

Effect of ambient temperature

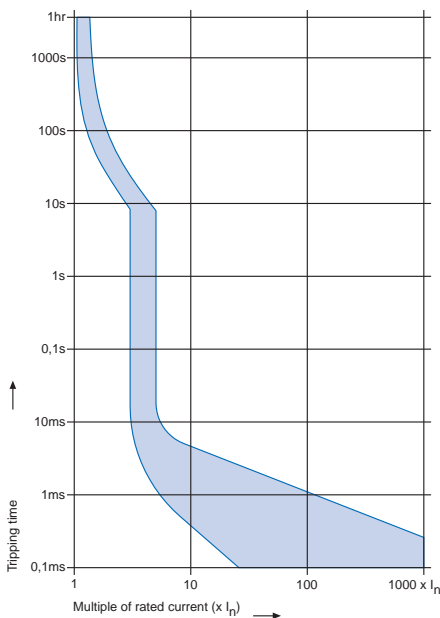
The unit is calibrated for an ambient temperature of +23°C. To determine the rated current for a lower or higher ambient temperature, use a correction factor from the table below:

Ambient temperature [°C]	Correction factor
-20	0,80
-5	0,87
0	0,90
+10	0,95
+23	1,00
+30	1,05
+40	1,10
+50	1,20
+60	1,30

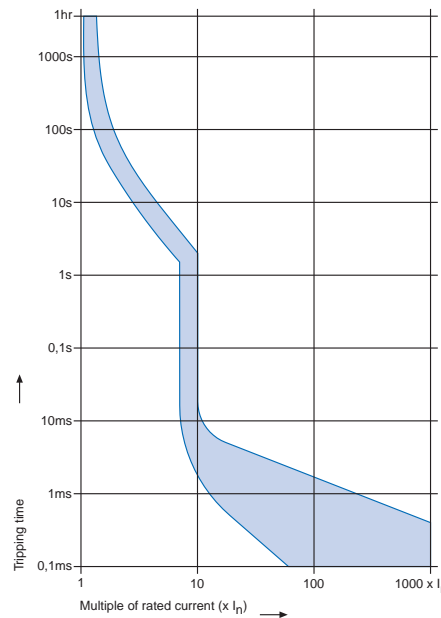
Example

Rated current at +23°C 10 A
 Ambient temperature +50°C
 Correction factor 1,2
 Chosen rated current at
 +50°C ambient temperature
10 A x 1,2 = 12 A

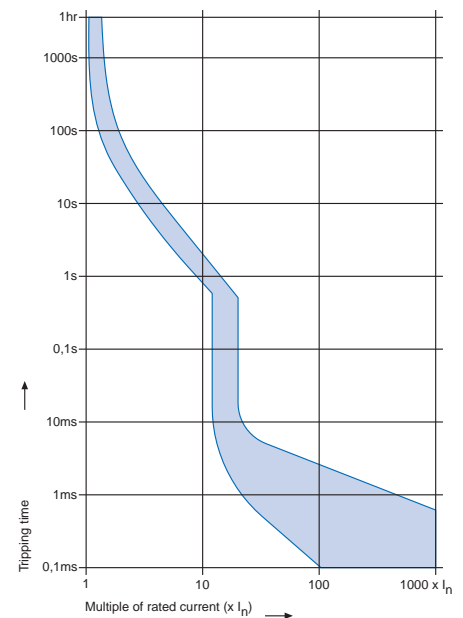
Tripping characteristic F



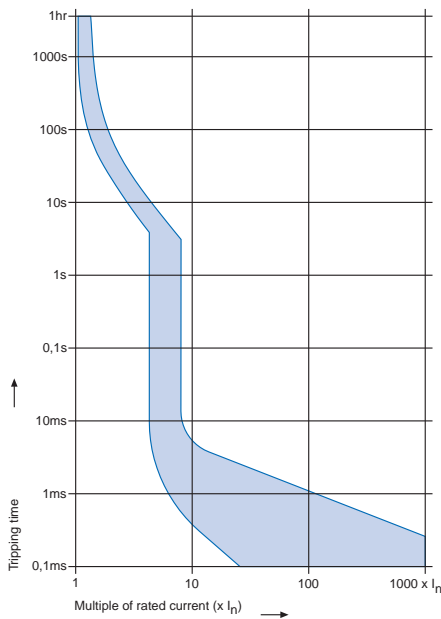
Tripping characteristic G



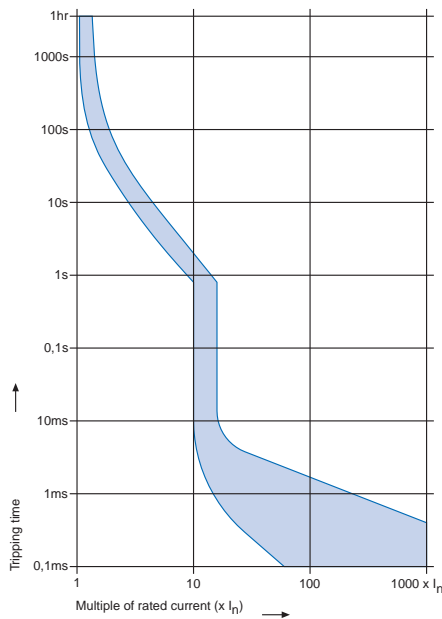
Tripping characteristic H



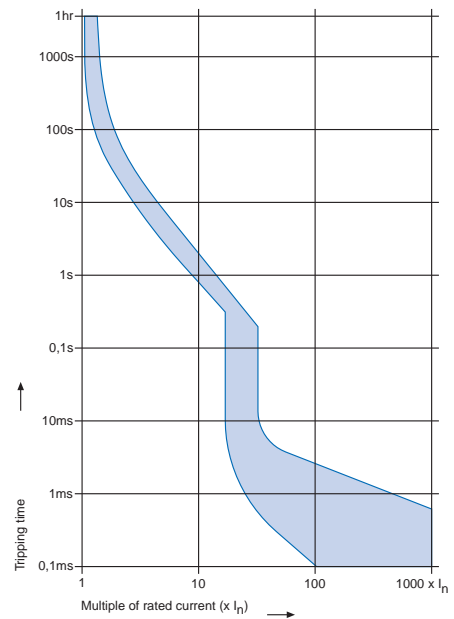
Tripping characteristic DF



Tripping characteristic DG



Tripping characteristic DH



Technical data

Pole:

Rated voltage U_e	AC versions F; G; H DC versions DF; DG; DH	AC 480/277 V; DC 65 V DC 180 V 1 pole DC 360 V 2 – 4 pole
Rated current I_n	See approvals, page 282	AC/DC 0,5 – 50 A
Short circuit capacity	Max. I_{CN}	10,000 A
Endurance	Number of operating cycles at I_n	6000
Type of tripping	<ul style="list-style-type: none"> • Thermal magnetic • Positively trip-free 	
Type of actuation	Manual ON/OFF	S-type
Permissible wire cross section		1,5 – 25 mm ²

Switched neutral:

Rated voltage U_e Rated current I_n	AC 277 V AC/DC 65 A
Function	The switched neutral pole contact closes before and opens after the protected poles. Automatic activation is effected by the protected poles, manual actuation by the linked handles.

Technical data (continued)




Add-on modules:

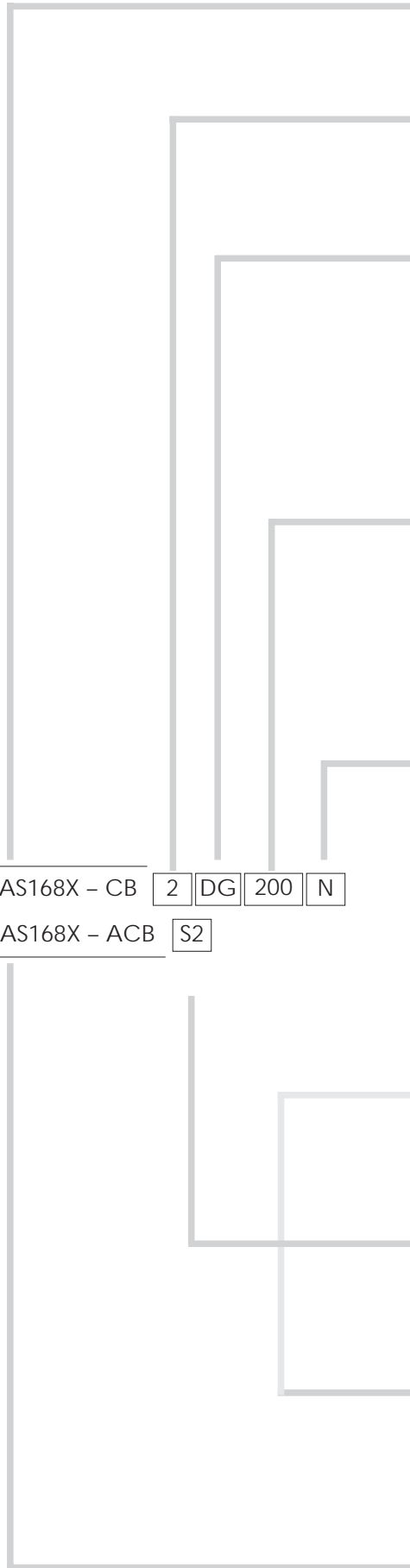
Auxiliary contact H1 & H2 and Signal contact S1 & S2	Rated voltage U_e AC 277 V	Rated current I_n 6 A
Functional auxiliary contact module	Type H1 (assumes the same contact position) Type H2 (assumes the opposite position)	Actuation of the contact is determined by the condition of the handle position of the adjacent poles.
Functional signal contact	Type S1 (assumes the same contact position) Type S2 (assumes the opposite position)	The signal contact operates due to a thermal magnetic tripping and must be reset by hand.
Relay trip module	Type Voltage range AC/DC	Impedance at 50/60 Hz
	A1 5 – 12 V	1.1 Ω
	A2 10 – 24 V	4.7 Ω
	A3 20 – 48 V	16 Ω
	A4 40 – 110 V	63 Ω
	A5 90 – 240 V	395 Ω
Function of relay trip module		The module allows remote tripping by applying a voltage between the terminals. Operating time 8 – 16 ms.

General data:

Dielectric strength		AC 2000 V
Vibration resistance		0,75 mm amplitude, 10 – 57 Hz
Shock resistance	Waveform 11 ms	25 g
Protection against electric shock	Finger safe per IEC 529	IP20
Permissible ambient temperature		-20°C to +60°C
Weight	1 pole Switched neutral Auxiliary contact Signal contact Relay trip module	ca. 130 g ca. 130 g ca. 100 g ca. 100 g ca. 120 g

Approvals

		Number of protected poles	Rated current range		Rated voltage	
			AC	AC	DC	DC
	UL 1077	1	0,5 – 50 A	277 V	0,5 – 40 A	180 V
		2	0,5 – 50 A	480 V	0,5 – 40 A	360 V
		3	0,5 – 50 A	480 V	0,5 – 40 A	360 V
		4	0,5 – 50 A	480 / 277 V		
	CSA 22.2 / 235	1	0,5 – 50 A	277 V	0,5 – 40 A	180 V
		2	0,5 – 50 A	480 V	0,5 – 40 A	360 V
		3	0,5 – 50 A	480 V	0,5 – 40 A	360 V
		4	0,5 – 50 A	480 / 277 V		
	VDE 0642	1	0,5 – 40 A	420/240 V	0,5 – 40 A	120 V
		2	0,5 – 40 A	420 V	0,5 – 40 A	240 V
		3	0,5 – 40 A	420 V	0,5 – 40 A	360 V
		4	0,5 – 40 A	420/240 V		

Order code

Basic type

Thermal magnetic high performance circuit breaker

Number of poles

- 1
- 2
- 3
- 4

Tripping characteristics

	AC + DC thermal	AC magnetic	DC magnetic	Available currents
F	Hold 1,05 xI _n / >1h	3 – 5 xI _n		0,5 – 50 A
G		6 – 10 xI _n		0,5 – 50 A
H		12 – 20 xI _n		0,5 – 50 A
DF			4,5 – 8 xI _n	0,5 – 40 A
DG	Tripping 1,35 xI _n / <1h		9 – 16 xI _n	0,5 – 40 A
DH			18 – 32 xI _n	6,0 – 40 A

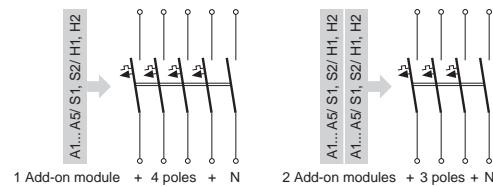
Rated current

Code	I _n (A)	Code	I _n (A)	Code	I _n (A)	Code	I _n (A)
005	0.5	060	6.0	160	16.0	320	32.0
010	1.0	070	7.0	180	18.0	350	35.0
015	1.5	080	8.0	200	20.0	400	40.0
020	2.0	090	9.0	230	23.0	450	45.0
030	3.0	100	10.0	250	25.0	500	50.0
040	4.0	120	12.0	270	27.0		
050	5.0	150	15.0	300	30.0		

Switched neutral pole

N

 AS168X – CB 2 DG 200 N

 AS168X – ACB S2
Maximum combination

Auxiliary contact

- H1 Assumes the same contact position as the protected poles
- H2 Assumes the opposite contact position as the protected poles

Signal contact

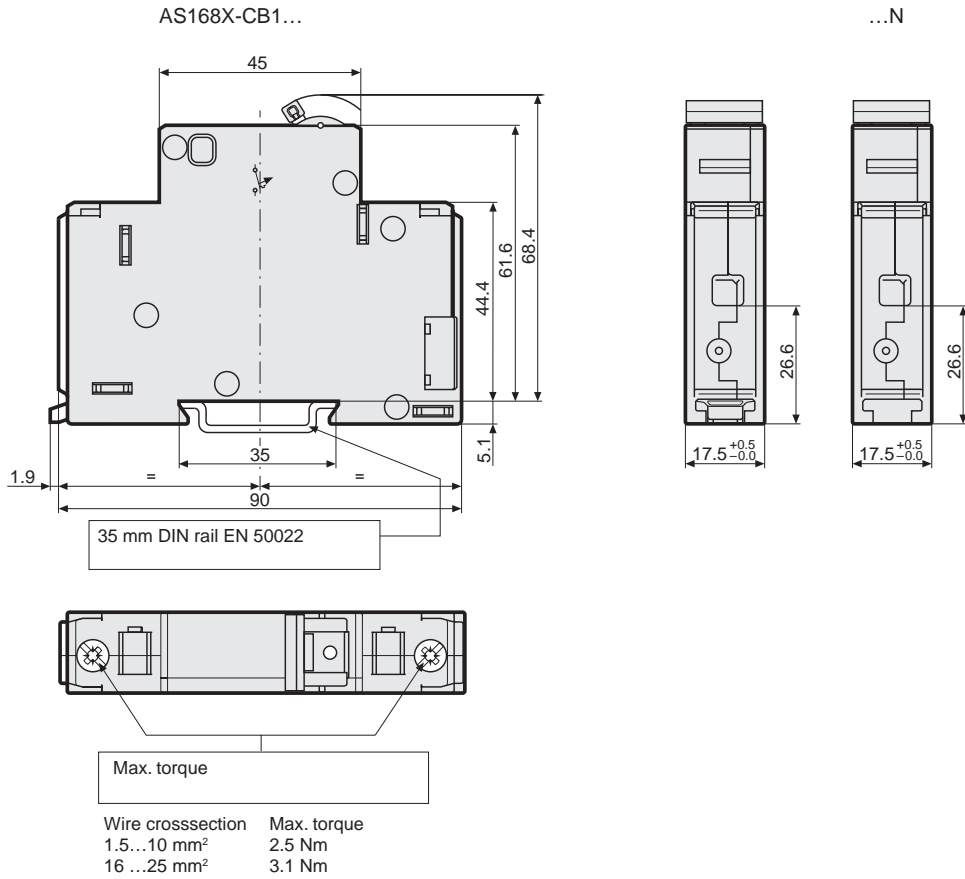
- S1 Assumes the same contact position as the protected poles
- S2 Assumes the opposite contact position as the protected poles

Relay trip module

- A1 AC/DC 5 – 12 V
- A2 AC/DC 10 – 24 V
- A3 AC/DC 20 – 48 V
- A4 AC/DC 40 – 110 V
- A5 AC/DC 90 – 240 V

Accessories
Must be ordered separately

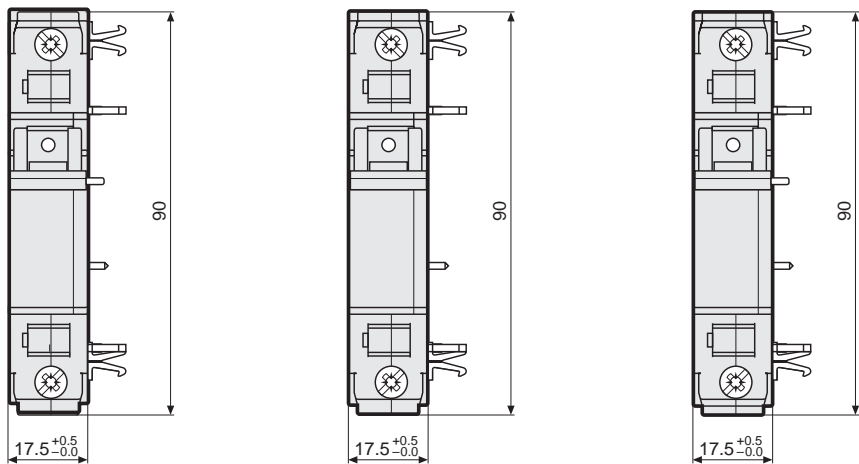
DIN rail mounting



AS168X-ACBH.

AS168X-ACBS.

AS168X-ACBA.



Schematic diagrams

