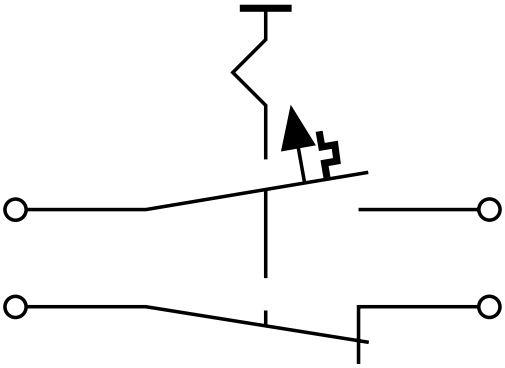
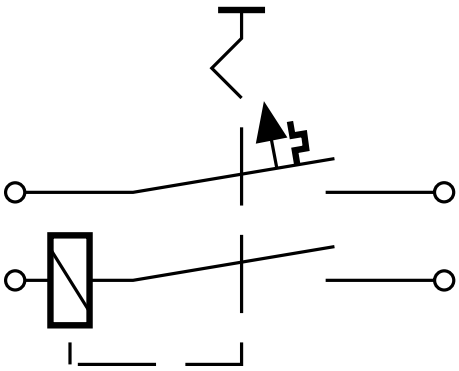


AS168X-CB1... / AS168X-ACBA



Symbol	Standard	Rated current	Rated voltage AC	Conditional short circuit capacity Icn	Rated voltage DC	Conditional short circuit capacity Icn
	UL 508 CSA C22.2 no. 14	0.5 - 52 A	480Y/277 V	5 kA	-	-
	UL 1077	0.5 - 40 A	480 V	10 kA	-	-
	CSA C22.2 no. 235	0.5 - 50 A	480 V	5 kA	65 V	2 kA
	EN 60934	0.5 - 30 A	240/420 V	4.5 kA	65 V	4.5 kA
	GB 17701	-	-	-	-	-

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

Ampere-Horsepower

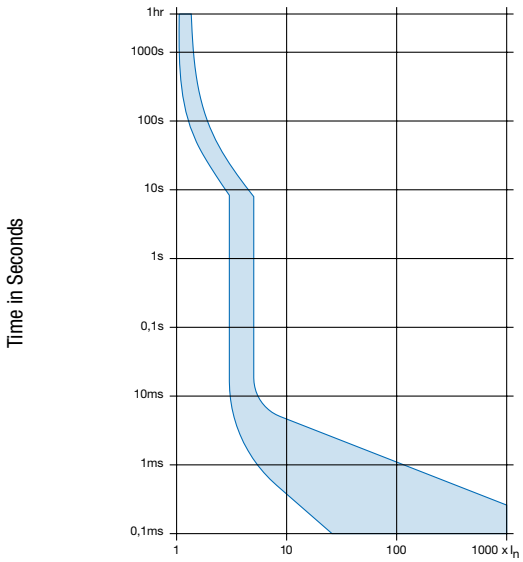
AS168X-CB	Motor Nameplate		Horsepower (FLA & LRC Ratings Apply where no HP Rating is given)							
			Nominal Circuit Voltage, VAC							
			110-120	200	208	220-240	265	**277**	380-415	**440-480**
Rated Current (See Note #1)	FLA Rating	Starting/ LRC Rating						**1 pole**		**2 pole**
0.5A	0.5A	3°								
1A	1A	6°							1/10	
1.5A	1.5A	9°				1/10	1/10	**1/10**	1/6	
2A	2A	12A				1/8	1/6	**1/6**	1/4	
3A	3A	18A	1/10	1/6	1/6	1/4	1/4	**1/3**	1/3	**1/2**
4A	4A	24A	1/8	1/4	1/3	1/3	1/3	**1/3**	1/2	**1**
5A	5A	30A	1/6	1/3	1/3	1/2	1/2	**1/2**	3/4	**1 1/2**
6A	6A	36A	1/4	1/2	1/2	1/2	3/4	**3/4**	1	**2**
7A	7A	42A	1/4	1/2	1/2	3/4	1	**1**	1 1/2	**2**
8A	8A	48A	1/3	3/4	3/4	1	1	**1**	2	**2**
9A	9A	54A	1/3	3/4	1	1	1	**1 1/2**	2	**3**
10A	10A	60A	1/2	1	1	1 1/2	1 1/2	**2**	2	**3**
12A	12A	72A	1/2	1 1/2	1 1/2	2	2	**2**	3	**3**
13A	13A	78A	1/2	1 1/2	1 1/2	2	2	**2**	3	**3**
15A	15A	90A	3/4	2	2	2	3	**3**	3	**5**
16A	16A	96A	1	2	2	2	3	**3**	3	**5**
18A	18A	108A	1	2	2	3	3	**3**	5	**5**
20A	20A	120A	1 1/2	3	3	3	3	**3**	5	**5**
23A	23A	138A	1 1/2	3	3	3	3	**3**	5	**7 1/2**
25A	25A	150A	2	3	3	3	5	**5**	5	**7 1/2**
27A	27A	162A	2	3	3	3	5	**5**	7 1/2	**10**
30A	30A	180A	2	3	3	5	5	**5**	7 1/2	**10**

AS168X-CB	Motor Nameplate		Horsepower (FLA & LRC Ratings Apply where no HP Rating is given)					
			Nominal Circuit Voltage, VAC					
			110-120	200	208	220-240	380-415	**440-480**
Rated Current (See Note #1)	FLA Rating	Starting/ LRC Rating						**3 pole**
0.5A	0.5A							
1A	1A							
1.5A	1.5A	10A					1/2	**1/2**
2A	2A	12.5A					3/4	**3/4**
3A	3A	20A		1/2	1/2	1/2	1	**1 1/2**
4A	4A	25A		3/4	3/4	3/4	1 1/2	**2**
5A	5A	32A	1/2	1	1	1	2	**3**
6A	6A	32A	1/2	1	1	1/2	2	**3**
7A	7A	32A	3/4	1/2	1/2	2	3	**3**
8A	8A	46A	3/4	2	2	2	3	**5**
9A	9A	46A	1	2	2	2	3	**5**
10A	10A	46A	1	2	2	3	5	**5**
12A	12A	63.5A	1 1/2	3	3	3	5	**7 1/2**
13A	13A	63.5A	1 1/2	3	3	3	5	**7 1/2**
15A	15A	81A	2	3	3	3	7 1/2	**10**
16A	16A	81A	2	3	3	5	7 1/2	**10**
18A	18A	81A	2	5	5	5	10	**10**
20A	20A	81A	3	5	5	5	10	**10**
23A	23A	116A	3	5	5	7 1/2	10	**15**
25A	25A	116A	3	5	7 1/2	7 1/2	10	**15**
27A	27A	145A	3	7 1/2	7 1/2	7 1/2	15	**20**
30A	30A	145A	3	7 1/2	7 1/2	10	15	**20**

Note #1: For AC motor circuit nameplate FLA loads, AC general-use loades, AC resistance loads

Time-Current-Curves

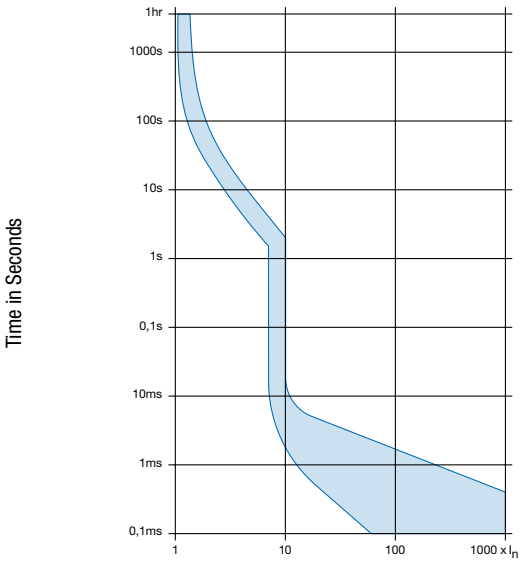
Version F / Magnetic 3-5 xI_n



Multiple of Rated Current In

Reference Temperature +23°

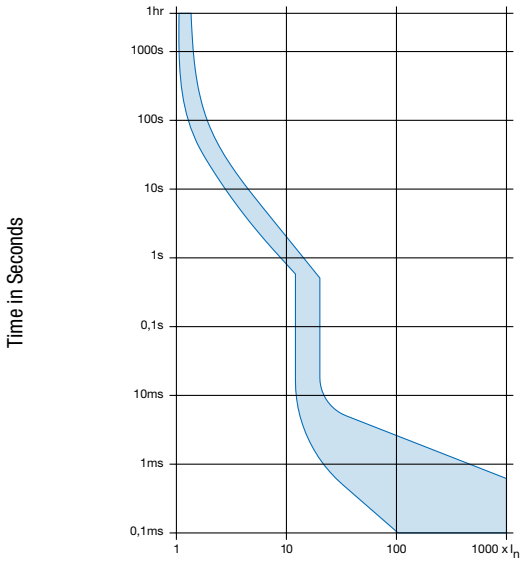
Version G / Magnetic 6-10 xI_n



Multiple of Rated Current In

Reference Temperature +23°

Version H / Magnetic 12-20 xI_n



Multiple of Rated Current In

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
3-pole	3

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

Tripping characteristics	Configuration key
1.0-1.25xIn / 3-5xIn / 0.5-52 A	F
1.0-1.25xIn / 6-10xIn / 0.5-52 A	G
1.0-1.25xIn / 12-20xIn / 0.5-52 A	H

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
8.0 A	080
9.0 A	090
10.0 A	100

Other rated currents on request

Rated current	Configuration key
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
52.0 A	520

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	
1.0-1.25xIn / 3-5xIn / 0.5-52 A	30.0 A		AS168X-CB3F300	4420.0742	
1.0-1.25xIn / 3-5xIn / 0.5-52 A	35.0 A		AS168X-CB3F350	4420.0994	
1.0-1.25xIn / 6-10xIn / 0.5-52 A	2.0 A		AS168X-CB3G020	4420.0402	
1.0-1.25xIn / 6-10xIn / 0.5-52 A	3.0 A		AS168X-CB3G030	4420.0400	
1.0-1.25xIn / 6-10xIn / 0.5-52 A	4.0 A		AS168X-CB3G040	4420.0388	
1.0-1.25xIn / 6-10xIn / 0.5-52 A	5.0 A		AS168X-CB3G050	4420.0301	
1.0-1.25xIn / 6-10xIn / 0.5-52 A	10.0 A		AS168X-CB3G100	4420.0241	
1.0-1.25xIn / 6-10xIn / 0.5-52 A	15.0 A		AS168X-CB3G150	4420.0204	▮
1.0-1.25xIn / 6-10xIn / 0.5-52 A	20.0 A		AS168X-CB3G200	4420.0198	▮
1.0-1.25xIn / 6-10xIn / 0.5-52 A	25.0 A		AS168X-CB3G250	4420.0242	
1.0-1.25xIn / 6-10xIn / 0.5-52 A	30.0 A		AS168X-CB3G300	4420.0210	▮
1.0-1.25xIn / 6-10xIn / 0.5-52 A	32.0 A		AS168X-CB3G320	4420.0323	
1.0-1.25xIn / 6-10xIn / 0.5-52 A	40.0 A		AS168X-CB3G400	4420.0199	
1.0-1.25xIn / 12-20xIn / 0.5-52 A	15.0 A		AS168X-CB3H150	4420.0569	▮
1.0-1.25xIn / 12-20xIn / 0.5-52 A	20.0 A		AS168X-CB3H200	4420.0308	
1.0-1.25xIn / 12-20xIn / 0.5-52 A	25.0 A		AS168X-CB3H250	4420.0542	
1.0-1.25xIn / 12-20xIn / 0.5-52 A	30.0 A		AS168X-CB3H300	4420.0287	
1.0-1.25xIn / 12-20xIn / 0.5-52 A	40.0 A		AS168X-CB3H400	4420.0372	
1.0-1.25xIn / 12-20xIn / 0.5-52 A	50.0 A		AS168X-CB3H500	4420.0762	

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Packaging Unit 1 Pcs

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