

GHG 622 miniature circuit breaker (MCB)



size 4



size 3



size 2



size 1

Technical data

MCB 0.5 A up to 63 A

Marking accd. to 2014/34/EU	⊕ II 2 G Ex de IIB/IIC Gb or Ex de [ia] ib IIB/IIC Gb			
EC-Type Examination Certificate	BVS 09 ATEX E 145 U			
Marking accd. to IECEx	Ex de IIB/IIC Gb			
IECEx Certificate of Conformity	IECEx BVS 10.0002 U			
Application temperature ¹⁾	-20 °C up to +55 °C (IIC) -45 °C up to +55 °C (IIB) (size 1 and 2)			
Operating temperature range	-20 °C up to +110 °C (IIC) -45 °C up to +110 °C (IIB) (size 1 and 2)			
Rated voltage	main contact	max. 400 V AC (+ 10 %)		
	aux. contact	max. 250 V AC		
Rated current	main contact	0.5 A to 63 A		
	aux. contact	max. 5 A		
Rated switching capacity 2/3 phase	10 kA			
	230 V AC (133/230 V AC) kA/cos φ	10/0.5		
	400 V AC (230/400 V AC) kA/cos φ	10/0.5		
Back-up fuse depend on rated current	up to 100 A			
Connecting terminals	main contact size 1 - 4	1 x 1.5 mm ² - 1 x 16 mm ² fine wire with wire end sleeve/single wire 2 x 1.5 mm ² - 2 x 6 mm ² fine wire with wire end sleeve/single wire up to 2 x 16 mm ² with cable lug GHG9059025R0010 up to 1 x 25 mm ² or 2 x 25 mm ² with cable lug GHG5101916R0001		
	auxiliary-/signal contact	1.5 mm ² up to 2.5 mm ² fine wire with wire end sleeve/single wire		
Module size	1	2	3	4
No of main contacts	1	2	3	4
No. of auxiliary contacts	2	3	4	5
Weight	0.6 kg	0.9 kg	1.2 kg	1.6 kg
Enclosure material	Polyamide			
Padlocking facility	in OFF position with a commercially available padlock			

¹⁾ The limits of the operating temperature range and the max. permissible temperature rise of the internal components have to be taken into account. See also page 2.6.19.



size 1



size 2



size 3



size 4

Order Code miniature circuit breaker (MCB): 0.5 up to 63 A

GHG 622 XXXX R0YYY

1. Contacts

Additional components	Contact arrangement					Circuit	No of main contacts (XXXX)		No of main contacts (XXXX)		No of main contacts (XXXX)		No of main contacts (XXXX)	
	Main contact	Aux. contact	Signal contact	Overload release	Undervoltage release		1 pole module size	2 pole module size	3 pole module size	4 pole module size				
none	x	--	--	--	--	--	1101	1	2101	2	3101	3	4101	4
one additional component	x	1 NO	--	--	--	1	1102	1	2102	2	3102	3		
	x	1 NC	--	--	--	2	1103	1	2103	2	3103	3		
	x	1 C/O	--	--	--	3	2104	2					4102	4
	x	2 NO	--	--	--	4					4118	4		
	x	1 NO + 1 C/O	--	--	--	5			3112	3				
	x	1 NO + 1 C/O	--	--	--						4114	4		
	x	--	1 C/O	--	--	8	2105	2	3113	3	4109	4	4103	4
	x	--	--	12-60 V	--	9	2106	2	3105	3	4107	4		
	x	--	--	110 - 415 V	--	9	2107	2	3106	3	4108	4		
	x	--	--	--	24 V AC	10			3107	3	4104	4		
x	--	--	--	110 V AC	10			3108	3	4105	4			
x	--	--	--	230 V AC	10			3109	3	4106	4			
two additional components	x	1 NO	1 C/O	--	--	1+8							4113	4
	x	1 C/O	1 C/O	--	--	3+8			3104	3	4110	4		
	x	1 NO	--	12-60 V	--	1+9			3110	3				
	x	1 C/O	--	12-60 V	--	2+9			3111	3				
	x	--	1 C/O	12-60 V	--	8+9			4111	4				
	x	--	1 C/O	110 - 415 V	--	8+9			4112	4				
	x	--	1 C/O	--	24 V AC	8+10			4115	4				
	x	--	1 C/O	--	110 V AC	8+10			4116	4				
x	--	1 C/O	--	230 V AC	8+10			4117	4					
three additional components	x	1 NC	1 C/O	12-60 V	--	1+8+9			4119	4				
	x	1 NC	1 C/O	110 - 415 V	--	1+8+9			4120	4				
	x	1 NO + 1 NC	1 C/O	--	24 V AC	1+8+10			4121	4				
	x	1 NO + 1 NC	1 C/O	--	110 V AC	1+8+10			4122	4				
	x	1 NO + 1 NC	1 C/O	--	230 V AC	1+8+10			4123	4				
	x	1 NO + 1 NC	1 C/O	--	24 V AC	1+8+10			4124	4				
	x	1 NO + 1 NC	--	--	230 V AC	1+8+10					4125	4		

Example: 2-pole MCB with two additional contacts (1 x aux. contact 1NO + 1 overload release 12 - 60 V)
 XXXX=3110 (module size 3) --> GHG 622 3110 R0YYY

GHG 622 XXXX ROYYY

2. Tripping current

Built-in components MCBs: order code MCB 0.5 up to 63 A - Icn = 6 kA

Tripping Current	Characteristic K			Characteristic Z			Characteristic B			Characteristic C		
	Max. back-up fuse gG	Powerloss per pole	YYY	Max. back-up fuse gG	Powerloss per pole	YYY	Max. back-up fuse gG	Powerloss per pole	YYY	Max. back-up fuse gG	Powerloss per pole	YYY
0.5 A	not necessary	1.6 W	513	not necessary	2.5 W	581				not necessary	1.4 W	621
1 A		1.6 W	515		2.3 W	582			1.4 W		622	
1.6 A		1.8 W	516		2.8 W	583			1.6 W		623	
2 A		1.9 W	517		2.5 W	584			1.8 W		624	
3 A	20 A	1.5 W	518	20 A	1.8 W	585			20 A	1.3 W	625	
4 A	25 A	2.0 W	519	20 A	2.4 W	586			20 A	1.8 W	626	
6 A	63 A	1.9 W	520	35 A	3.7 W	587	63 A	2.0 W	601	40 A	2.0 W	627
8 A	63 A	2.5 W	521	40 A	3.45 W	588			63 A	1.0 W	628	
10 A	63 A	1.26 W	522	63 A	1.7 W	589	100 A	1.3 W	602	100 A	1.3 W	629
13 A	63 A	1.26 W	523				100 A	2.3 W	603	100 A	2.3 W	630
16 A	80 A	2.0 W	524	63 A	2.8 W	590	100 A	1.8 W	604	100 A	1.8 W	631
20 A	80 A	2.7 W	525	80 A	2.4 W	591	100 A	2.5 W	605	100 A	2.5 W	632
25 A	100 A	2.9 W	526	80 A	2.6 W	592	100 A	3.2 W	606	100 A	3.2 W	633
32 A	100 A	3.6 W	527	100 A	2.9 W	593	100 A	3.7 W	607	100 A	3.7 W	634
40 A	125 A	4.5 W	528	100 A	4.1 W	594	125 A	4.8 W	608	125 A	4.8 W	635
50 A	160 A	2.9 W	529	125 A	4.4 W	595	160 A	3.25 W	609	160 A	3.25 W	636
63 A	160 A	5.2 W	530	125 A	5.2 W	596	160 A	4.8 W	610	160 A	4.8W	637

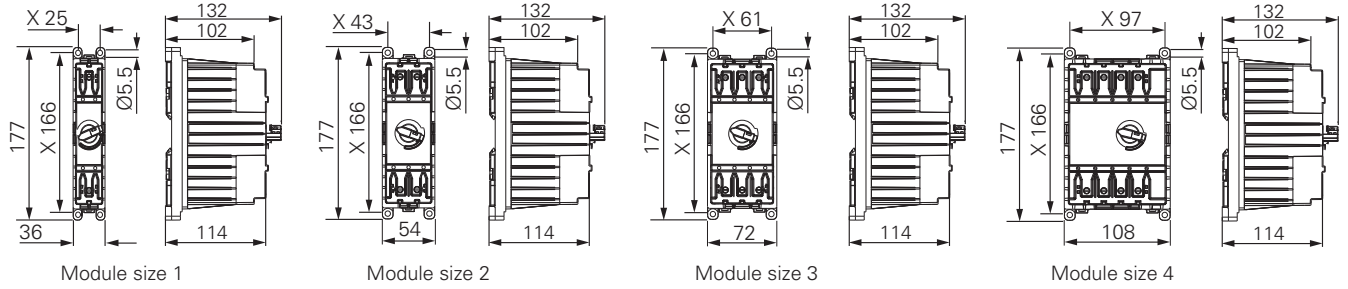
Built-in components MCBs: order code MCB 0.5 up to 63 - Icn = 10 kA

Tripping current	Characteristic K			Characteristic Z			Characteristic B			Characteristic C		
	Max. back-up fuse gG	Powerloss per pole	YYY	Max. back-up fuse gG	Powerloss per pole	YYY	Max. back-up fuse gG	Powerloss per pole	YYY	Max. back-up fuse gG	Powerloss per pole	YYY
0.5 A	not necessary	1.6 W	013							not necessary	1.4 W	121
1 A		1.6 W	015						1.4 W		122	
1.6 A		1.8 W	016						1.6 W		123	
2 A		1.9 W	017						1.8 W		124	
3 A	20 A	1.5 W	018						20 A	1.3 W	125	
4 A	25 A	2.0 W	019						20 A	1.8 W	126	
6 A	63 A	1.9 W	020				63 A	2.0 W	101	40 A	2.0 W	127
8 A	63 A	2.5 W	021						63 A	1.0 W	128	
10 A	63 A	1.3 W	022				100 A	1.3 W	102	100 A	1.3 W	129
13 A	63 A	1.3 W	023				100 A	2.3 W	103	100 A	2.3 W	130
16 A	80 A	2.0 W	024				100 A	1.8 W	104	100 A	1.8 W	131
20 A	80 A	2.7 W	025				100 A	2.5 W	105	100 A	2.5 W	132
25 A	100 A	2.9 W	026				100 A	3.2 W	106	100 A	3.2 W	133
32 A	100 A	3.6 W	027				100 A	3.7 W	107	100 A	3.7 W	134
40 A	125 A	4.5 W	028				125 A	4.8 W	108	125 A	4.8 W	135
50 A	160 A	2.9 W	029				160 A	3.3 W	109	160 A	3.3 W	136
63 A	160 A	5.2 W	030				160 A	4.8 W	110	160 A	4.8 W	137

Built-in components MCBs: order code MCB 0.5 up to 63 A - Icn = 15/25 kA

Tripping current	Characteristic K			Characteristic Z			Characteristic B			Characteristic C		
	Max. Back-up fuse gG	Powerloss per pole	YYY	Max. Back-up fuse gG	Powerloss per pole	YYY	Max. Back-up fuse gG	Powerloss per pole	YYY	Max. Back-up fuse gG	Powerloss per pole	YYY
0.5 A	not necessary	1.4 W	263	not necessary	2.5 W	331				not necessary	1.4 W	371
1 A		1.4 W	265		2.3 W	332			1.4 W		372	
1.6 A		1.6 W	266		2.8 W	333			1.6 W		373	
2 A		1.8 W	267		2.5 W	334			1.8 W		374	
3 A	25 A	1.9 W	268	25 A	1.9 W	335			25 A	1.9W	375	
4 A	30 A	2.4 W	269	35 A	2.6 W	336			25 A	2.4 W	376	
6 A	63 A	2.2 W	270	63 A	3.7 W	337	63 A	2.2 W	351	63 A	2.2 W	377
8 A	80 A	2.9 W	271	80 A	3.5 W	338			63 A	2.9 W	378	
10 A	100 A	1.4 W	272	100 A	2.1 W	339	80 A	1.4 W	352	80 A	1.4 W	379
13 A	100 A	2.3 W	273				80 A	2.3 W	353	80 A	2.3 W	380
16 A	100 A	2.5 W	274	100 A	2.8 W	340	100 A	2.5 W	354	100 A	2.5 W	381
20 A	100 A	2.9 W	275	100 A	2.9 W	341	100 A	2.9 W	355	100 A	2.9 W	382
25 A	125 A	3.5 W	276	125 A	3.5 W	342	100 A	3.5 W	356	100 A	3.5 W	383
32 A	160 A	4.2 W	277	160 A	4.2 W	343	125 A	4.2 W	357	125 A	4.2 W	384
40 A	160 A	6.4 W	278	160 A	6.4 W	344	125 A	6.4 W	358	125 A	6.4 W	385
50 A	160A	3.0 W	279	160 A	4.4 W	345	160 A	3.0 W	359	160 A	3.0 W	386
63 A	160 A	5.6 W	280	160 A	5.2 W	346	160 A	5.6 W	360	160 A	5.6 W	387

Dimension drawing / termination diagram

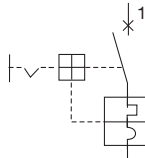


Module size 1

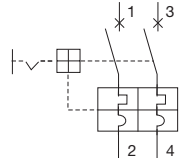
Module size 2

Module size 3

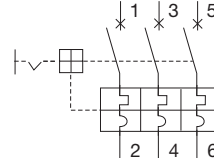
Module size 4



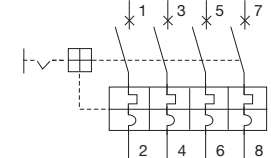
1. 1-pole MCB



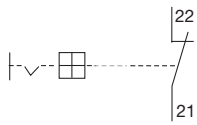
2. 2-pole MCB



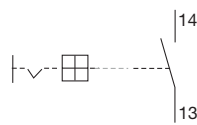
3. 3-pole MCB



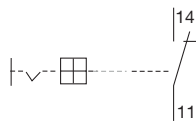
4. 4-pole MCB



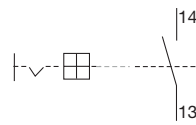
5. HK 1 NC



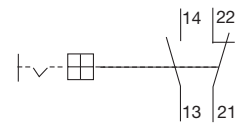
6. HK 1 NO



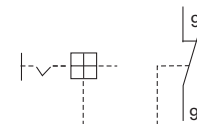
7. HK 1 C/O



8. HK 2 NO

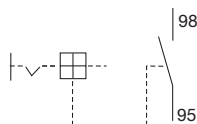


9. HK 1 NO + 1 NC

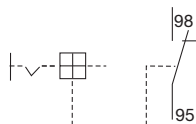


10. SK 1

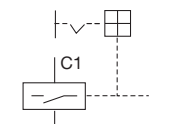
SK: Signal contact



11. SK 1 NO

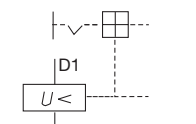


12. SK 1 C/O



13. AA

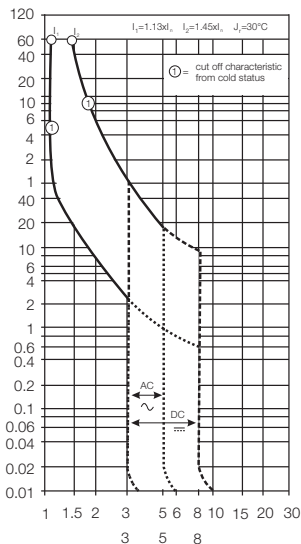
AA: shunt opening release



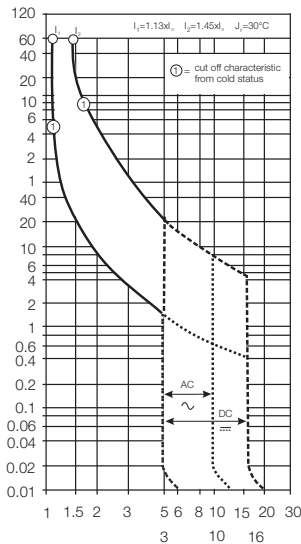
14. UA

UA: undervoltage trip

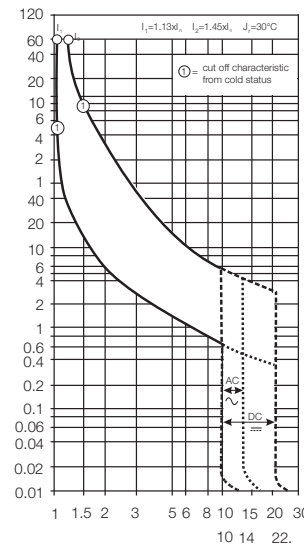
Tripping characteristic



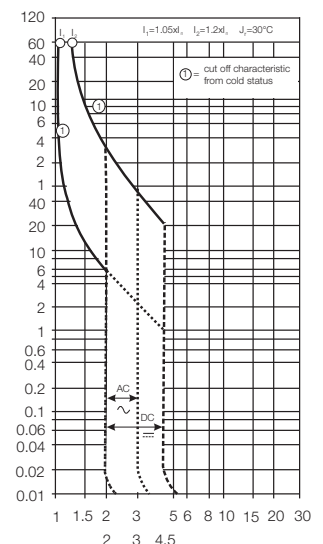
MCB characteristic B



MCB characteristic C



MCB characteristic K



MCB characteristic Z