TeSys GV2

0.06 to 15 kW



TeSys protection components

Magnetic motor circuit breakers GV2L

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GV2L10

Motor circuit breakers from 0.09 to 15 kW

GV2L: Control by rotary knob, connection by screw clamp terminals

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3									Magnetic protection rating	Tripping current Id ± 20 %	Use in association with thermal overload relay (class 10 A)	Reference
400/415 V			500 V			690 V						
P	Icu	Ics (1)	P	Icu	Ics (1)	P	Icu	Ics (1)				
kW	kA		kW	kA		kW	kA		A	A		
0.09	★	★	**–**	–	–	**–**	–	–	0.4	5	LRD 03	**GV2L03**
0.12	★	★	**–**	–	–	**0.37**	★	★	0.63	8	LRD 04	**GV2L04**
0.18	★	★	**–**	–	–	**–**	–	–	0.63	8	LRD 04	**GV2L04**
–	–	–	**–**	–	–	**0.55**	★	★	1	13	LRD 05	**GV2L05**
0.25	★	★	**–**	–	–	**–**	–	–	1	13	LRD 05	**GV2L05**
–	–	–	**–**	–	–	**0.75**	★	★	1	13	LRD 06	**GV2L05**
0.37	★	★	**0.37**	★	★	**–**	–	–	1	13	LRD 05	**GV2L05**
0.55	★	★	**0.55**	★	★	**1.1**	★	★	1.6	22.5	LRD 06	**GV2L06**
–	–	–	**0.75**	★	★	**–**	–	–	1.6	22.5	LRD 06	**GV2L06**
0.75	★	★	**1.1**	★	★	**1.5**	4	100	2.5	33.5	LRD 07	**GV2L07**
1.1	–	–	**–**	–	–	**–**	–	–			LRD 08	**GV2L08**
1.5	★	★	**1.5**	★	★	**3**	4	100	4	51	LRD 08	**GV2L08**
–	–	–	**–**	–	–	**–**	–	–			LRD 08	**GV2L08**
2.2	★	★	**3**	★	★	**4**	4	100	6.3	78	LRD 10	**GV2L10**
3	★	★	**4**	10	100	**5.5**	4	100	10	138	LRD 12	**GV2L14**
4	–	–	**–**	–	–	**–**	–	–			LRD 14	**GV2L14**
–	–	–	**–**	–	–	**7.5**	4	100	10	138	LRD 14	**GV2L14**
–	–	–	**–**	–	–	**9**	4	100	14	170	LRD 16	**GV2L16**
5.5	50	50	**7.5**	10	75	**11**	4	100	14	170	LRD 16	**GV2L16**
7.5	50	50	**9**	10	75	**15**	4	100	18	223	LRD 21	**GV2L20**
9	50	50	**11**	10	75	**18.5**	4	100	25	327	LRD 22	**GV2L22**
11	50	50	**15**	10	75	**–**	–	–	25	327	LRD 22	**GV2L22**
15	50	50	**18.5**	10	75	**22**	4	100	32	416	LRD 32	**GV2L32**

(1) As % of Icu. Associated current limiter or fuses, where required.
★ > 100 kA.

TeSys protection components

Magnetic motor circuit breakers GV2LE

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GV2LE10

Magnetic motor circuit breakers from 0.06 to 15 kW

GV2LE: control by rocker lever, connection by screw clamp terminals

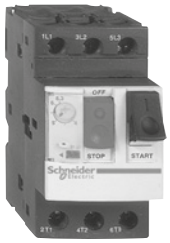
Standard power ratings of 3-phase motors 50/60 Hz in category AC-3									Magnetic protection rating	Tripping current Id ± 20 %	Use in association with thermal overload relay	Reference
400/415 V			500 V			690 V						
P	Icu	Ics (1)	P	Icu	Ics (1)	P	Icu	Ics (1)				
kW	kA		kW	kA		kW	kA		A	A		
0.06	★	★	**–**	–	–	**–**	–	–	0.4	5	LR2 K0302	**GV2LE03**
0.09	★	★	**–**	–	–	**–**	–	–	0.4	5	LR2 K0304	**GV2LE03**
0.12	★	★	**–**	–	–	**0.37**	★	★	0.63	8	LR2 K0304	**GV2LE04**
0.18	★	★	**–**	–	–	**–**	–	–	0.63	8	LR2 K0305	**GV2LE04**
–	–	–	**–**	–	–	**0.55**	★	★	1	13	LR2 K0305	**GV2LE05**
0.25	★	★	**–**	–	–	**–**	–	–	1	13	LR2 K0306	**GV2LE05**
–	–	–	**–**	–	–	**0.75**	★	★	1	13	LR2 K0306	**GV2LE05**
0.37	★	★	**0.37**	★	★	**–**	–	–	1	13	LR2 K0306	**GV2LE05**
0.55	★	★	**0.55**	★	★	**1.1**	★	★	1.6	22.5	LR2 K0307	**GV2LE06**
–	–	–	**0.75**	★	★	**–**	–	–	1.6	22.5	LR2 K0307	**GV2LE06**
0.75	★	★	**1.1**	★	★	**1.5**	3	75	2.5	33.5	LR2 K0308	**GV2LE07**
1.1	★	★	**–**	–	–	**–**	–	–	2.5	33.5	LR2 K0308	**GV2LE07**
1.5	★	★	**1.5**	★	★	**3**	3	75	4	51	LR2 K0310	**GV2LE08**
–	–	–	**2.2**	★	★	**–**	–	–	4	51	LR2 K0312	**GV2LE08**
2.2	★	★	**3**	50	100	**4**	3	75	6.3	78	LR2 K0312	**GV2LE10**
3	★	★	**4**	10	100	**5.5**	3	75	10	138	LR2 K0314	**GV2LE14**
4	★	★	**5.5**	10	100	**–**	–	–	10	138	LR2 K0316	**GV2LE14**
–	–	–	**–**	–	–	**7.5**	3	75	10	138	LRD 14	**GV2LE14**
–	–	–	**–**	–	–	**9**	3	75	14	170	LRD 16	**GV2LE16**
5.5	15	50	**7.5**	6	75	**11**	3	75	14	170	LR2 K0321	**GV2LE16**
7.5	15	50	**9**	6	75	**15**	3	75	18	223	LRD 21	**GV2LE20**
9	15	40	**11**	4	75	**18.5**	3	75	25	327	LRD 22	**GV2LE22**
11	15	40	**15**	4	75	**–**	–	–	25	327	LRD 22	**GV2LE22**
15	10	50	**18.5**	4	75	**22**	3	75	32	416	LRD 32	**GV2LE32**

(1) As % of Icu.
★ > 100 kA.

TeSys protection components

Thermal-magnetic motor circuit breakers GV2ME

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GV2ME10

Motor circuit breakers from 0.06 to 15 kW / 400 V, with screw clamp terminals

GV2ME with pushbutton control

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3									Setting range of thermal trips (2)	Magnetic tripping current Id ± 20 %	Reference
400/415 V			500 V			690 V					
P	Icu	Ics (1)	P	Icu	Ics (1)	P	Icu	Ics (1)			
kW	kA	%	kW	kA	%	kW	kA	%	A	A	
–	–	–	–	–	–	–	–	–	0.1…0.16	1.5	**GV2ME01**
0.06	★	★	–	–	–	–	–	–	0.16…0.25	2.4	**GV2ME02**
0.09	★	★	–	–	–	–	–	–	0.25…0.40	5	**GV2ME03**
0.12	★	★	–	–	–	**0.37**	★	★	0.40…0.63	8	**GV2ME04**
0.18	★	★	–	–	–	–	–	–			
0.25	★	★	–	–	–	**0.55**	★	★	0.63…1	13	**GV2ME05**
0.37	★	★	**0.37**	★	★	–	–	–	1…1.6	22.5	**GV2ME06**
0.55	★	★	**0.55**	★	★	**0.75**	★	★			
–	–	–	**0.75**	★	★	**1.1**	★	★			
0.75	★	★	**1.1**	★	★	**1.5**	3	75	1.6…2.5	33.5	**GV2ME07**
1.1	★	★	**1.5**	★	★	**2.2**	3	75	2.5…4	51	**GV2ME08**
1.5	★	★	**2.2**	★	★	**3**	3	75			
2.2	★	★	**3**	50	100	**4**	3	75	4…6.3	78	**GV2ME10**
3	★	★	**4**	10	100	**5.5**	3	75	6…10	138	**GV2ME14**
4	★	★	**5.5**	10	100	**7.5**	3	75			
5.5	15	50	**7.5**	6	75	**9**	3	75	9…14	170	**GV2ME16**
–	–	–	–	–	–	**11**	3	75			
7.5	15	50	**9**	6	75	**15**	3	75	13…18	223	**GV2ME20**
9	15	40	**11**	4	75	**18.5**	3	75	17…23	327	**GV2ME21**
11	15	40	**15**	4	75	–	–	–	20…25	327	**GV2ME22** (3)
15	10	50	**18.5**	4	75	**22**	3	75	24…32	416	**GV2ME32**

Motor circuit breakers from 0.06 to 15 kW / 400 V, with lugs

To order thermal magnetic circuit breakers with connection by lugs, add the digit **6** to the end of reference selected above.
Example: **GV2ME08** becomes **GV2ME086**.

Thermal magnetic circuit breakers GV2 ME with built-in auxiliary contact block

With instantaneous auxiliary contact block (composition, see page B6/21):

■ GV AE1, add suffix **AE1TQ** to the motor circuit breaker reference selected above.
Example: **GV2ME01AE1TQ**.
■ GV AE11, add suffix **AE11TQ** to the motor circuit breaker reference selected above.
Example: **GV2ME01AE11TQ**.
■ GV AN11, add suffix **AN11TQ** to the motor circuit breaker reference selected above.
Example: **GV2ME01AN11TQ**.

These circuit breakers with built-in contact block are sold in lots of 20 units in a single pack.

(1) As % of Icu.
(2) The thermal trip setting must be within the range marked on the graduated knob.
*(3) Maximum rating which can be mounted in enclosures **GV2MC** or **MP**, please consult your Regional Sales Office.*
★ > 100 kA.

TeSys protection components

Thermal-magnetic motor circuit breakers GV2ME - UL applications

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GV2ME10

Motor circuit breakers from 3/4 to 20 HP / 460 V, with screw clamp terminals

GV2ME with pushbutton control

Thermal setting (A)	Maximum Horsepower ratings								Group Motor applications	Reference
	Single-Phase			Three-Phase						
	115 V	200 V	230 V	115 V	200 V	230 V	460 V	575 V	Max. Fuse or Circuit breaker (A)	
0.1…0.16	–	–	–	–	–	–	–	–	450	**GV2ME01**
0.16…0.25	–	–	–	–	–	–	–	–	450	**GV2ME02**
0.25…0.40	–	–	–	–	–	–	–	–	450	**GV2ME03**
0.40…0.63	–	–	–	–	–	–	–	–	450	**GV2ME04**
0.63…1	–	–	–	–	–	–	–	1/2	450	**GV2ME05**
1…1.6	–	–	1/10	–	–	–	3/4	3/4	450	**GV2ME06**
1.6…2.5	–	1/6	1/6	–	1/2	1/2	1	1.5	450	**GV2ME07**
2.5…4	1/8	1/4	1/3	–	3/4	3/4	2	3	450	**GV2ME08**
4…6.3	1/4	1/2	1/2	3/4	1	1.5	3	5	450	**GV2ME10**
6…10	1/2	1	1.5	1	2	3	5	7.5	450	**GV2ME14**
9…14	3/4	2	2	2	3	3	10	10	450	**GV2ME16**
13…18	1	2	3	2	5	5	10	15	450	**GV2ME20**
17…23	1.5	3	3	3	5	7.5	15	20	450	**GV2ME21**
20…25	2	–	–	–	7.5	7.5	15	20	450	**GV2ME22**
24…32	2	5	5	5	7.5	10	20	25	450	**GV2ME32**

TeSys protection components

Thermal-magnetic motor circuit breakers GV2ME

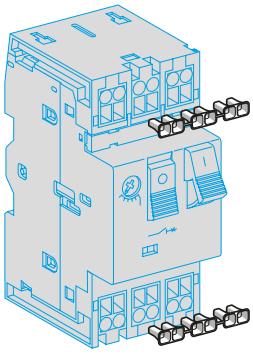


GV2ME●●3

Motor circuit breakers from 0.06 to 11 kW, with spring terminal connections

GV2ME (1) with pushbutton control

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3						Setting range of thermal trips (3)	Magnetic tripping current Id ± 20 %	Reference
400/415 V			500 V					
P	Icu	Ics (2)	P	Icu	Ics (2)			
kW	kA	%	kW	kA	%	A	A	
–	–	–	–	–	–	0.1…0.16	1.5	**GV2ME013**
0.06	★	★	–	–	–	0.16…0.25	2.4	**GV2ME023**
0.09	★	★	–	–	–	0.25…0.40	5	**GV2ME033**
0.12 **0.18**	★ ★	★ ★	–	–	–	0.40…0.63	8	**GV2ME043**
0.25 **0.37**	★ ★	★ ★	**0.37**	★	★	0.63…1	13	**GV2ME053**
0.37 **0.55**	★ ★	★ ★	**0.37** **0.55** **0.75**	★ ★ ★	★ ★ ★	1…1.6	22.5	**GV2ME063**
0.75	★	★	**1.1**	★	★	1.6…2.5	33.5	**GV2ME073**
1.1 **1.5**	★ ★	★ ★	**1.5** **2.2**	★ ★	★ ★	2.5…4	51	**GV2ME083**
2.2	★	★	**3**	50	100	4…6.3	78	**GV2ME103**
3 **4**	★ ★	★ ★	**4** **5.5**	10 10	100 100	6…10	138	**GV2ME143**
5.5	15	50	**7.5**	6	75	9…14	170	**GV2ME163**
7.5	15	50	**9**	6	75	13…18	223	**GV2ME203**
9 **11**	15 15	40 40	**11**	4	75	17…23	327	**GV2ME213**
11	15	40	**15**	4	75	20…25	327	**GV2ME223**



LA9 D99

Contact blocks

Description	Mounting	Maximum number	Type of contacts	Sold in lots of	Unit reference
Instantaneous auxiliary contacts	Front	1	N/O + N/C	10	**GVAE113**
			N/O + N/O	10	**GVAE203**
	LH side	2	N/O + N/C	1	**GVAN113**
			N/O + N/O	1	**GVAN203**

Accessory

Description	Application	Sold in lots of	Unit reference
Cable end reducer	For connection of conductors from 1 to 1.5 mm²	20	**LA9D99**

*(1) For connection of conductors from 1 to 1.5 mm², the use of an **LA9 D99** cable end reducer is recommended.*
*(2) Maximum rating which can be mounted in enclosures **GV2MC** or **MP**, please consult your Regional Sales Office*
(3) The thermal trip setting must be within the range marked on the graduated knob.
★ > 100 kA.

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TeSys protection components

Thermal-magnetic motor circuit breakers GV2P

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GV2P10

Motor circuit breakers from 0.06 to 30 kW / 400 V

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3									Setting range of thermal trips (2)	Magnetic tripping current Id ± 20 %	Reference
400/415 V			500 V			690 V					
P	Icu	Ics (1)	P	Icu	Ics (1)	P	Icu	Ics (1)			
kW	kA	%	kW	kA	%	kW	kA	%	A	A	
GV2 P: control by rotary knob											
Screw clamp terminals											
–	–	–	–	–	–	–	–	–	0.1…0.16	1.5	**GV2P01**
0.06	★	★	–	–	–	–	–	–	0.16…0.25	2.4	**GV2P02**
0.09	★	★	–	–	–	–	–	–	0.25…0.40	5	**GV2P03**
0.12	★	★	–	–	–	**0.37**	★	★	0.40…0.63	8	**GV2P04**
0.18	★	★	–	–	–	**–**	–	–			
0.25	★	★	–	–	–	**0.55**	★	★	0.63…1	13	**GV2P05**
0.37	★	★	**0.37**	★	★	**–**	–	–	1…1.6	22.5	**GV2P06**
0.55	★	★	**0.55**	★	★	**0.75**	★	★			
0.75	★	★	**1.1**	★	★	**1.5**	8	100	1.6…2.5	33.5	**GV2P07**
1.1	★	★	**1.5**	★	★	**2.2**	8	100	2.5…4	51	**GV2P08**
2.2	★	★	**3**	★	★	**4**	6	100	4…6.3	78	**GV2P10**
3	★	★	**5**	50	100	**5.5**	6	100	6…10	138	**GV2P14**
5.5	★	★	**7.5**	42	75	**9**	6	100	9…14	170	**GV2P16**
–	–	–	**–**	–	–	**11**	6	100			
7.5	50	50	**9**	10	75	**15**	4	100	13…18	223	**GV2P20**
9	50	50	**11**	10	75	**18.5**	4	100	17…23	327	**GV2P21**
11	50	50	**15**	10	75	**–**	–	–	20…25	327	**GV2P22**
15	50	50	**18.5**	10	75	**22**	4	100	24…32	416	**GV2P32**

How to use the table : select your load operating voltage, then select its standard power value (below, in the same column). The appropriate circuit breaker is in the extreme right column, in the corresponding row.
Exemple: GV2P04 can protect 0.12 and 0.18 kW under 400/415 V, and 0.18 kW under 440 V, and 0,37 kW under 690 V. No 500 V standard power value can fit GV2P04.

Motor circuit breakers up to 50 HP / 600 V, UL 60947-4-1 type E

GV2 (3)

To obtain a GV2 **P** motor circuit breaker, UL 60947-4-1 type E, use the following with the circuit breaker:
■ a “Large Spacing” adapter **GV2GH7.**

Motor circuit breakers from 3/4 to 20 HP / 460 V, with screw clamp terminals

GV2P with rotary handle

Thermal setting (A)	Maximum Horsepower ratings (4)								Group Motor applications	Reference
	Single-Phase			Three-Phase						
	115 V	200 V	230 V	115 V	200 V	230 V	460 V	575 V	Max. Fuse or Circuit breaker (A)	
0.1…0.16	–	–	–	–	–	–	–	–	450	**GV2P01**
0.16…0.25	–	–	–	–	–	–	–	–	450	**GV2P02**
0.25…0.40	–	–	–	–	–	–	–	–	450	**GV2P03**
0.40…0.63	–	–	–	–	–	–	–	–	450	**GV2P04**
0.63…1	–	–	–	–	–	–	–	1/2	450	**GV2P05**
1…1.6	–	–	1/10	–	–	–	3/4	3/4	450	**GV2P06**
1.6…2.5	–	1/6	1/6	–	1/2	1/2	1	1.5	450	**GV2P07**
2.5…4	1/8	1/4	1/3	–	3/4	3/4	2	3	450	**GV2P08**
4…6.3	1/4	1/2	1/2	3/4	1	1.5	3	5	450	**GV2P10**
6…10	1/2	1	1.5	1	2	3	5	7.5	450	**GV2P14**
9…14	3/4	2	2	2	3	3	10	10	450	**GV2P16**
13…18	1	2	3	2	5	5	10	15	450	**GV2P20**
17…23	1.5	3	3	3	5	7.5	15	20	450	**GV2P21**
20…25	2	–	–	–	7.5	7.5	15	20	450	**GV2P22**
24…32	2	5	5	5	7.5	10	20	25	450	**GV2P32**

(1) As % of Icu.
(2) The thermal trip setting must be within the range marked on the graduated knob.
(3) Accessory: see page B6/23.
(4) 3P FLA corresponding values: see page A6/58.
★ > 100 kA.

TeSys protection components

Thermal-magnetic circuit breakers GV2RT

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GV2RT

For motors with high current peak on starting

Control by rocker lever

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3					Setting range of thermal trips [1]	Magnetic tripping current Id ± 20 %	Reference
220/ 230 V	400/ 415 V	440 V	500 V	690 V			
kW	kW	kW	kW	kW	A	A	
0.06	0.09	0.09 0.12	–	–	0.25…0.40	8	**GV2RT03**
–	0.12 0.18	0.18	–	0.37	0.40…0.63	13	**GV2RT04**
0.09 0.12	0.25 0.37	0.25 0.37	0.37	0.55	0.63…1	22	**GV2RT05**
0.18 0.25	0.37 0.55	0.37 0.55	0.37 0.55 0.75	0.75 1.1	1…1.6	33	**GV2RT06**
0.37	0.75	0.75 1.1	1.1	1.5	1.6…2.5	51	**GV2RT07**
0.55 0.75	1.1 1.5	1.5	1.5 2.2	2.2 3	2.5…4	78	**GV2RT08**
1.1	2.2	2.2 3	3	4	4…6.3	138	**GV2RT10**
1.5 2.2	3 4	4	4 5.5	5.5 7.5	6…10	200	**GV2RT14**
2.2 3	5.5	5.5 7.5	7.5	9 11	9…14	280	**GV2RT16**
4	7.5	7.5 9	9	15	13…18	400	**GV2RT20**
5.5	9 11	11	11	18.5	17…23	400	**GV2RT21**

(1) The thermal trip setting must be within the range marked on the graduated knob.

For primaries of 3-phase transformers

Control by rocker lever

Standard power ratings					Setting range of thermal trips [2]	Magnetic tripping current Id ± 20 %	Reference
230/240 V	400/415 V	440 V	500 V	690 V			
kW	kW	kW	kW	kW	A	A	
–	–	–	–	–	0.25…0.40	8	**GV2RT03**
–	–	–	–	–	0.40…0.63	13	**GV2RT04**
–	–	0.63	0.63	1	0.63…1	22	**GV2RT05**
0.4	0.63	1	1	–	1…1.6	33	**GV2RT06**
0.63	1	–	1.6	1.6 2	1.6…2.5	51	**GV2RT07**
1	1.6 2	1.6 2	2 2.5	2.5	2.5…4	78	**GV2RT08**
1.6 2	2.5	2.5 4	4	4 5 6.3	4…6.3	138	**GV2RT10**
2.5	4 5	5	5 6.3	–	6…10	200	**GV2RT14**
4	6.3	6.3	–	10 12.5	9…14	280	**GV2RT16**
5 6.3	10	10	10 12.5	10	13…18	400	**GV2RT20**

Accessory [3]

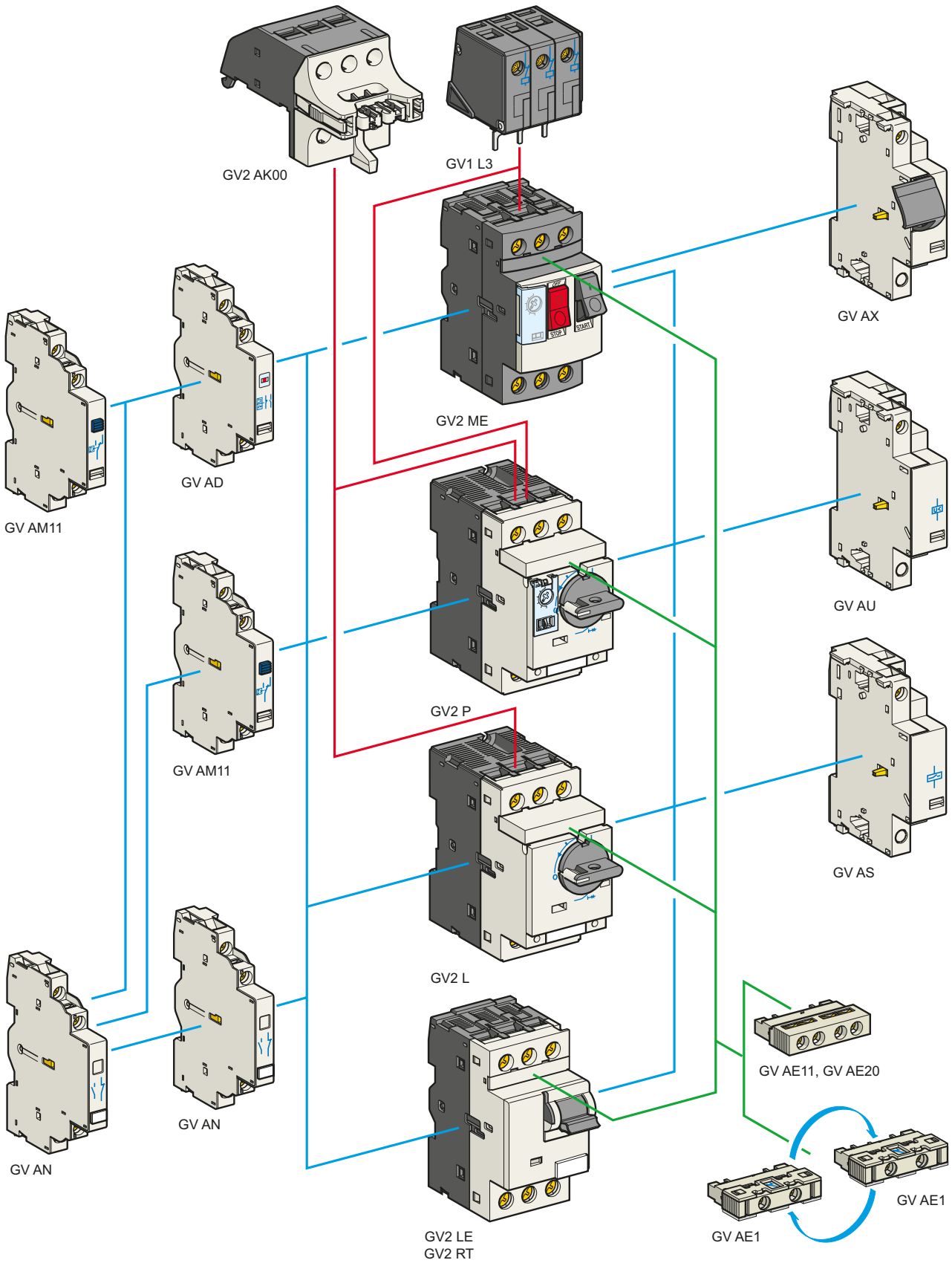
Description	Reference
Padlockable external operator (IP 54) black handle, blue legend plate	**GV2AP03**

(2) The thermal trip setting must be within the range marked on the graduated knob.

*(3) Other accessories such as mounting, cabling and marking accessories are identical to those used for **GV2 ME** motor circuit breakers, see page B6/23.*

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TeSys protection components

Thermal-magnetic and magnetic motor circuit breakers GV2 with screw clamp connections

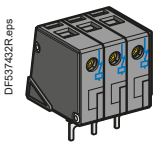
Add-on blocks and accessories

Contact blocks

Description	Mounting	Maximum number	Type of contacts		Sold in lots of	Unit reference
Instantaneous auxiliary contacts	Front (1)	1	N/O or N/C (2)		10	**GVAE1**
			N/O + N/C		10	**GVAE11**
			N/O + N/O		10	**GVAE20**
	Side (LH)	2	N/O + N/C		1	**GVAN11**
			N/O + N/O		1	**GVAN20**
Fault signalling contact + instantaneous auxiliary contact	Side (3) (LH)	1	N/O (fault)	+ N/O	1	**GVAD1010**
				+ N/C	1	**GVAD1001**
			N/C (fault)	+ N/O	1	**GVAD0110**
				+ N/C	1	**GVAD0101**
Short-circuit signalling contact	Side (LH)	1	C/O common point		1	**GVAM11**

Electric trips

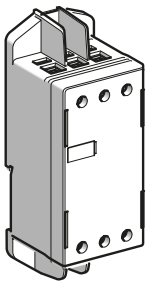
Mounting	Voltage		Reference
Undervoltage or shunt trips (4)			
Side (1 block on RH side of circuit breaker)	24 V	50 Hz	**GVA●025**
		60 Hz	**GVA●026**
	48 V	50 Hz	**GVA●055**
		60 Hz	**GVA●056**
	100 V	50 Hz	**GVA●107**
	100…110 V	60 Hz	**GVA●107**
	110…115 V	50 Hz	**GVA●115**
		60 Hz	**GVA●116**
	120…127 V	50 Hz	**GVA●125**
	127 V	60 Hz	**GVA●115**
	200 V	50 Hz	**GVA●207**
	200…220 V	60 Hz	**GVA●207**
	220…240 V	50 Hz	**GVA●225**
		60 Hz	**GVA●226**
	380…400 V	50 Hz	**GVA●385**
		60 Hz	**GVA●386**
	415…440 V	50 Hz	**GVA●415**
	415 V	60 Hz	**GVA●416**
	440 V	60 Hz	**GVA●385**
	480 V	60 Hz	**GVA●415**
	500 V	50 Hz	**GVA●505**
	600 V	60 Hz	**GVA●505**
Undervoltage trip, INRS (can only be mounted on GV2 ME) Safety device for dangerous machines conforming to INRS and VDE 0113			
Side (1 block on RH side of circuit breaker GV2 ME)	110…115 V	50 Hz	**GVAX115**
		60 Hz	**GVAX116**
	127 V	60 Hz	**GVAX115**
	220…240 V	50 Hz	**GVAX225**
		60 Hz	**GVAX226**
	380…400 V	50 Hz	**GVAX385**
		60 Hz	**GVAX386**
	415…440 V	50 Hz	**GVAX415**
	440 V	60 Hz	**GVAX385**



GV1L3

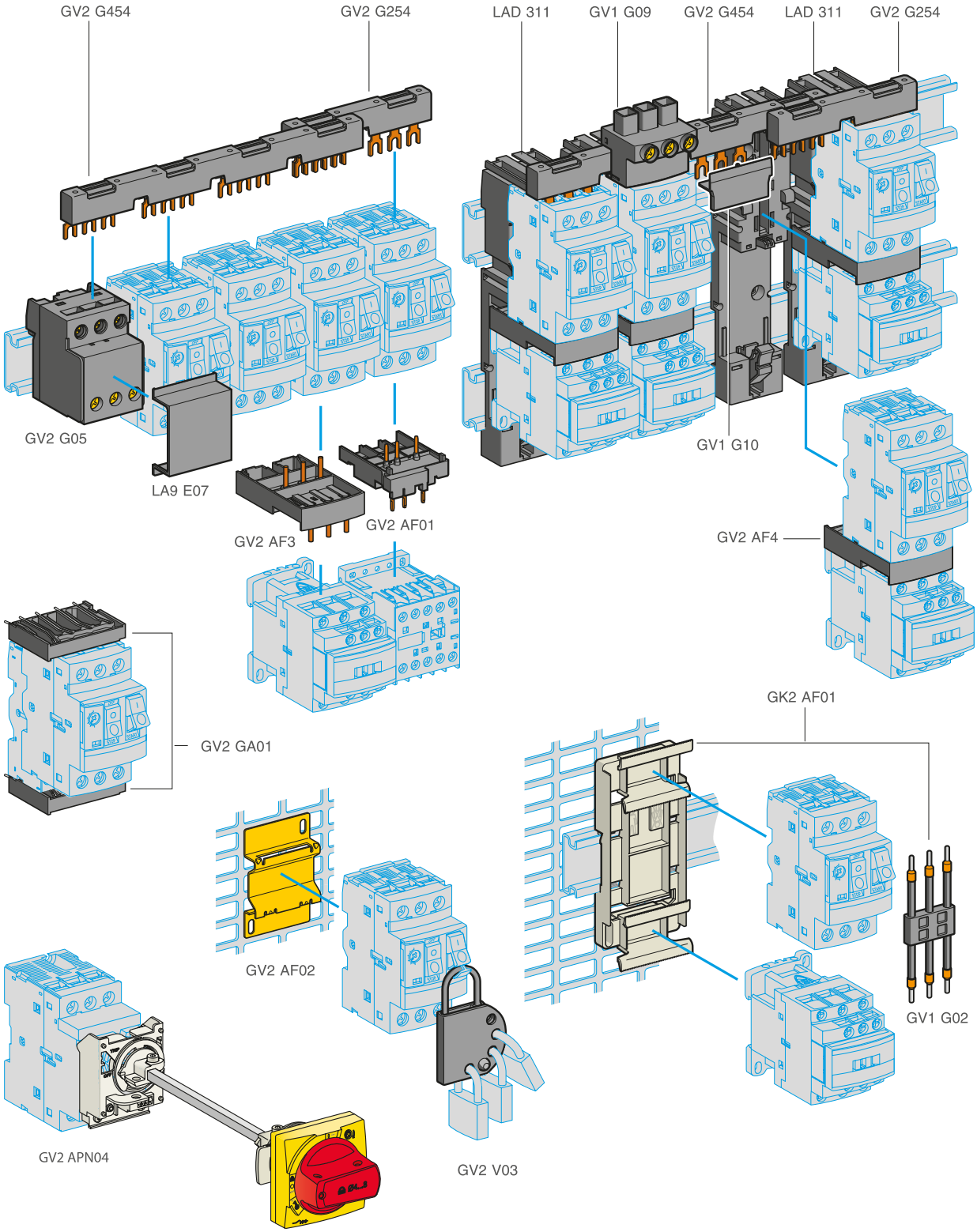
Limiter blocks

Description	Mounting	Maximum number	Reference
Visible isolation block (5)	Front (1)	1	**GV2AK00 (6)**
Limiters	At top (GV2ME and GV2P)	1	**GV1L3**
	Independent	1	**LA9LB920**



LA9LB920

*(1) Mounting of a **GVAE** contact block or a **GV2AK00** visible isolation block on **GV2P** and **GV2L**.*
(2) Choice of N/C or N/O contact operation, depending on which way round the reversible block is mounted.
*(3) The **GV AD** is always mounted next to the circuit breaker.*
*(4) To order an undervoltage trip: replace the dot (●) in the reference with a **U**, example: **GVAU025**.*
*To order a shunt trip: replace the dot (●) in the reference with an **S**, example: **GVAS025**.*
*(5) Visible isolation of the 3 poles upstream of circuit breaker **GV2P** and **GV2L**.*
(6) Ie Max = 32 A.



Life Is On Schneider Electric

TeSys protection components

Thermal-magnetic and magnetic motor circuit breakers GV2 with screw clamp connections

Accessories

Accessories

Description	Application	Sold in lots of	Unit reference
Adapter plates	For mounting a GV2 by screw fixing	10	**GV2AF02**
	For mounting a GV2ME and contactor LC1D09…D38 with front faces aligned	1	**LAD311**
Height compensation plate	7.5 mm to align GV2ME-GV2LE and GV2P-GV2L and allow the use of a common GV2G●●● busbar	10	**GV1F03**
Combination blocks	Between GV2 and contactor LC1K or LP1K	10	**GV2AF01**
	Between GV2 and contactor LC1D09…D38	10	**GV2AF3**
	Between GV2 mounted on LAD311 and contactor LC1D09…D38	10	**GV2AF4**
Motor starter adapter plate	With 3-pole connection for mounting a GV2 and a contactor LC1D09…D25	1	**GK2AF01**

Description	Application	Pitch	Reference
		mm	
Sets of 3-pole Ie = 63 A busbars	2 tap-offs	45	**GV2G245**
		54	**GV2G254**
		72	**GV2G272**
	3 tap-offs	45	**GV2G345**
		54	**GV2G354**
	4 tap-offs	45	**GV2G445**
		54	**GV2G454**
		72	**GV2G472**
	5 tap-offs	54	**GV2G554**

Description	Ie	Application	Sold in lots of	Unit reference
	A			
Protective end cover	-	For unused busbar outlets	5	**GV1G10**
Terminal block for supply to one or more GV2 G busbar sets	63	Connection from the top	1	**GV1G09**
	63	Can be fitted with current limiter GV1 L3 (GV2ME and GV2P)	1	**GV2G05**
Cover for terminal block	-	For mounting in modular panels	10	**LA9E07**
Flexible 3-pole connection for connecting a GV2 to a contactor LC1-D09…D25	25	Centre distance between mounting rails: 100…120 mm	10	**GV1G02**
Set of connections upstream/downstream	16	For connecting GV2 ME to a printed circuit board	10	**GV2GA01**
"Large Spacing" adapter UL 60947-4-1 type E	-	For GV2 P●● (except 32 A)	1	**GV2GH7**
Clip-in marker holders (supplied with each circuit breaker)	-	For GV2P, GV2L, GV2LE and GV2RT (8 x 22 mm)	100	**LA9D92**

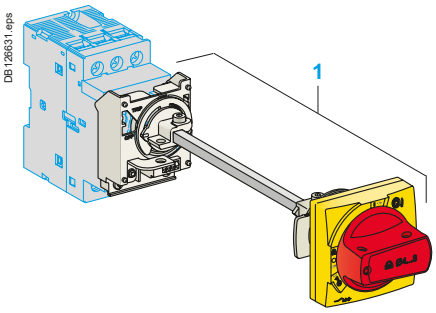
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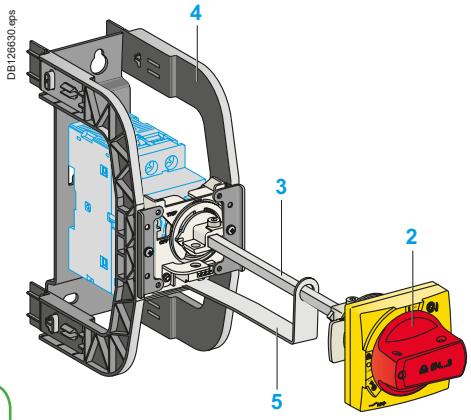


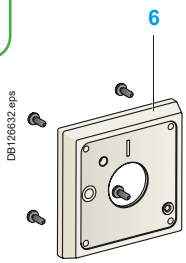
GV1 G09

TeSys protection components

Thermal-magnetic and magnetic motor circuit breakers GV2 with screw clamp connections









Extended Rotary Handle

Allows a circuit breaker or a starter-controller installed in back of an enclosure to be operated from the front of the enclosure.
A rotary handle can be black or red/yellow, IP54 or IP65. It includes a function for locking the circuit breaker or the starter in the O (Off) for red/yellow handle, in the O (Off) or I (On) for black handle, by means of up to 3 padlocks with a shank diameter of 4 to 8 mm. The extended shaft must be adjusted to use in different size enclosures. The IP54 rotary handle is fixed with a nut (Ø22) to make easier the assembling. The new Laser Square tool brings the accuracy to align the circuit breaker and the rotary handle.

Padlockable external operators for GV2P and GV2L

Description

1 Kit handle + mounting system
2 Universal handle
3 Shaft
4 Bracket
5 Shaft support plate for deep enclosure
6 Retrofit accessory
7 Laser Square accessory

Kit handle + mounting system			
Description		**Item**	**Reference**
For GV2P/L	Black handle, front plate, with trip status, IP 54	1	**GV2APN01**
	Red handle, front plate, with trip status, IP 54	1	**GV2APN02**
	Black handle, front plate, without trip status, IP 65	1	**GV2APN03**
	Red handle, front plate, without trip status, IP 65	1	**GV2APN04**
For GV2LE	Padlocking in “On” and “Off” position Black handle, blue front plate, IP 54	-	**GV2AP03**
Universal handle			
For GV2P/L	Black handle, with trip status, IP54	2	**GVAPB54**
	Red handle, with trip status, IP54	2	**GVAPR54**
	Red handle, without trip status, IP65	2	**GVAPR65**
	Black handle, without trip status, IP 65	2	**GVAPB65**
Shaft			
For GV2P/L	L = 315 mm	3	**GVAPA1**
Bracket			
For GV2P/L		4	**GVAPH02**
Shaft support plate for deep enclosure			
For GV2P/L	Depth ⩾ 250 mm	5	**GVAPK11**
Retrofit accessory			
For GV2P/L		6	**GVAPP1**
Laser Square accessory			
For GV2P/L		7	**GVAPL01**

Sticker		Sold in lots of		
Warning label	For French	10	-	**GVAPSFR**
	For English	10	-	**GVAPSEN**
	For German	10	-	**GVAPSDE**
	For Spanish	10	-	**GVAPSES**
	For Chinese	10	-	**GVAPSCN**
	For Portuguese	10	-	**GVAPSPT**
	For Russian	10	-	**GVAPSRU**
	For Italian	10	-	**GVAPSIT**

Padlocking device

Description		Reference
For all GV2 device	For use with up to 4 padlocks, Ø6 mm shank max. (padlocks not included)	**GV2V03**

TeSys GV2

0.06 to 15 kW



Environment

Circuit breaker type				GV2L	GV2LE	GV2ME	GV2P	GV2RT
Conforming to standards				IEC/EN 60947-4-1, IEC/EN 60947-2				
				CSA C22.2 n°60947-4-1 (1)				
Product certifications				CCC, EAC, BV, LROS, DNV-GL, RINA	CCC, EAC, BV, RINA	CCC, UL, CSA, EAC, ATEX, BV, LROS, DNV-GL, RINA	CCC, UL, CSA, EAC, ATEX, BV, LROS, DNV-GL, RINA	CCC, UL, CSA, EAC, BV, LROS
Climatic withstand				According to IACS E10				
Degree of protection (front face)	Conforming to IEC 60529	Open mounted		Against direct finger contact: IP20				
		In enclosure		IP65 with GV2PC01 GV2PC02 enclosure	-	IP41 with GV2M●01 IP55 with GV2M●02 enclosure	IP 65 with GV2PC01 GV2PC02 enclosure	-
Shock resistance	Conforming to IEC 60068-2-27			30 gn - 11 ms				
Vibration resistance	Conforming to IEC 60068-2-6			5 gn (5 to 150 Hz)				
Ambient air temperature	Storage		°C	-40…+80				
	Operation	Open mounted	°C	-20…+60				
		In enclosure	°C	-20…+40				
Temperature compensation		Open mounted	°C	-20…+60				
		In enclosure	°C	-20…+40				
Flame resistance	Conforming to IEC 60695-2-11		°C	960				
Maximum operating altitude			m	2000				
Suitable for isolation	Conforming to IEC 60947-1 § 7-1-6			Yes				
Resistance to mechanical impact			J	0.5				
				IK04				
Sensitivy to phase failure				Yes, conforming to IEC 60947-4-1 § 8-2-1-5-2 for GV2ME & GV2P				

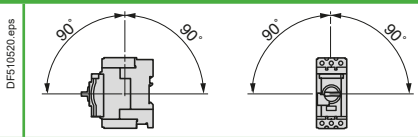
Technical characteristics

Circuit breaker type			GV2L	GV2LE	GV2ME	GV2P	GV2RT
Utilisation category	Conforming to IEC 60947-2		A				
	Conforming to IEC 60947-4-1		AC-3				
Rated operational voltage (Ue)	Conforming to IEC 60947-2	V	690				
Rated insulation voltage (Ui)	Conforming to IEC 60947-2	V	690				
Rated voltage	Conforming to UL 60947-4-1	V	-	-	600	600	600
	CSA C 22.2 n° 60947-4-1		480	480	600	600	600
Rated operational frequency	Conforming to IEC 60947-4-1 UL, CSA	Hz	50/60				
Rated impulse withstand voltage (U imp)	Conforming to IEC 60947-2	kV	6				
Total power dissipated per pole		W	1.8		2.5		
Mechanical durability (C.O.: Closing, Opening)		C.O.	100 000				
Electrical durability for AC-3/415V duty (C.O.: Closing, Opening)	415 V In	C.O.	100 000				
Duty class (maximum operating rate)		C.O./h	40		25		
Maximum conventional rated thermal current (Ith)	Conforming to IEC 60947-4-1	A	0.4...32	0.4...32	0.16...32	0.16...32	0.40...23
Rated duty	Conforming to IEC 60947-4-1		Continuous duty				

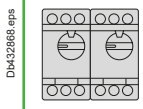
*(1) **GV2L03** to **GV2L22**, **GV2LE03** to **GV2LE22**.*
*(2) UL 60947-4-1 type E for **GV2P●●** (except 32 A).*

Mounting characteristics

Operating position
Without derating, in relation to normal vertical mounting plane (1)



Products side by side



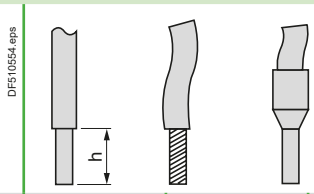
When several products **GV2ME●●**, **GV2P●●**, **GV2RT●●** are mounted side by side, the thermal trip setting Ir maybe need to be adjusted up to 1.1xIn.

Do not exceed the maximum thermal setting Ir.
E.g: **GV2ME14**, thermal setting range: 6...10, do not adjust Ir above 10 A.

Connection characteristics

Connection to screw clamp terminals or spring terminals

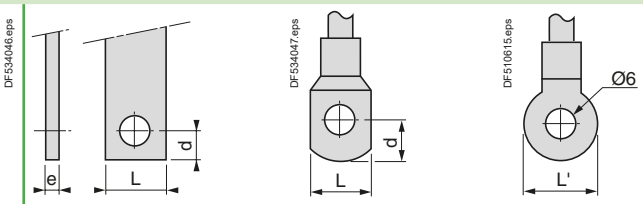
Bare cables



Circuit breaker type			GV2L		GV2LE		GV2ME		GV2P		GV2RT	
			Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
Connection to screw clamp terminals (Max. number of conductors x c.s.a.)	Solid cable	mm²	2 x 1	2 x 6	2 x 1	2 x 6	2 x 1	2 x 6	2 x 1	2 x 6	2 x 1	2 x 6
	Flexible cable without cable end	mm²	2 x 1.5	2 x 6	2 x 1.5	2 x 6	2 x 1.5	2 x 6	2 x 1.5	2 x 6	2 x 1.5	2 x 6
	Flexible cable with cable end	mm²	2 x 1	2 x 4	2 x 1	2 x 4	2 x 1	2 x 4	2 x 1	2 x 4	2 x 1	2 x 4
Tightening torque		N.m	1.7									
Connection to spring terminals Number of conductors x c.s.a.	Solid cable	mm²	–	–	–	–	2 x 1 (2)	2 x 6	–	–	–	–
	Flexible cable without cable end	mm²	–	–	–	–	2 x 1.5 (2)	2 x 4	–	–	–	–

Connection by bars or lugs

Bars or lugs



Circuit breaker type			GV2ME●●6
Pitch	Without spreaders	mm	13.5
	With spreaders	mm	–
Bars or cables with lugs	e	mm	≤ 6
	L	mm	≤ 9.5
	L'	mm	≤ 9.5
	d	mm	≤ 10
Screws			M4
	Tightening torque	N.m	1.7
Bare cables (copper or aluminium) with connectors	Height (h)	mm	–
	C.s.a.	mm²	–
	Tightening torque	N.m	–

(1) When mounting on a vertical rail, fit a stop to prevent any slippage.
*(2) For cross-sections 1 to 1.5 mm², the use of an **LA9D99** cable end reducer is recommended.*

References:
pages B6/11 to B6/24
Curves:
pages B6/69 to B6/78
Dimensions:
pages B6/82 to B6/91

Breaking capacity of GV2L and GV2LE

Circuit breaker type				GV2LE									GV2L								
				03 to 06	07	08	10	14	16	20	22	32	03 to 05	06 & 07	08	10	14	16	20	22	32
Rating			A	0.4 to 1.6	2.5	4	6.3	10	14	18	25	32	0.4 to 1	1.6 to 2.5	4	6.3	10	14	18	25	32
Breaking capacity conforming to IEC 60947-2	230/240 V	Icu	kA	★	★	★	★	★	★	★	50	50	★	★	★	★	★	★	★	50	50
		Ics % (1)		★	★	★	★	★	★	★	100	100	★	★	★	★	★	★	★	100	100
	400/415 V	Icu	kA	★	★	★	★	★	15	15	15	10	★	★	★	★	★	50	50	50	50
		Ics % (1)		★	★	★	★	★	50	50	40	50	★	★	★	★	★	50	50	50	50
	440 V	Icu	kA	★	★	★	50	15	8	8	6	6	★	★	★	★	20	20	20	20	20
		Ics % (1)		★	★	★	100	100	50	50	50	50	★	★	★	★	75	75	75	75	75
	500 V	Icu	kA	★	★	★	50	10	6	6	4	4	★	★	★	★	10	10	10	10	10
		Ics % (1)		★	★	★	100	100	75	75	75	75	★	★	★	★	100	75	75	75	75
	690 V	Icu	kA	★	3	3	3	3	3	3	3	3	★	4	4	4	4	4	4	4	4
		Ics % (1)		★	75	75	75	75	75	75	75	75	★	100	100	100	100	100	100	100	100
Associated fuses (if required) if Isc > breaking capacity Icu conforming to IEC 60947-2 amendment 1	230/240 V	aM	A	★	★	★	★	★	★	★	80	80	★	★	★	★	★	★	★	100	100
		gG	A	★	★	★	★	★	★	★	100	100	★	★	★	★	★	★	★	125	125
	400/415 V	aM	A	★	★	★	★	★	63	63	80	80	★	★	★	★	★	80	100	100	100
		gG	A	★	★	★	★	★	80	80	100	100	★	★	★	★	★	100	125	125	125
	440 V	aM	A	★	★	★	50	50	50	50	63	63	★	★	★	★	50	63	80	80	80
		gG	A	★	★	★	63	63	63	63	80	80	★	★	★	★	63	80	100	100	100
	500 V	aM	A	★	★	★	50	50	50	50	50	50	★	★	★	★	50	50	50	50	50
		gG	A	★	★	★	63	63	63	63	63	63	★	★	★	★	63	63	63	63	63
	690 V	aM	A	★	16	25	32	32	40	40	40	40	★	20	25	40	40	50	50	50	50
		gG	A	★	20	32	40	40	50	50	50	50	★	25	32	50	50	63	63	63	63
Cable protection against thermal stress in the event of short-circuit (PVC insulated copper cables) Minimum c.s.a. protected at 40 °C and at Isc max.	1 mm²		kA	●	●	●	≤10	≤ 6	(2)	(2)	(2)	(2)	●	●	●	≤10	≤ 6	(2)	(2)	(2)	(2)
	1.5 mm²		kA	●	●	●	≤20	≤10	(2)	(2)	(2)	(2)	●	●	●	≤20	≤10	(2)	(2)	(2)	(2)
	2.5 mm²			●	●	●	●	●	●	●	●	(2)	●	●	●	●	●	●	●	●	(2)
	4…6 mm²			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

★ *> 100 kA.*
● *Cable c.s.a. protected.*
(1) As % of Icu.
(2) Cable c.s.a. not protected.

Circuit breakers

TeSys protection components

Thermal-magnetic motor circuit breakers GV2ME and GV2P

Breaking capacity of GV2ME, GV2RT and GV2P

Circuit breaker type				GV2ME and GV2RT									GV2P								
				01 to 06	07	08	10	14	16	20	21 & 22	32	01 to 06	07	08	10	14	16	20	21 & 22	32
Rating			A	0.1 to 1.6	2.5	4	6.3	10	14	18	23 & 25	32	0.1 to 1.6	2.5	4	6.3	10	14	18	23 & 25	32
Breaking capacity conforming to IEC 60947-2	230/240 V	Icu	kA	★	★	★	★	★	★	★	50	50	★	★	★	★	★	★	★	★	★
		Ics % (1)		★	★	★	★	★	★	★	100	100	★	★	★	★	★	★	★	★	★
	400/415 V	Icu	kA	★	★	★	★	★	15	15	15	10	★	★	★	★	★	★	50	50	50
		Ics % (1)		★	★	★	★	★	50	50	40	50	★	★	★	★	★	★	50	50	50
	440 V	Icu	kA	★	★	★	50	15	8	8	6	6	★	★	★	★	★	50	20	20	20
		Ics % (1)		★	★	★	100	100	50	50	50	50	★	★	★	★	★	75	75	75	75
	500 V	Icu	kA	★	★	★	50	10	6	6	4	4	★	★	★	★	50	42	10	10	10
		Ics % (1)		★	★	★	100	100	75	75	75	75	★	★	★	★	100	75	75	75	75
	690 V	Icu	kA	★	3	3	3	3	3	3	3	3	★	8	8	6	6	6	4	4	4
		Ics % (1)		★	75	75	75	75	75	75	75	75	★	100	100	100	100	100	100	100	100
Associated fuses (if required) if Isc > breaking capacity Icu conforming to IEC 60947-2	230/240 V	aM	A	★	★	★	★	★	★	★	80	80	★	★	★	★	★	★	★	★	★
		gG	A	★	★	★	★	★	★	★	100	100	★	★	★	★	★	★	★	★	★
	400/415 V	aM	A	★	★	★	★	★	63	63	80	80	★	★	★	★	★	★	100	100	100
		gG	A	★	★	★	★	★	80	80	100	100	★	★	★	★	★	★	125	125	125
	440 V	aM	A	★	★	★	50	50	50	50	63	63	★	★	★	★	★	50	63	80	80
		gG	A	★	★	★	63	63	63	63	80	80	★	★	★	★	★	63	80	100	100
	500 V	aM	A	★	★	★	50	50	50	50	50	50	★	★	★	★	50	50	50	50	50
		gG	A	★	★	★	63	63	63	63	63	63	★	★	★	★	63	63	63	63	63
	690 V	aM	A	★	16	25	32	32	40	40	40	40	★	20	25	40	40	50	50	50	50
		gG	A	★	20	32	40	40	50	50	50	50	★	25	32	50	50	63	63	63	63

★ > 100 kA.
(1) As % of Icu.

References: pages B6/11 to B6/24
Curves: pages B6/69 to B6/78
Dimensions: pages B6/82 to B6/91

TeSys protection components

Thermal-magnetic motor circuit breakers GV2ME and GV2P

Breaking capacity of GV2ME, GV2RT and GV2P (used in association with current limiter GV1L3)

Circuit breaker type				GV2ME and GV2RT									
				01 to 06	07	08	10	14	16	20	21	22	32
Rating			A	0.1 to 1.6	2.5	4	6.3	10	14	18	23	25	32
Breaking capacity conforming to IEC 60947-2	230/240 V	Icu	kA	★	★	★	★	★	★	★	★	★	★
		Ics % (1)		★	★	★	★	★	★	★	★	★	★
	400/415 V	Icu	kA	★	★	★	★	★	100	100	100	100	100
		Ics % (1)		★	★	★	★	★	50	50	40	40	40
	440 V	Icu	kA	★	★	★	★	★	50	20	20	20	20
		Ics % (1)		★	★	★	★	★	75	75	75	75	75
	500 V	Icu	kA	★	★	★	★	50	42	10	10	10	10
		Ics % (1)		★	★	★	★	100	100	75	75	75	75

Circuit breaker type				GV2P									
				01 to 06	07	08	10	14	16	20	21	22	32
Rating			A	0.1 to 1.6	2.5	4	6.3	10	14	18	23	25	32
Breaking capacity conforming to IEC 60947-2	230/240 V	Icu	kA	★	★	★	★	★	★	★	★	★	★
		Ics % (1)		★	★	★	★	★	★	★	★	★	★
	400/415 V	Icu	kA	★	★	★	★	★	★	★	★	★	★
		Ics % (1)		★	★	★	★	★	★	★	★	★	★
	440 V	Icu	kA	★	★	★	★	★	100	100	100	100	100
		Ics % (1)		★	★	★	★	★	50	50	50	50	50
	500 V	Icu	kA	★	★	★	★	100	100	100	100	100	100
		Ics % (1)		★	★	★	★	50	50	50	50	50	50
	690 V (3)	Icu = Ics	kA	★	50	50	50	50	50	50	50	50	50

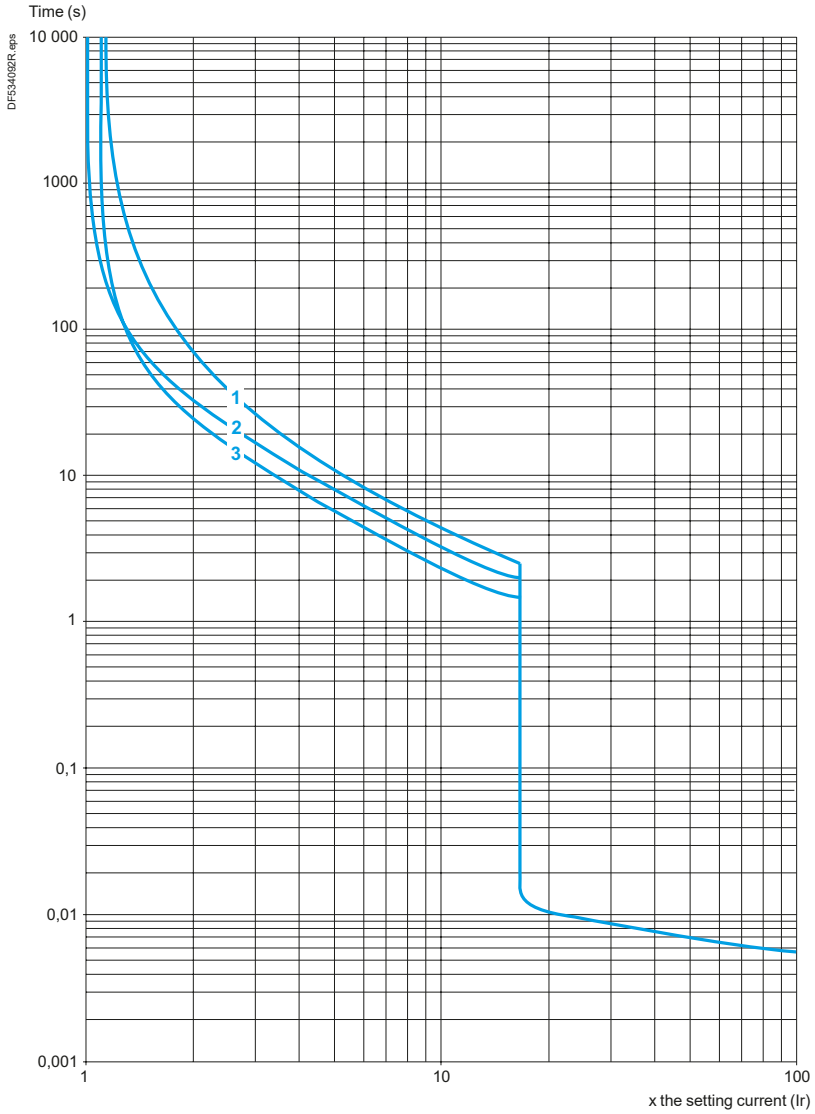
Circuit breaker type				GV2ME									
				01 to 06	07	08	10	14	16	20	21	22	32
Rating			A	0.1 to 1.6	2.5	4	6.3	10	14	18	23	25	32
Cable protection against thermal stress in the event of short-circuit (PVC insulated copper cables)	Minimum c.s.a. protected at 40 °C at Isc max.	1 mm²		●	●	●	⩽ 10 kA	⩽ 6 kA	(2)	(2)	(2)	(2)	(2)
		1.5 mm²		●	●	●	⩽ 20 kA	⩽ 10 kA	(2)	(2)	(2)	(2)	(2)
		2.5 mm²		●	●	●	●	●	●	●	●	●	(2)
		4…6 mm²		●	●	●	●	●	●	●	●	●	●

★ *> 100 kA.*
● *Cable c.s.a. protected.*
(1) As % of Icu.
(2) Cable c.s.a. not protected.
*(3) With limiter **LA9LB920**.*

Circuit breakers

Tripping curves for GV2L or LE combined with thermal overload relay LRD or LR2K

Average operating times at 20 °C related to multiples of the setting current

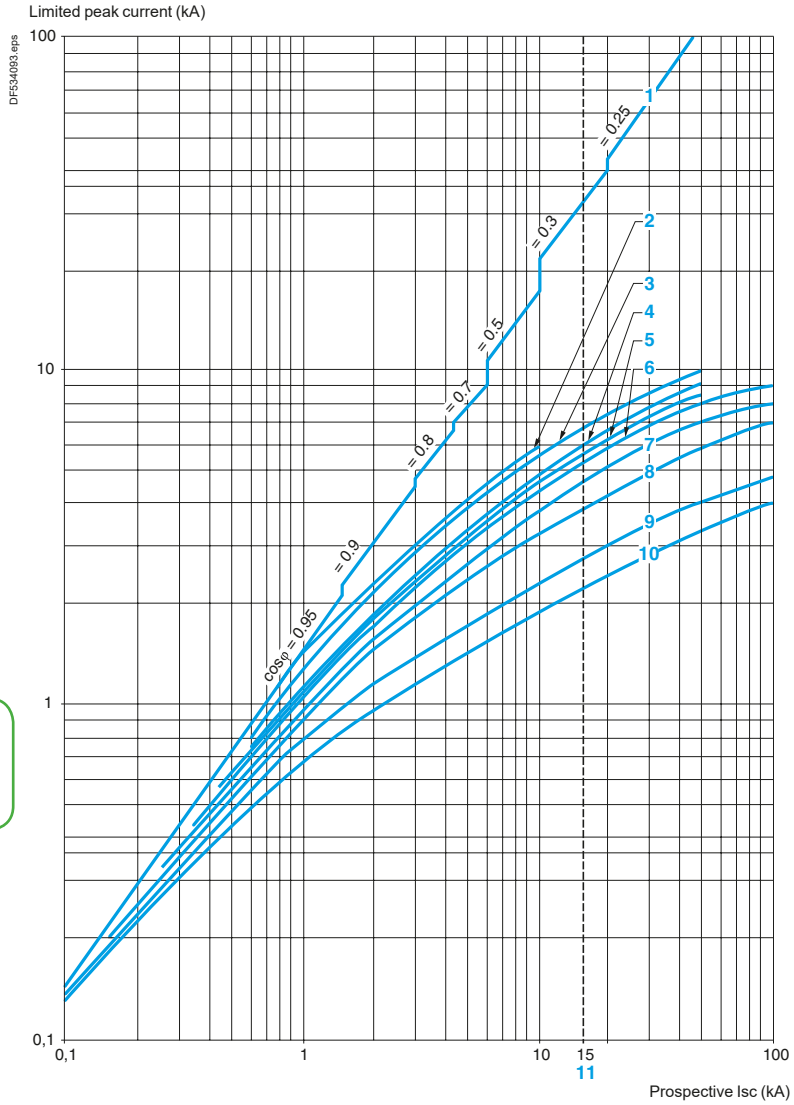


1 3 poles from cold state
2 2 poles from cold state
3 3 poles from hot state

Current limitation on short-circuit for GV2L and GV2LE only (3-phase 400/415 V)

Dynamic stress

I peak = f (prospective Isc) at 1.05 Ue = 435 V



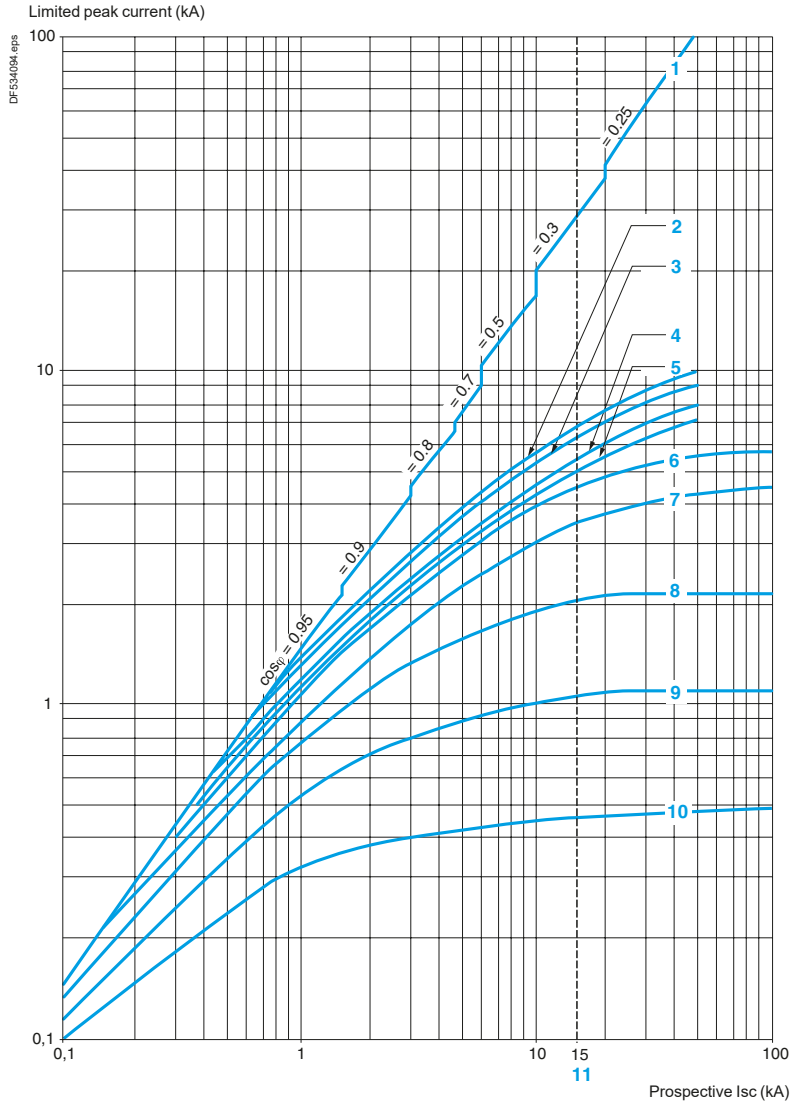
1 Maximum peak current
2 32 A
3 25 A
4 18 A
5 14 A
6 10 A
7 6.3 A
8 4 A
9 2.5 A
10 1.6 A
11 Limit of rated ultimate breaking capacity on short-circuit of GV2LE (14, 18, 23 and 25 A ratings).

Circuit breakers

Current limitation on short-circuit for GV2L and GV2LE + thermal overload relay LRD or LR2K (3-phase 400/415 V)

Dynamic stress

I peak = f (prospective Isc) at 1.05 Ue = 435 V

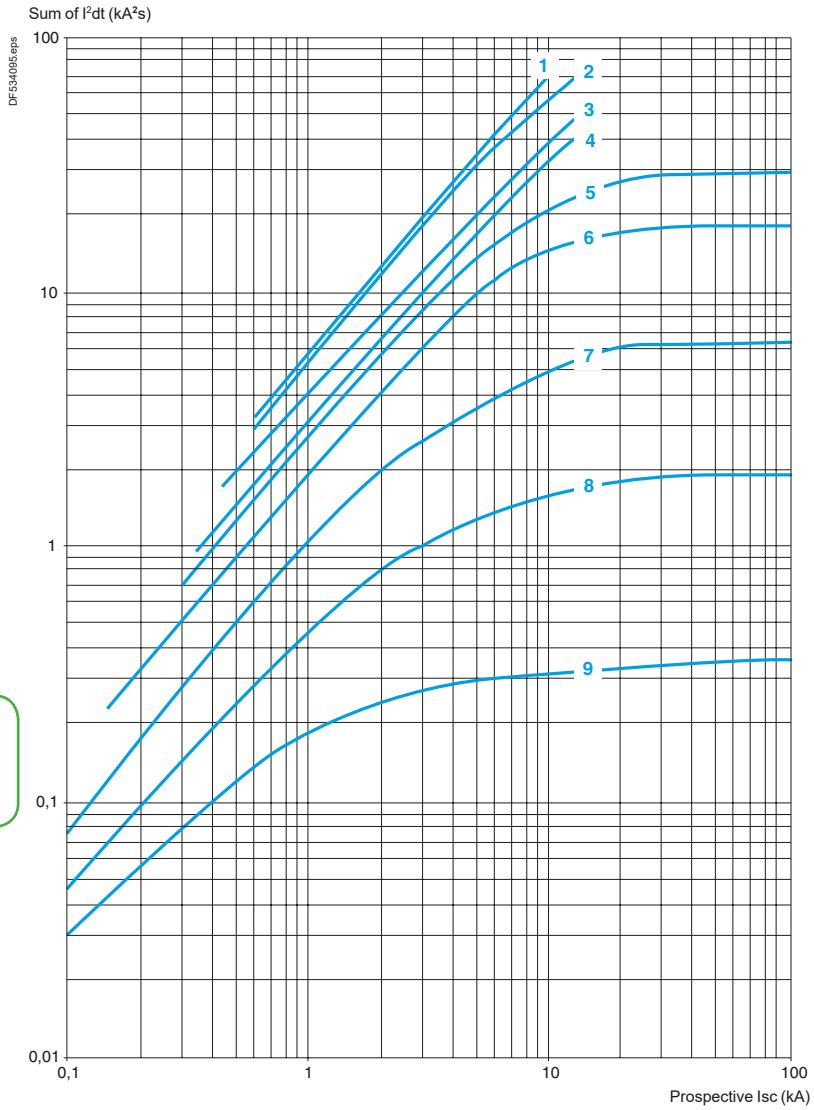


1 Maximum peak current
2 32 A
3 25 A
4 18 A
5 14 A
6 10 A
7 6.3 A
8 4 A
9 2.5 A
10 1.6 A
11 Limit of rated ultimate breaking capacity on short-circuit of GV2LE (14, 18, 23 and 25 A ratings).

Thermal limit on short-circuit for GV2LE only

Thermal limit in kA²s in the magnetic operating zone

Sum of I²dt = f (prospective Isc) at 1.05 Ue = 435 V



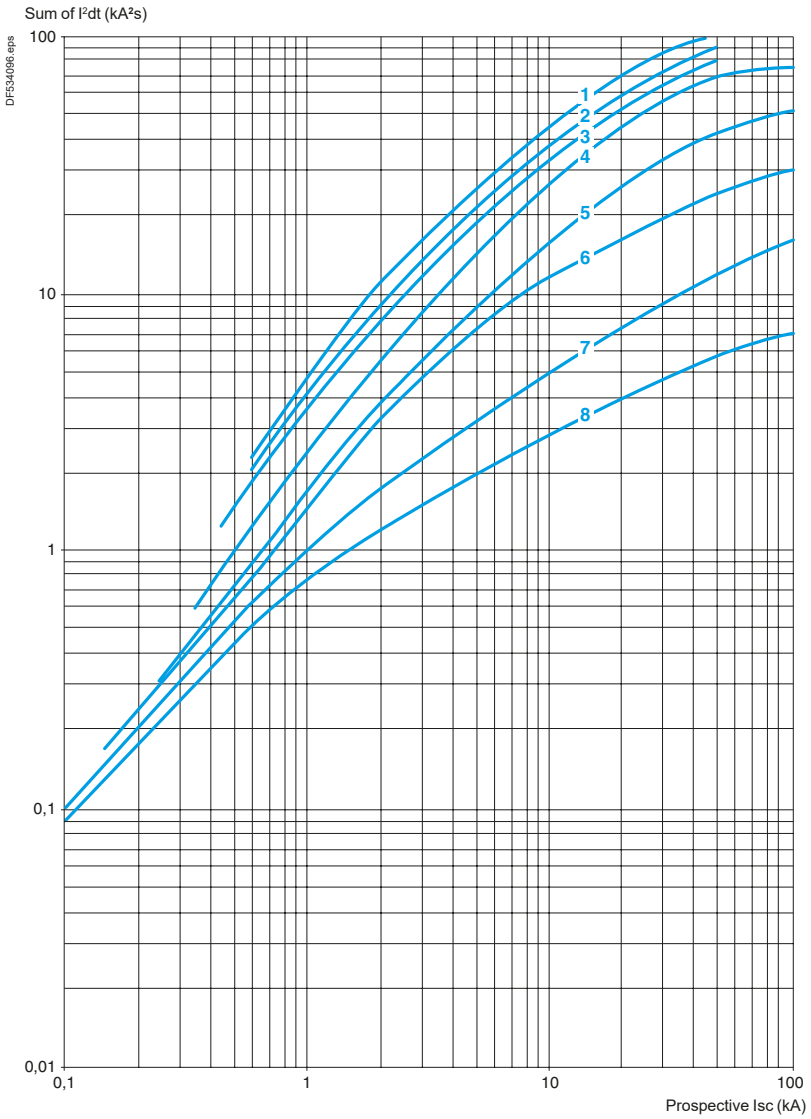
1 32 A
2 25 A
3 18 A
4 14 A
5 10 A
6 6.3 A
7 4 A
8 2.5 A
9 1.6 A

References:
pages B6/11 to B6/24
Characteristics:
pages B6/64 to B6/68
Dimensions:
pages B6/82 to B6/91

Thermal limit on short-circuit for GV2L only

Thermal limit in kA²s in the magnetic operating zone

Sum of I²dt = f (prospective Isc) at 1.05 Ue = 435 V



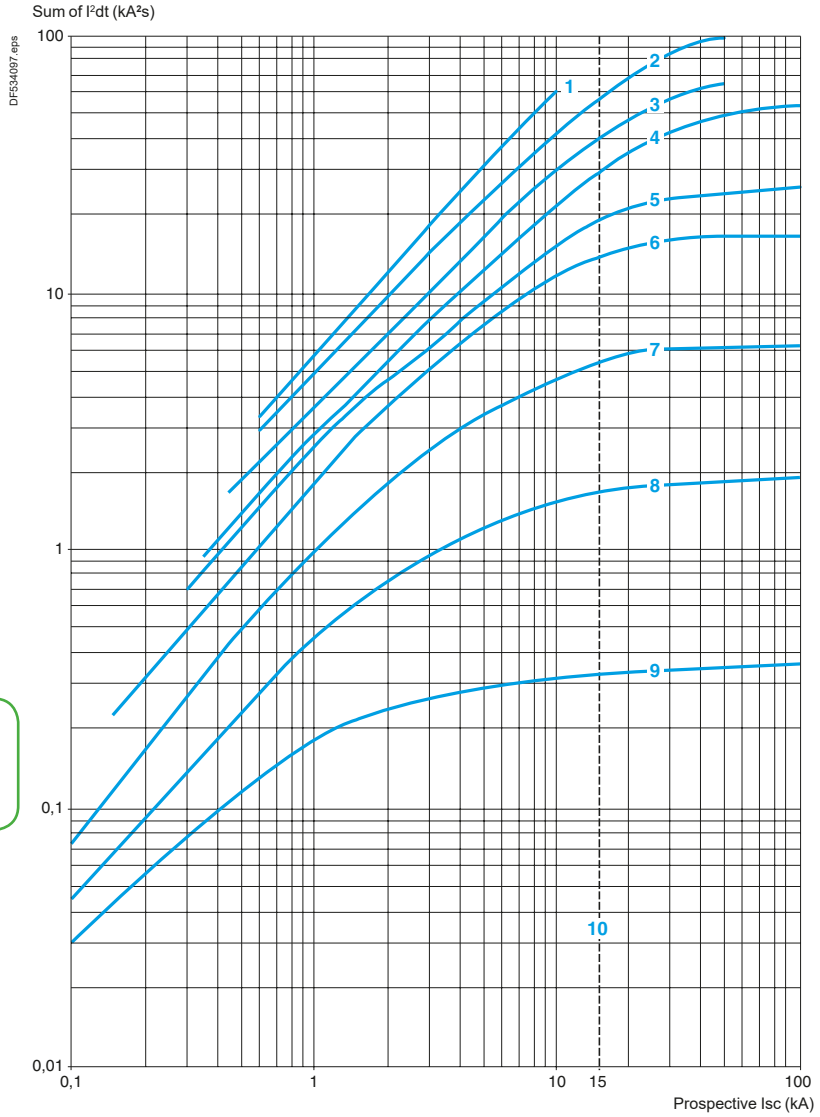
1 25 A and 32 A
2 18 A
3 14 A
4 10 A
5 6.3 A
6 4 A
7 2.5 A
8 1.6 A

Circuit breakers

Thermal limit on short-circuit for GV2L and GV2LE + thermal overload relay LRD or LR2K

Thermal limit in kA²s in the magnetic operating zone

Sum of I²dt = f (prospective Isc) at 1.05 Ue = 435 V

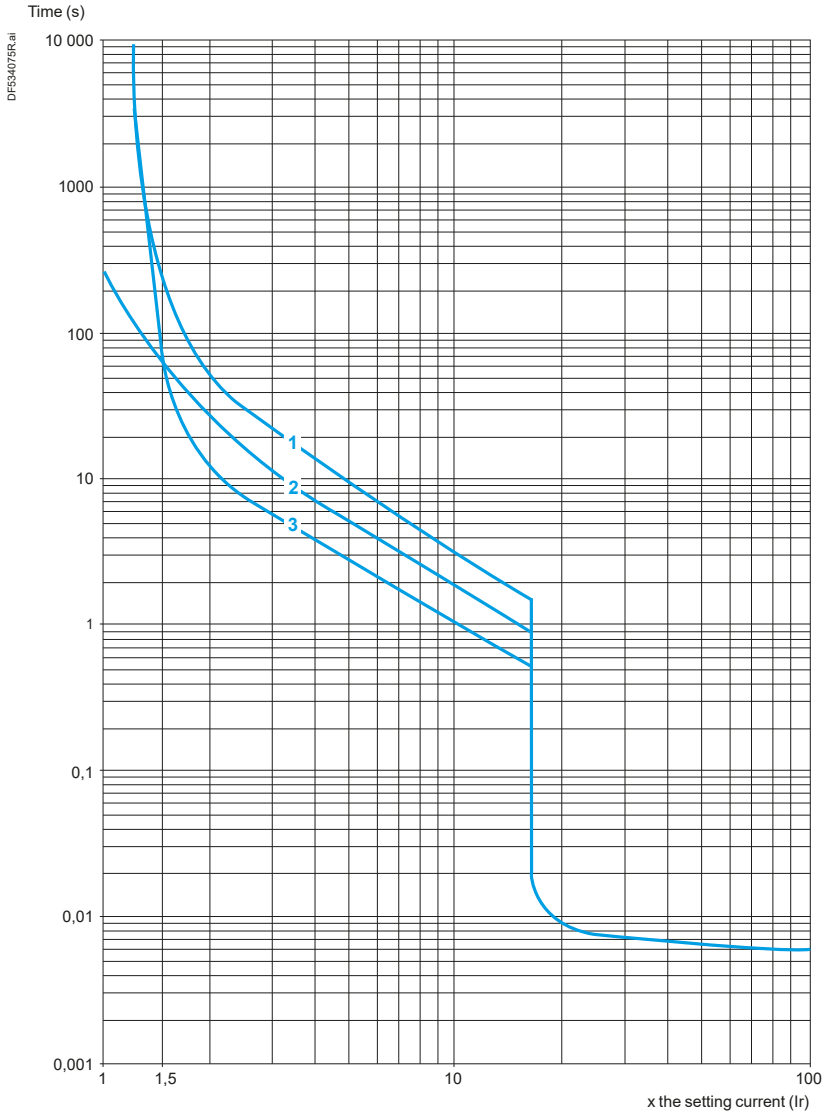


1 32 A (GV2LE32)
2 25 A and 32 A (GV2L32)
3 18 A
4 14 A
5 10 A
6 6.3 A
7 4 A
8 2.5 A
9 1.6 A
10 Limit of rated ultimate breaking capacity on short-circuit of GV2 LE (14, 18, 23 and 25 A ratings).

Circuit breakers

Thermal-magnetic tripping curves for GV2ME, GV2RT and GV2P

Average operating times at 20 °C related to multiples of the setting current



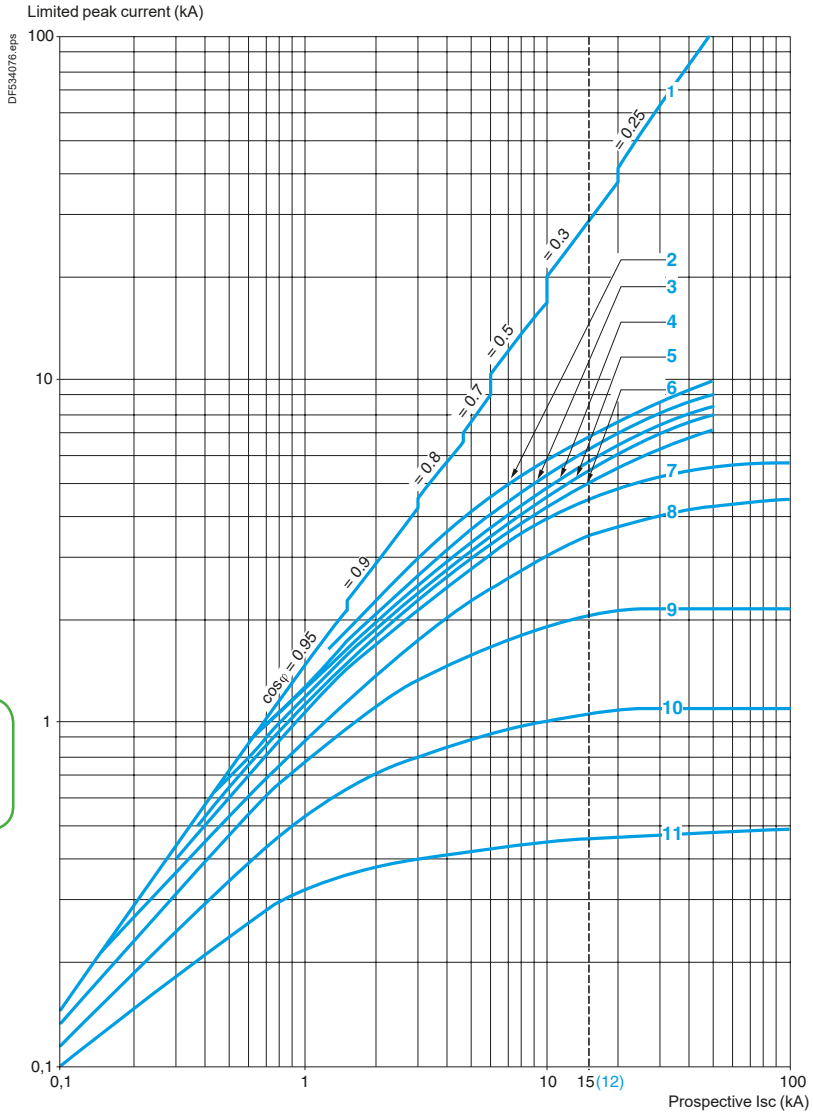
1 3 poles from cold state
2 2 poles from cold state
3 3 poles from hot state

Circuit breakers

Current limitation on short-circuit for GV2ME, GV2RT and GV2P (3-phase 400/415 V)

Dynamic stress

I peak = f (prospective Isc) at 1.05 Ue = 435 V



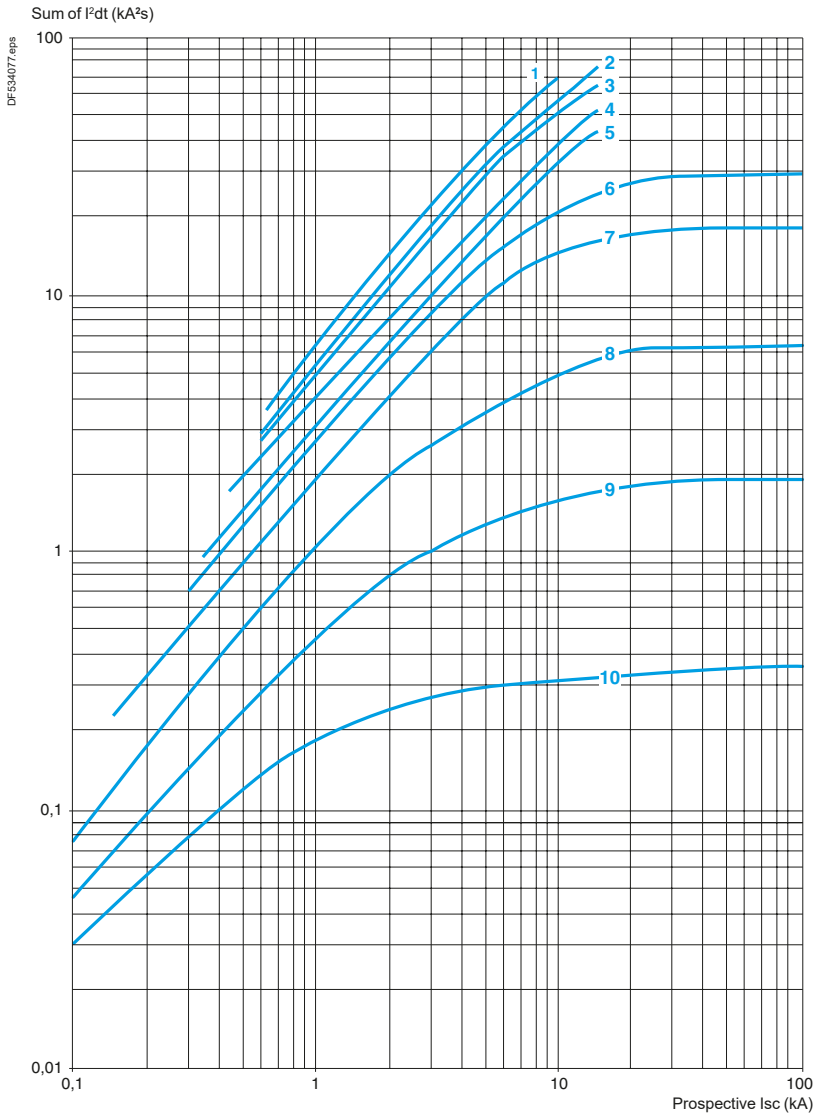
1 Maximum peak current
2 24 - 32 A
3 20 - 25 A
4 17 - 23 A
5 13 - 18 A
6 9 - 14 A
7 6 - 10 A
8 4 - 6.3 A
9 2.5 - 4 A
10 1.6 - 2.5 A
11 1 - 1.6 A
12 Limit of rated ultimate breaking capacity on short-circuit of GV2ME (14, 18, 23 and 25 A ratings)

Circuit breakers

Thermal limit on short-circuit for GV2ME and GV2RT

Thermal limit in kA²s in the magnetic operating zone

Sum of I²dt = f (prospective Isc) at 1.05 Ue = 435 V

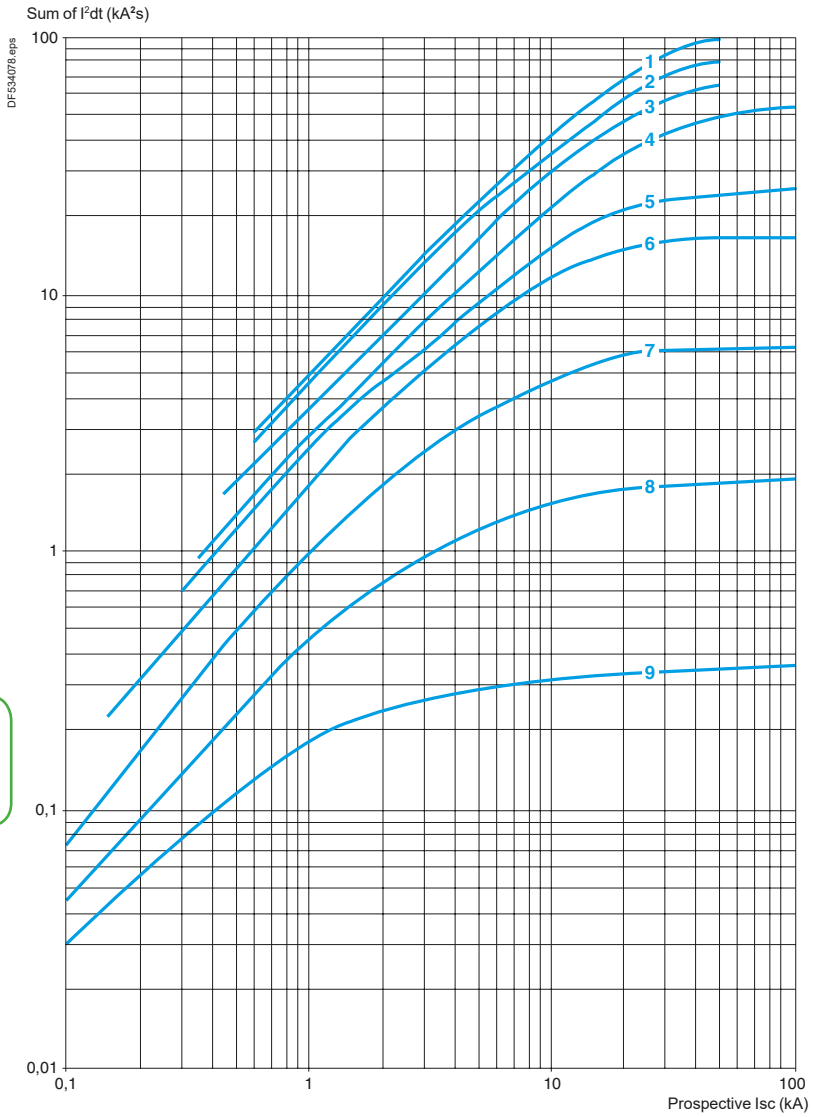


1 24 - 32 A
2 20 - 25 A
3 17 - 23 A
4 13 - 18 A
5 9 - 14 A
6 6 - 10 A
7 4 - 6.3 A
8 2.5 - 4 A
9 1.6 - 2.5 A
10 1 - 1.6 A

Thermal limit on short-circuit for GV2P

Thermal limit in kA²s in the magnetic operating zone

Sum of I²dt = f (prospective Isc) at 1.05 Ue = 435 V



1 20 - 25 A, 24 - 32 A
2 17 - 23 A
3 13 - 18 A
4 9 - 14 A
5 6 - 10 A
6 4 - 6.3 A
7 2.5 - 4 A
8 1.6 - 2.5 A
9 1 - 1.6 A

Circuit breakers

TeSys protection components

GV2 motor circuit breakers

Electric trips

Characteristics of GV2 electric trips

Type of trip			GVAU●●● MN undervoltage trip	GVAX●●● MN undervoltage trip for GV2 mE - safety device for dangerous machines	GVAS●●● MX shunt trip
Rated insulation voltage (Ui)	Conforming to IEC 60947-1	V	690	500	690
	Conforming to UL 60947-4-1, CSA C22.2 n° 60947-4-1	V	600	-	600
Operational voltage (Ue)	Conforming to IEC 60947-1	V	0.85...1.1 Uc	0.85...1.1 Uc	0.7...1.1 Uc
Drop-out voltage		V	0.7...0.35 Uc	0.7...0.35 Uc	0.75...0.2 Uc
Inrush consumption	~ ⎓	VA	12	12	14
Sealed consumption	~ ⎓	VA	3.5	3.5	5
Operating time	Conforming to IEC 60947-1	ms	From the moment the voltage reaches its operational value until opening of the circuit breaker. 10...15		
On-load factor			100 %		
Cabling (spring connection)	Number of conductors		2 or 4		
	Solid cable	mm^2	1...2.5		
	Flexible cable without cable end	mm^2 AWG	0.75...2.5		
	Flexible cable with cable end	mm^2	0.75...2.5		
Tightening torque		N.m	1.4 max		
Mechanical durability (C.O.: Close - Open)		C.O.	30000 (GV2ME and GV2P)		

References: pages B6/11 to B6/24
Characteristics: pages B6/64 to B6/68
Dimensions: pages B6/82 to B6/91

TeSys protection components

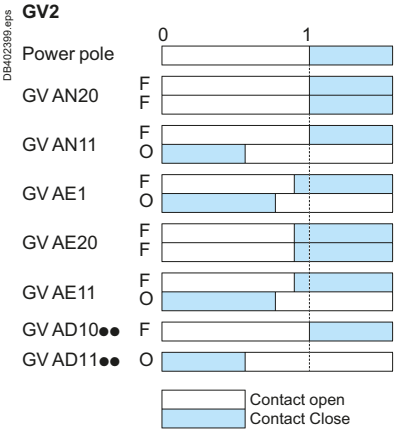
Thermal-magnetic motor circuit breakers GV2

Auxiliary contacts

Type of contacts			Instantaneous auxiliary GVAN, GVAD							Fault signalling GVAD, GVAM11 (1)				Instantaneous auxiliary GVAE			
Rated insulation voltage (Ui) (associated insulation coordination)	Conforming to IEC 60947-1	V	690							690				250 (690 in relation to main circuit)			
	Conforming to UL 60947-4-1, CSA C22.2 n° 60947-4-1	V	600							300				300			
Conventional thermal current (Ith)	Conforming to IEC 60947-5-1	A	6							2.5				2.5			
	Conforming to UL 60947-5-1, CSA C22.2 n° 60947-5-1	A	5							1				1			
Mechanical durability (C.O.: Close - Open)		C.O.	100 000							1000				100 000			
Operational power and current conforming to IEC 60947-5-1. a.c. operation			AC-15/100 000 C.O.							AC-14/1000 C.O.				AC-15/100 000 C.O.			
	Rated operational voltage (Ue)	V	**48**	**110 127**	**230 240**	**380 415**	**440**	**500**	**690**	**24**	**48**	**110 127**	**230 240**	**24**	**48**	**110 127**	**230 240**
Operation	Operational power, normal conditions	VA	300	500	720	850	650	500	400	36	48	72	72	48	60	120	120
	Occasional breaking and making capacities, abnormal conditions	kVA	3	7	13	15	13	12	9	0.22	0.3	0.45	0.45	0.48	0.6	1.27	2.4
	Rated operational current (Ie)	A	6	4.5	3.3	2.2	1.5	1	0.6	1.5	1	0.5	0.3	2	1.25	1	0.5
Operational power and current conforming to IEC 60947-5-1. d.c.			DC-13/100 000 C.O.							DC-13/1000 C.O.				DC-13/100 000 C.O.			
	Rated operational voltage (Ue)	V	**24**	**48**	**60**	**110**	**240** (2)	**–**	**–**	**24**	**48**	**60**	**–**	**24**	**48**	**60**	**–**
Operation	Operational power, normal conditions	W	140	240	180	140	120	–	–	24	15	9	–	24	15	9	–
	Occasional breaking and making capacities, abnormal conditions	W	240	360	240	210	180	–	–	100	50	50	–	100	50	50	–
	Rated operational current (Ie)	A	6	5	3	1.3	0.5	–	–	1	0.3	0.15	–	1	0.3	0.15	–
Low power switching reliability of contact			**GV AE**: Number of failures for “n” million operating cycles (17 V-5 mA): = 10^{-6}														
Minimum operational conditions d.c. operation		V	17														
		mA	5														
Short-circuit protection			By **GB2 CB●●** circuit breaker (rating according to operational current for Ue ⩽ 415 V) or by gG fuse 10 A max											**GB2 CB06** or gG fuse 10 A max			
Cabling, screw clamp terminals	Number of conductors		**1**			**2**											
	Solid cable	mm²	1…2.5			1…2.5											
	Flexible cable without cable end	mm²	0.75…2.5			0.75…2.5											
	Flexible cable with cable end	mm²	0.75…1.5			0.75…1.5											
	Tightening torque	N.m	1.4 max			1.4 max											
Cabling, spring terminal connections			**GV AN** only														
	Flexible cable without cable end	mm²	0.75…2.5			0.75…2.5				–				0.75…1.5			

Operation of instantaneous auxiliary contacts

GV2



Operation of fault signalling contacts

GVAM11
Change of state following tripping on short-circuit.

GVAD10●● and **GVAD01●●**
Change of state following tripping on short-circuit, overload or undervoltage.

(1) For application example of fault signalling contact and short-circuit signalling contact.
*(2) Add an RC circuit type **LA4 D** to the load terminals.*

References: pages B6/11 to B6/24
Characteristics: pages B6/64 to B6/68
Dimensions: pages B6/82 to B6/91

Life Is On Schneider Electric

Characteristics of 3-pole busbars GV2G●●●

			GV2G●●●
Rated insulation voltage (Ui)	Conforming to IEC 60947-1	V	690
Conventional thermal current (Ith)	Conforming to IEC 60439-1	A	63
Rated operational current (Ie)		A	63
Permissible peak current (I peak)		kA	11
Permissible thermal limit (I^2t)		kA^2s	104
Degree of protection	Conforming to IEC 60529		IP 20
Terminal block			Yes

Characteristics of terminal blocks GV2G05 and GV1G09 (for GV2ME and GV2P)

Rated insulation voltage (Ui)	Conforming to IEC 60947-1	V	690	
Conventional thermal current (Ith)	Conforming to IEC 60439-1	A	63	
Rated operational current (Ie)		A	63	115
Degree of protection	Conforming to IEC 60529		IP 20	
Connection	Solid cable	mm^2	1 x 1.5 to 25 conductor or 2 x 1.5 to 6 conductors	
	Flexible cable without cable end	mm^2	1 x 1.5 to 16 conductor or 2 x 1.5 to 4 conductors	
	Flexible cable with cable end	mm^2	1 x 1.5 to 10 conductor or 2 x 1.5 to 2 conductors	
	Flexible or solid cable AWG		1 AWG 4	
Tightening torque	Connector	N.m	2.2	
	Screw clamp terminals	N.m	1.7	

Characteristics of current limiters (GV2ME and GV2P)

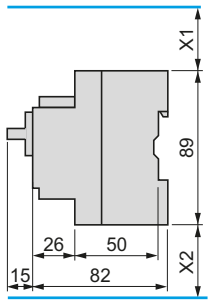
Type			GV1L3		LA9LB920	
Rated insulation voltage (Ui)	Conforming to IEC 60947-1	V	690		690	
Conventional thermal current (Ith)	Conforming to IEC 60947-1	A	63		63	
Rated operational current (Ie)		A	32		32	
Operating threshold	rms current	A	1500 (non adjustable threshold)		1000 (non adjustable threshold)	
Connection			1 conductor	2 conductors	1 conductor	2 conductors
	Solid cable	mm^2	1.5…25	1.5…10	1.5…25	1.5…10
	Flexible cable without cable end	mm^2	1.5…25	2.5…10	1.5…25	1.5…10
	Flexible cable with cable end	mm^2	1.5…16	1.5… 4	1.5…16	1.5… 4
Tightening torque		N.m	2.2			

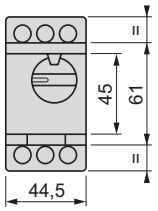
References:
pages B6/11 to B6/24
Characteristics:
pages B6/64 to B6/68
Dimensions:
pages B6/82 to B6/91

GV2L

Dimensions

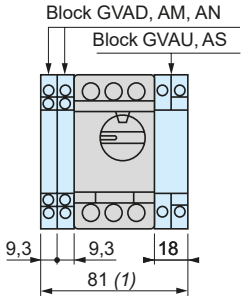
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X1 Electrical clearance = 40 mm for Ue ⩽ 415 V, or 80 mm for Ue = 440 V, or 120 mm for Ue = 500 and 690 V.
X2 = 40 mm.

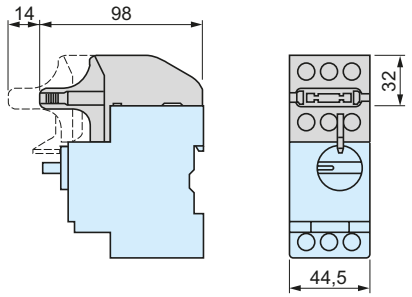
GVAD, AM, AN, AU, AS



(1) Maximum.

GV2AK00

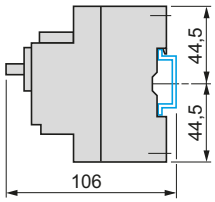
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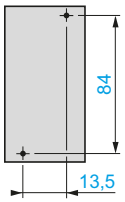
Mounting

On rail AM1 DE200, AM1 ED200 (35 x 15)

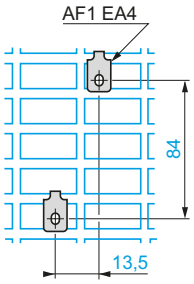
DF537440.eps



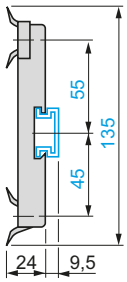
Panel mounted

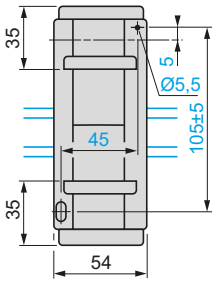


On pre-slotted mounting plate AM1 PA



Adapter plate GK2AF01





7.5 mm height compensation plate GV1F03

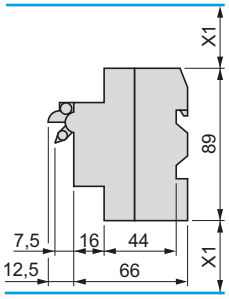
DF537441.eps

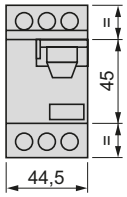


GV2LE

Dimensions

DF537442.eps

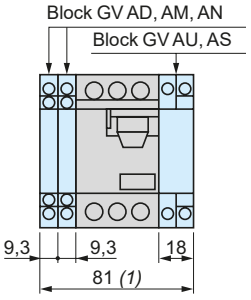




X1 Electrical clearance = 40 mm for Ue ⩽ 690 V.

GVAD, AM, AN, AU, AS

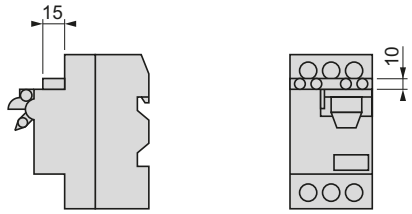
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(1) Maximum.

GVAE

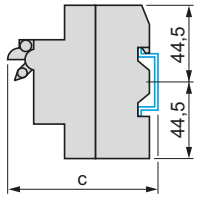
DF537443.eps



Mounting

On 35 mm ⎓ rail

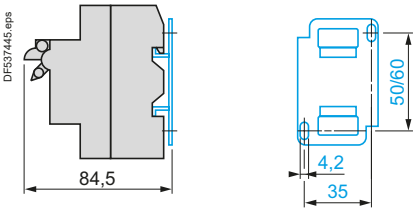
DF537444.eps



c = 80 on AM1 DP200 (35 x 7.5) and 88 on AM1 DE200, ED200 (35 x15)

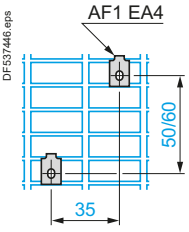
On panel with adapter plate GV2 AF02

DF537445.eps



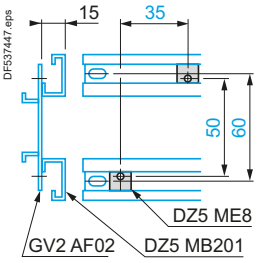
On pre-slotted plate AM1 PA

DF537446.eps



On rails DZ5 MB201

DF537447.eps

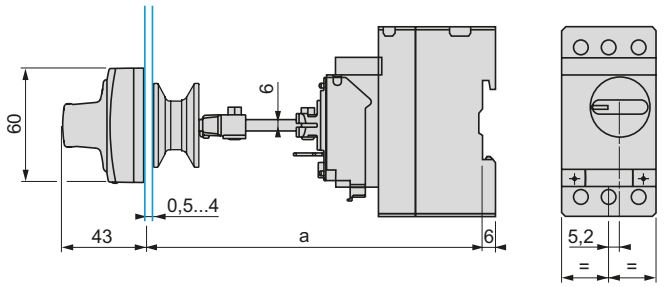


References:
pages B6/11 to B6/24
Characteristics:
pages B6/64 to B6/68
Curves:
pages B6/69 to B6/78

Mounting

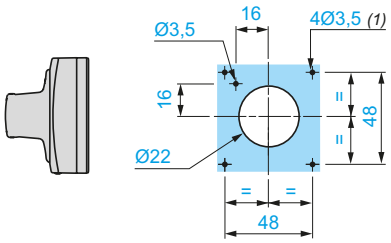
Mounting of external operator GV2APN01, GV2APN02 or GV2APN04 for motor circuit breakers GV2L

DB127415.eps



Door cut-out

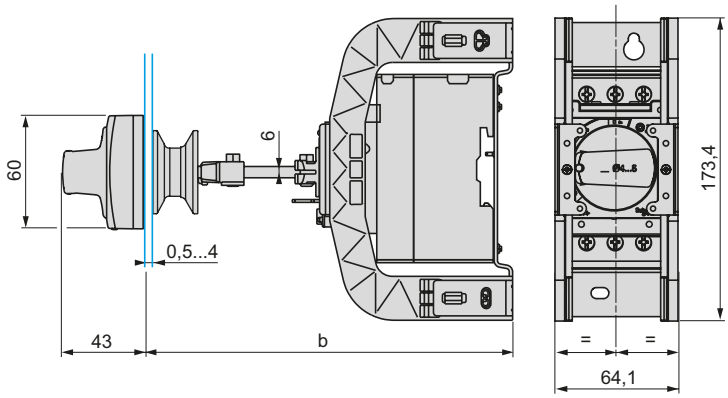
DB126634.eps



(1) For IP65 only.

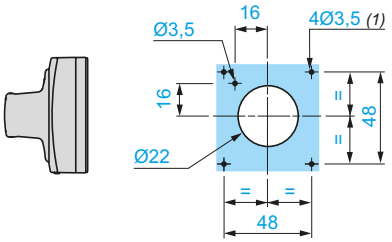
Mounting of external operator GVAPH02 for motor circuit breakers GV2L

DB127414.eps



Door cut-out

DB126634.eps

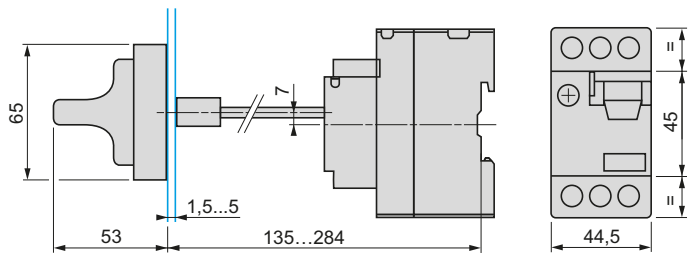


(1) For IP65 only.

	a		b	
	Mini	Maxi	Mini	Maxi
GV2 APN●●	140	250		
GV2 APN●● + GV APH02			151	250
GV2 APN●● + GV APK11	250	434	-	-
GV2 APN●● + GV APH02 + GV APK11	-	-	250	445

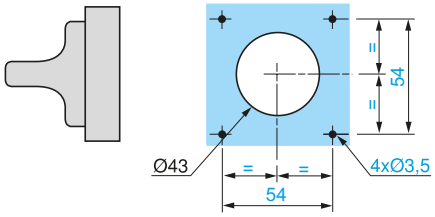
Mounting of external operator GV2AP03 for GV2LE

DB126649.eps



Door cut-out

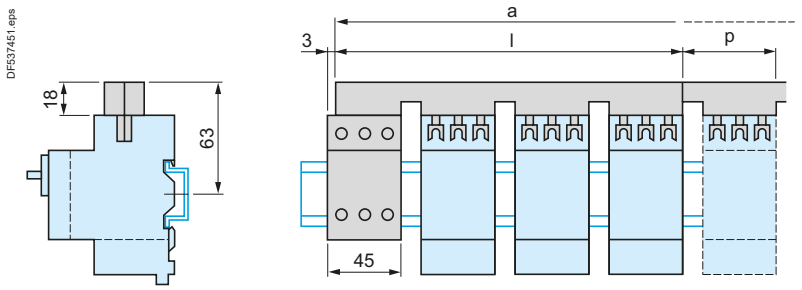
DF569008.eps



Circuit breakers

GV2LE

Sets of busbars GV2G445, GV2G454, GV2G472, with terminal block GV2G05

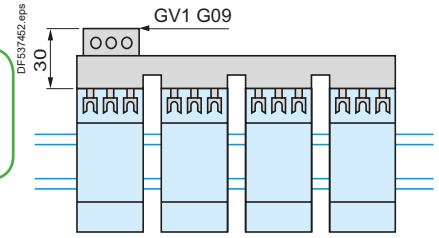


	l	p
GV2G445 (4 x 45 mm)	179	45
GV2G454 (4 x 54 mm)	206	54
GV2G472 (4 x 72 mm)	260	72

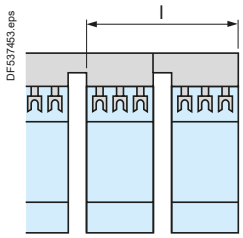
	a			
Number of tap-offs	**5**	**6**	**7**	**8**
GV2G445	224	269	314	359
GV2G454	260	314	368	422
GV2G472	332	404	476	548

Sets of busbars GV2LE

Sets of busbars GV2G●●● with term. block GV1G09

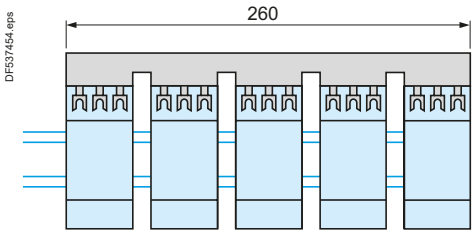


Sets of busbars GV2G245, GV2G254, GV2GR272

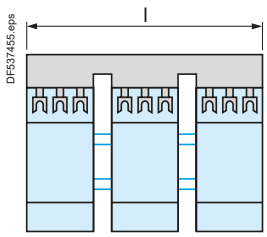


	l
GV2G245 (2 x 45 mm)	89
GV2G254 (2 x 54 mm)	98
GV2G272 (2 x 72 mm)	116

Set of busbars GV2G554



Sets of busbars GV2G345 and GV2G354

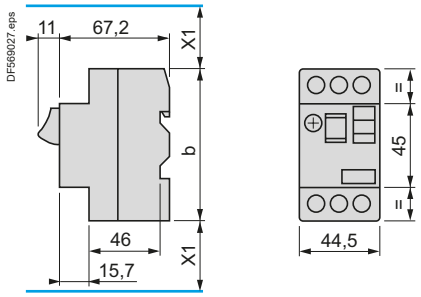


	l
GV2G345 (3 x 45 mm)	134
GV2G354 (3 x 54 mm)	152

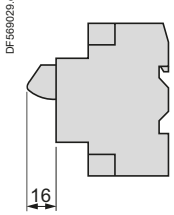
Circuit breakers

Dimensions

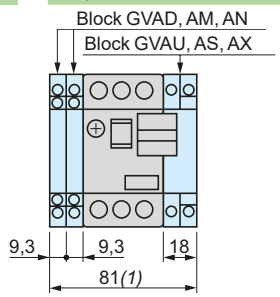
GV2ME



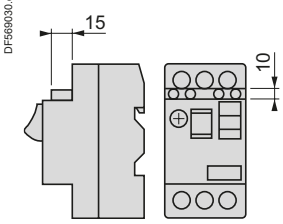
GVAX



GVAD, AM, AN, AU, AS, AX



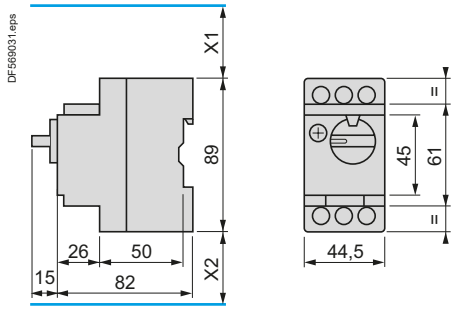
GVAE



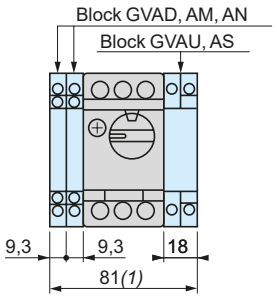
	b
GV2ME●●	89
GV2ME●●3	101

(1) Maximum.
X1 Electrical clearance = 40 mm for Ue ≤ 690 V

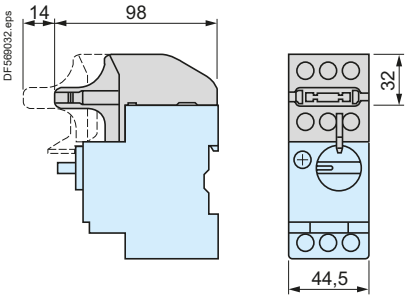
GV2P



GVAD, AM, AN, AU, AS

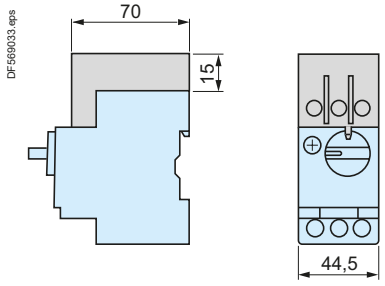


GV2AK00



(1) Maximum.
X1 Electrical clearance = 40 mm for Ue ≤ 415 V, or 80 mm for Ue = 440 V, or 120 mm for Ue = 500 and 690 V
X2 = 40 mm

GV2GH7



References:
pages B6/11 to B6/24
Characteristics:
pages B6/64 to B6/68
Curves:
pages B6/69 to B6/78

TeSys protection components

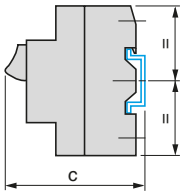
Thermal-magnetic motor circuit breakers GV2ME and GV2P

Mounting

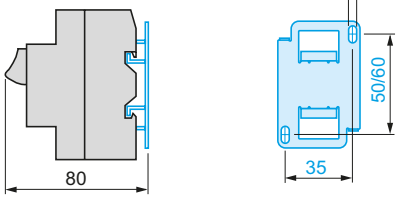
GV2ME

On 35 mm ⊔ rail

DF569012.eps

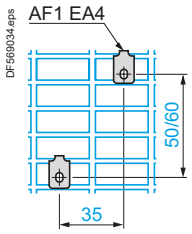


On panel with adapter plate GV2AF02

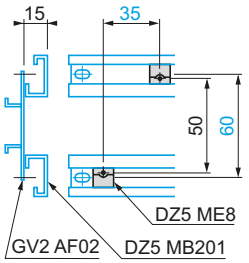


On pre-slotted plate AM1 PA

DF569034.eps



On rails DZ5 MB201

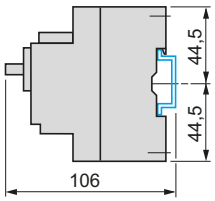


c = 78.5 on AM1 DP200 (35 x 7.5)
c = 86 on AM1 DE200, ED200 (35 x 15)

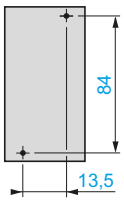
GV2P

On rail AM1 DE200, ED200 (35 x 15)

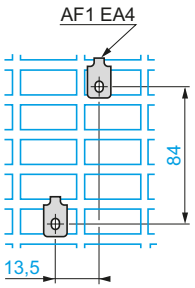
DF569013.eps



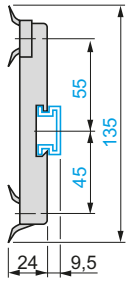
Panel mounted

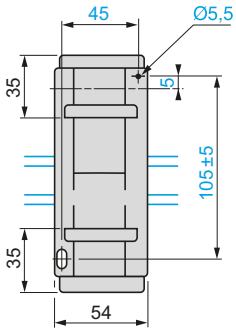


On pre-slotted plate AM1 PA



Adapter plate GK2AF01



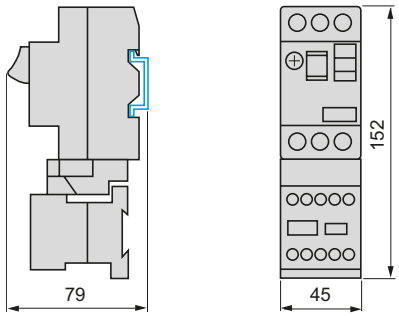


Dimensions

GV2AF01

Combination GV2ME + TeSys k contactor

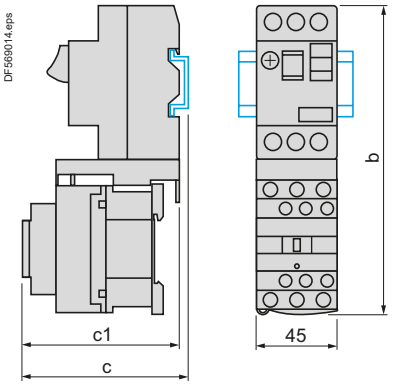
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GV2AF3

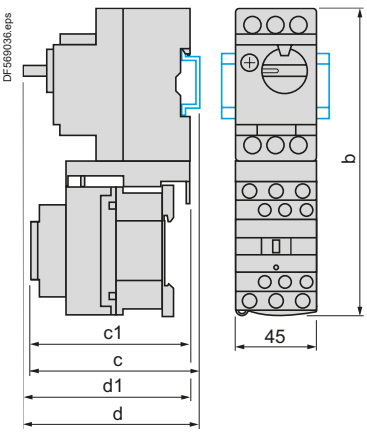
Combination GV2ME + TeSys d contactor

DF569014.eps



Combination GV2P + TeSys d contactor

DF569036.eps



GV2ME +	LC1D09 …D18	LC1D25 and D32
b	176.4	186.8
c1	94.1	100.4
c	99.6	105.9

GV2P +	LC1D09 …D18	LC1D25 and D32
b	176.4	186.8
c1	100.1	106.4
c	105.6	111.9
d1	95	95
d	100.5	100.5

References:
pages B6/11 to B6/24

Characteristics:
pages B6/64 to B6/68

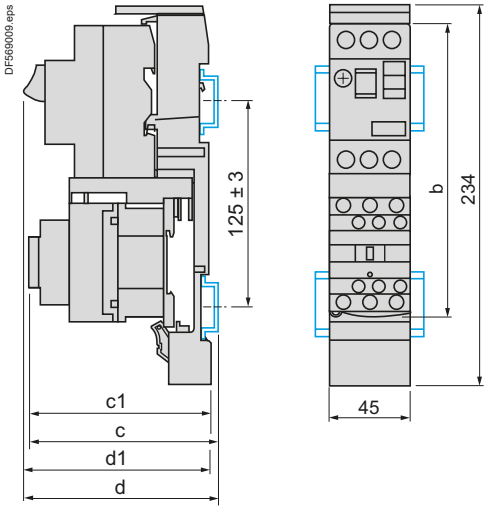
Curves:
pages B6/69 to B6/78

Life Is On Schneider Electric

Dimensions

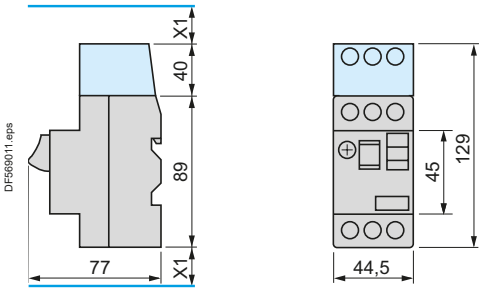
GV2AF4 + LAD311

Combination GV2ME + TeSys d contactor



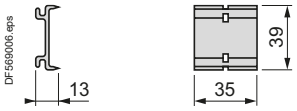
GV2ME +	LC1D09…D18	LC1D25 and D32
b	176.4	186.8
c1	103.1	136.4
c	135.6	141.9
d1	107	107
d	112.5	112.5

GV2ME + GV1L3 (current limiter)



X1 = 10 mm for Ue = 230 V
or 30 mm for 230 V < Ue ≤ 690 V

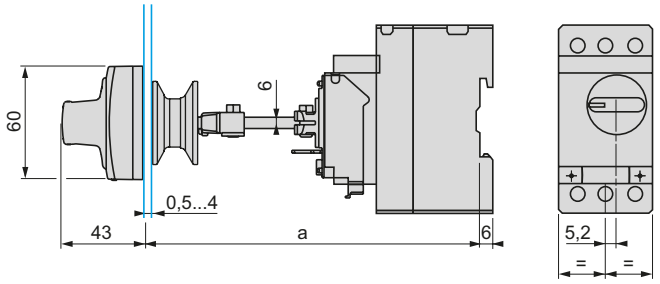
7.5 mm height compensation plate GV1F03



Mounting

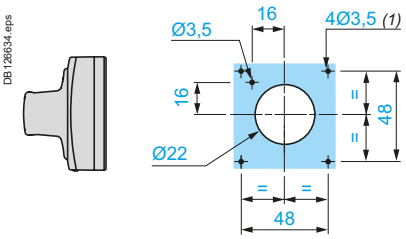
Mounting of external operator GV2APN01, GV2APN02 or GV2APN04 for motor circuit breakers GV2P

DB127415.eps



Door cut-out

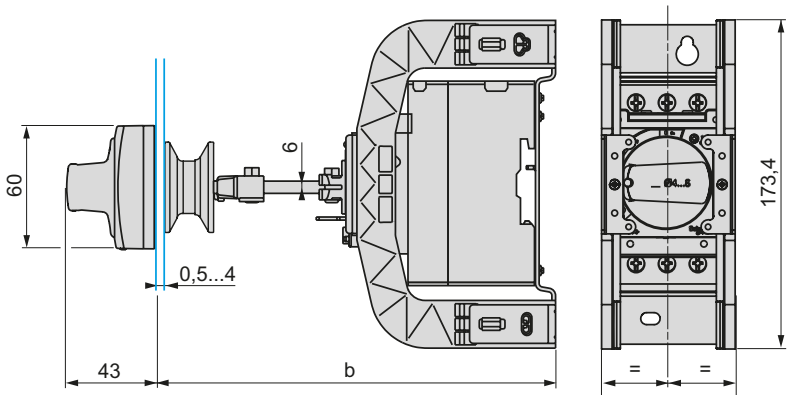
DB126634.eps



(1) For IP65 only.

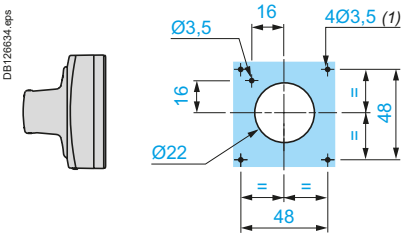
Mounting of external operator GVAPH02 for motor circuit breakers GV2P

DB127414.eps



Door cut-out

DB126634.eps



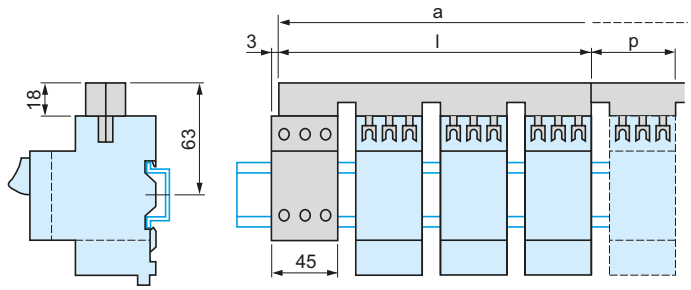
(1) For IP65 only.

	a		b	
	Mini	Maxi	Mini	Maxi
GV2APN●●	140	250		
GV2APN●● + GVAPH02			151	250
GV2APN●● + GVAPK11	250	434	-	-
GV2APN●● + GVAPH02 + GVAPK11	-	-	250	445

GV2ME, GV2P

Sets of busbars GV2G445, GV2G454, GV2G472, with terminal block GV2G05

DF569037.eps

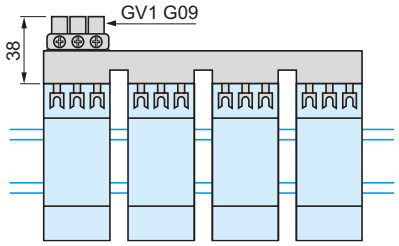


	l	p
GV2G445 (4 x 45 mm)	179	45
GV2G454 (4 x 54 mm)	206	54
GV2G472 (4 x 72 mm)	260	72

	a			
Number of tap-offs	**5**	**6**	**7**	**8**
GV2G445	224	269	314	359
GV2G454	260	314	368	422
GV2G472	332	404	476	548

Sets of busbars GV2G●●● with terminal block GV1G09

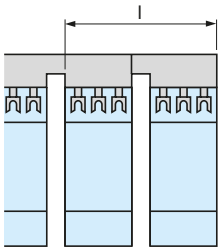
DF569028.eps



	l
GV2G245 (2 x 45 mm)	89
GV2G254 (2 x 54 mm)	98
GV2G272 (2 x 72 mm)	116

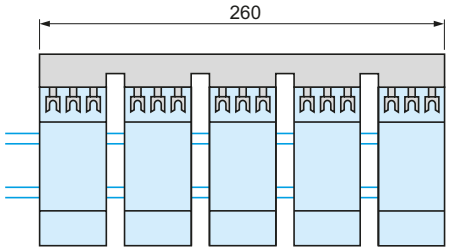
Sets of busbars GV2G245, GV2G254, GV2G272

DF569038.eps



Sets of busbars GV2G554

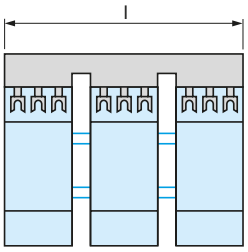
DF569039.eps



	l
GV2G345 (3 x 45 mm)	134
GV2G354 (3 x 54 mm)	152

Sets of busbars GV2G345 and GV2G354

DF569040.eps



Circuit breakers

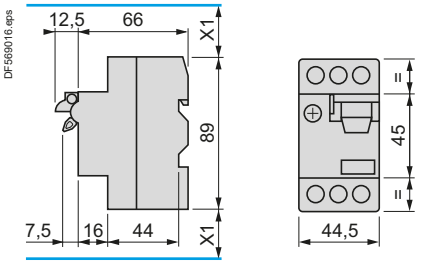
References:
pages B6/11 to B6/24

Characteristics:
pages B6/64 to B6/68

Curves:
pages B6/69 to B6/78

GV2RT

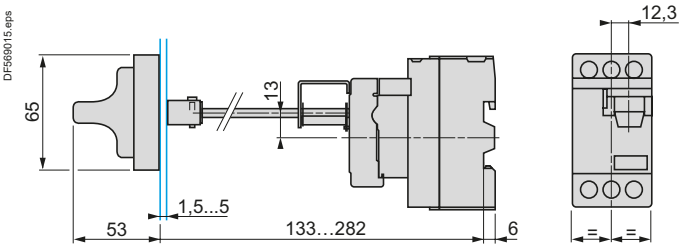
Dimensions



X1: Electrical clearance = 40 mm for Ue < 690 V

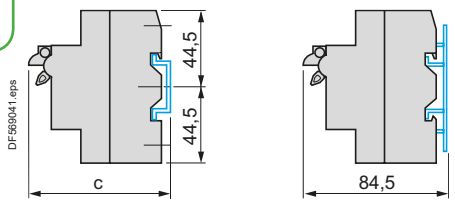
Mounting

Mounting of external operator GV2AP03

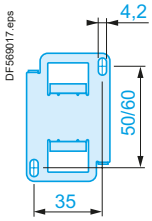


Circuit breakers

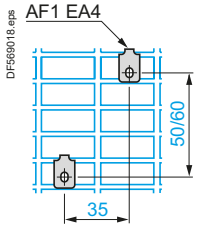
On 35 mm ⎓ rail



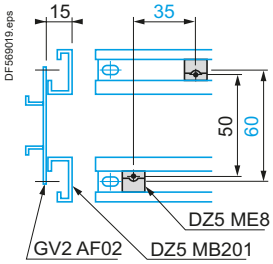
On panel with adapter plate GV2AF02



On pre-slotted plate AM1 PA



On rails DZ5 MB



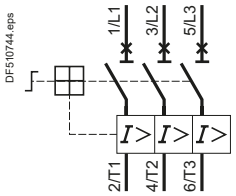
c = 80 on AM1 DP200 (35 x 7.5)
c = 88 on AM1 DE200, ED200 (35 x 15)

TeSys protection components

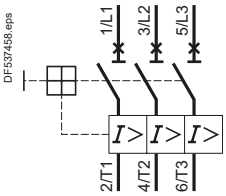
Thermal-magnetic motor circuit breakers GV2L, GV2LE, GV2ME, GV2P, GV2RT

Schemes

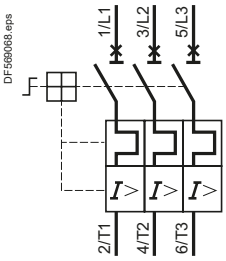
GV2L●●



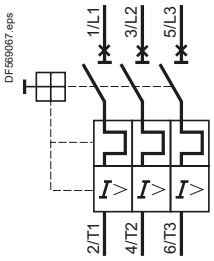
GV2LE●●



GV2P●●

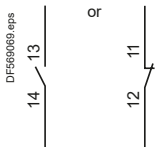


GV2ME●● and GV2RT

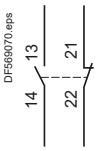


Front mounting add-on contact blocks Instantaneous auxiliary contacts

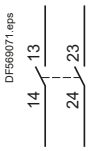
GVAE1



GVAE11

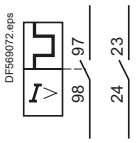


GVAE20

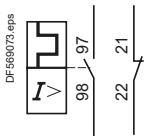


Front mounting add-on contact blocks Instantaneous auxiliary contacts and fault signalling contacts

GVAED101

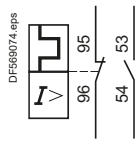


GVAED011

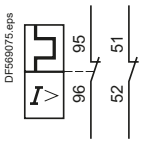


Side mounting add-on contact blocks Instantaneous auxiliary contacts and fault signalling contacts

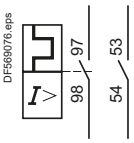
GVAD0110



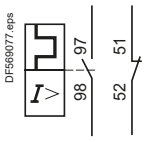
GVAD0101



GVAD1010

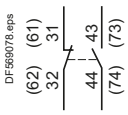


GVAD1001

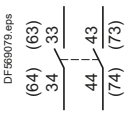


Instantaneous auxiliary contacts

GVAN11

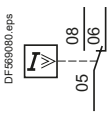


GVAN20



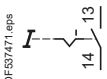
Short-circuit signalling contacts

GVAM11

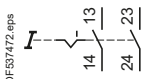


Start-Stop signalling contact blocks

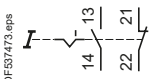
GK2AX10



GK2AX20

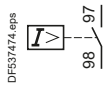


GK2AX50

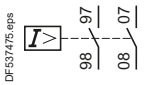


Fault signaling contact blocks

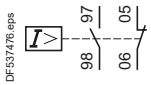
GK2AX12



GK2AX22

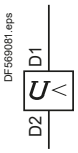


GK2AX52

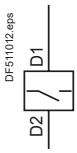


Voltage trips

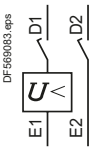
GVAU●●●



GVAS●●●

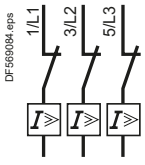


GVAX●●●

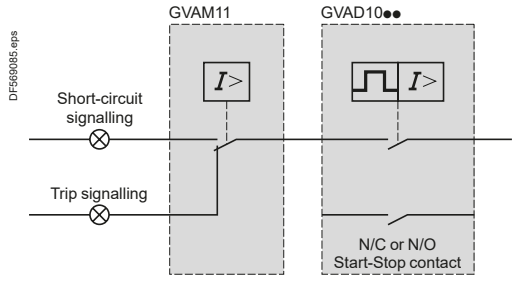


Current limiter

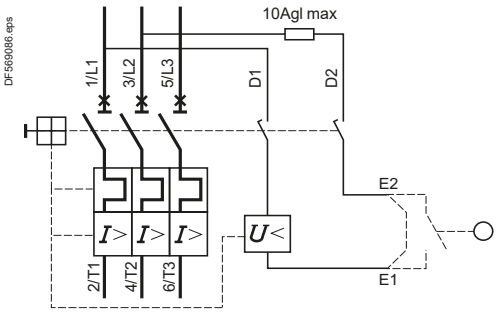
GV1L3



Use of fault signalling contact and short-circuit signalling contact



Connection of undervoltage trip for dangerous machines (conforming to INRS) on GV2ME only



References:
pages B6/11 to B6/24

Characteristics:
pages B6/64 to B6/68

Curves:
pages B6/69 to B6/78