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GV2ME10

Circuit
breakers

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

400/415 V			500 V			690 V			Setting range of thermal trips (2)	Magnetic tripping current I _d ± 20 %	Reference
P	I _{cu}	I _{cs} (1)	P	I _{cu}	I _{cs} (1)	P	I _{cu}	I _{cs} (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, **AE1TQ** to the motor circuit breaker reference selected above.
Example: **GV2ME01AE1TQ**.
- GV AE1 **AE11TQ** to the motor circuit breaker reference selected above.
Example: **GV2ME01AE11TQ**.
- GV AN1 **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 I_{cu}.

(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**

★ > 100 kA.

TeSys protection components

Thermal-magnetic motor circuit breakers GV2P



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.

Example: 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 Max. Fuse or Circuit breaker (A)	Reference
	Single-Phase			Three-Phase							
	115 V	200 V	230 V	115 V	200 V	230 V	460 V	575 V			
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

Magnetic motor circuit breakers GV3L



GV3L65

Motor circuit breakers from 0.09 to 45 kW

GV3L: control by rotary knob, connection by EverLink® BTR screw connectors

Standard power ratings of 3-phase motors

50/60 Hz in category AC-3

400/415 V			500 V			690 V			Magnetic protection rating	Tripping current Id ± 20 %	Use in association with thermal overload relay (class 10 A)	Reference
P	Icu	Ics ⁽¹⁾	P	Icu	Ics ⁽¹⁾	P	Icu	Ics ⁽¹⁾				
kW	kA		kW	kA		kW	kA		A	A		
11	100	100	15	12	50	18.5	6	50	25	350	LRD 325	GV3L25
15	100	100	18.5	12	50	22	6	50	32	448	LRD 332	GV3L32
18.5	50	100	22	12	50	37	6	50	40	560	LRD 340	GV3L40
22	50	100	30	12	50	45	6	50	50	700	LRD 350	GV3L50
30	50	100	37	12	50	55	6	50	65	910	LRD 365	GV3L65
37	50	60	45	12	50	55	6	50	73	1120	LRD 380	GV3L73
45	50	60	45	12	50	55	6	50	80	1100	LRD 380	GV3L80 ⁽²⁾

Connection by EverLink® BTR screw connectors, for assembly with a contactor

To assemble a **GV3L25** to **L73** circuit breaker with an **LC1D40A** to **D80A** contactor, it is possible to use the circuit breaker supplied without downstream EverLink® power terminal block. To order this product, add the digit **1** to the end of the references selected above. Example: **GV3L73** becomes **GV3L731**. Do not use direct mounting between **GV3L80** and **LC1D80A** because of potential overheating, use cable link.

Connection by lugs

To order these circuit breakers with connection by lugs, add the digit **6** to the end of reference selected above. Example: **GV3L32** becomes **GV3L326**.

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

⁽²⁾ 750 A Lock Rotor Current max.

★ > 100 kA.

TeSys protection components

Thermal-magnetic motor circuit breakers GV3P



GV3P651



GV3P80

Motor circuit breakers up to 45 kW / 400 V

Standard power ratings of 3-phase motors
50/60 Hz in category AC-3

400/415 V			500 V			690 V			Setting range of thermal trips (2)	Magnetic tripping current I _d ± 20 %	Reference
P	I _{cu}	I _{cs} (1)	P	I _{cu}	I _{cs} (1)	P	I _{cu}	I _{cs} (1)			
kW	kA	%	kW	kA	%	kW	kA	%	A	A	
GV3P: control by rotary knob											
Connection by EverLink® BTR screw connectors (3)											
5.5	100	100	7.5	12	50	11	6	50	9...13	182	GV3P13
7.5	100	100	9	12	50	15	6	50	12...18	252	GV3P18
11	100	100	15	12	50	18.5	6	50	17...25	350	GV3P25
15	100	100	18.5	12	50	22	6	50	23...32	448	GV3P32
18.5	50	100	22	12	50	37	6	50	30...40	560	GV3P40
22	50	100	30	12	50	45	6	50	37...50	700	GV3P50
30	50	100	45	12	50	55	6	50	48...65	910	GV3P65
37	50	60	45	12	50	55	6	50	62...73	1120	GV3P73
45	50	60	45	12	50	55	6	50	70...80	1120	GV3P80 (4)

Connection by EverLink® BTR screw connectors, for assembly with a contactor

To assemble a **GV3P13** to **P73** circuit breaker with an **LC1D40A** to **D73A** contactor, it is possible to use the circuit breaker supplied without downstream EverLink® power terminal block. To order this product, add the digit **1** to the end of the references selected above. Example: **GV3P73** becomes **GV3P731**. Do not use direct mounting between **GV3P80** and **LC1D80A** because of potential overheating, use cable link.

Connection by lugs

To order thermal magnetic circuit breakers with connection by lugs, add the digit **6** to the end of reference selected above. Example: **GV3P18** becomes **GV3P186**.

Motor circuit breakers up to 40 HP / 460 V, UL 60947-4-1 type E

GV3P13 (5) to GV3P65 (5)

To obtain a motor-circuit breaker **GV3P**, UL 60947-4-1 type E, use the following with the circuit breaker:

- a "Large Spacing" cover **GV3G66**,
- a short-circuit signalling contact **GVAM11**.

Motor circuit breakers from 7.5 to 50 HP / 460 V, with screw clamp terminals

GV3P with rotary handle

Overload Thermal Protection							
Thermal setting (A)	Maximum Horsepower ratings ⁽⁶⁾						Reference
	Single-Phase		Three-Phase				
	115 V	230 V	200 V	230 V	460 V	575 V	
9...13	1/2	1.5	3	3	7.5	10	GV3P13
12...18	3/4	2	3	5	7.5	10	GV3P18
17...25	1.5	3	5	7.5	15	20	GV3P25
23...32	2	3	7.5	7.5	20	25	GV3P32
30...40	3	5	10	10	25	30	GV3P40
37...50	3	7.5	10	10	30	40	GV3P50
48...65	3	10	15	15	40	50	GV3P65
62...73	5	15	20	25	50	60	GV3P73

GV3P13 to GV3P65 - with connection by lugs (5)

To obtain a motor-circuit breaker **GV3P**, UL 60947-4-1 type E, with connection by lugs, add the digit **6** to the end of reference selected above and use the following with the circuit breaker:

- two IP 20 covers **LAD96570**,
- a short-circuit signalling contact **GVAM11**.

(1) As % of I_{cu}.

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

(3) BTR screws: hexagon socket head. Require use of an insulated Allen key, in compliance with local wiring regulations.

(4) 750 A Lock Rotor Current max.

(5) Accessories: see page B6/30.

(6) 3P FLA corresponding values : see page A6/58.

TeSys protection components

Thermal-magnetic motor circuit breakers GV5P and GV6P



GV5P220F

Thermal-magnetic circuit breakers GV5P with screw clamp terminals up to 110 kW ⁽¹⁾

Control by direct rotary handle									
Standard power ratings of 3-phase motors 50/60 Hz in category AC-3									Thermal setting range (Ir)
400/415 V			500 V			660/690 V			
P	Icu	Ics ⁽²⁾	P	Icu	Ics ⁽²⁾	P	Icu	Ics ⁽²⁾	
kW	kA	%	kW	kA	%	kW	kA	%	A
55...75	36	100	75...90	30	100	90...110	8	100	70...150
	70	100		50	100		10	100	
90...110	36	100	110	30	100	110...132	8	100	100...220
	70	100		50	100		10	100	

⁽¹⁾ Breakers have to be used with suitable rating of contactors, as defined in section A6.

⁽²⁾ As % of Icu.



GV6P320F

Thermal-magnetic circuit breakers GV6P with screw clamp terminals up to 250 kW ⁽¹⁾

Control by direct rotary handle									
Standard power ratings of 3-phase motors 50/60 Hz in category AC-3									Thermal setting range (Ir)
400/415 V			500 V			660/690 V			
P	Icu	Ics ⁽²⁾	P	Icu	Ics ⁽²⁾	P	Icu	Ics ⁽²⁾	
kW	kA	%	kW	kA	%	kW	kA	%	A
132...160	36	100	160...200	25	100	200...250	10	100	160...320
	70	100		50	100		10	100	
200...250	36	100	250...315	25	100	315...400	10	100	250...500
	70	100		50	100		10	100	

⁽¹⁾ Breakers have to be used with suitable rating of contactors, as defined in section A6.

⁽²⁾ As % of Icu.

Thermal-magnetic circuit breakers GV5P/GV6P with screw clamp terminals ⁽¹⁾

Control by direct rotary handle					
Thermal setting	3-Phase			Standard breaking capacity	High breaking capacity
	230 V	460 V	575 V		
A	HP	HP	HP	Reference	Reference
90...150	50	100	150	GV5P150F	GV5P150H
133...220	75	150	200	GV5P220F	GV5P220H
160...320	125	250	300	GV6P320F	GV6P320H
250...500	150	350	500	GV6P500F	GV6P500H

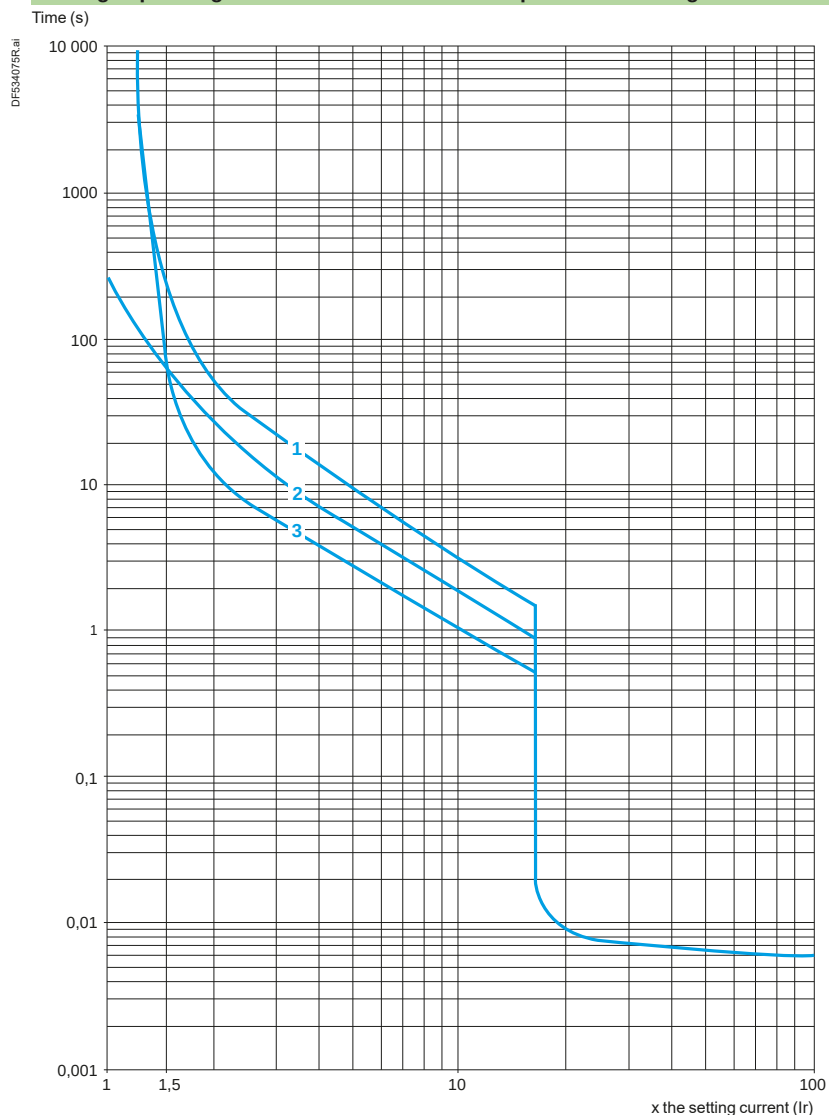
⁽¹⁾ Breakers have to be used with suitable rating of contactors, as defined in section A6.

TeSys protection components

Thermal-magnetic motor circuit breakers GV2ME and GV2P

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

TeSys protection components

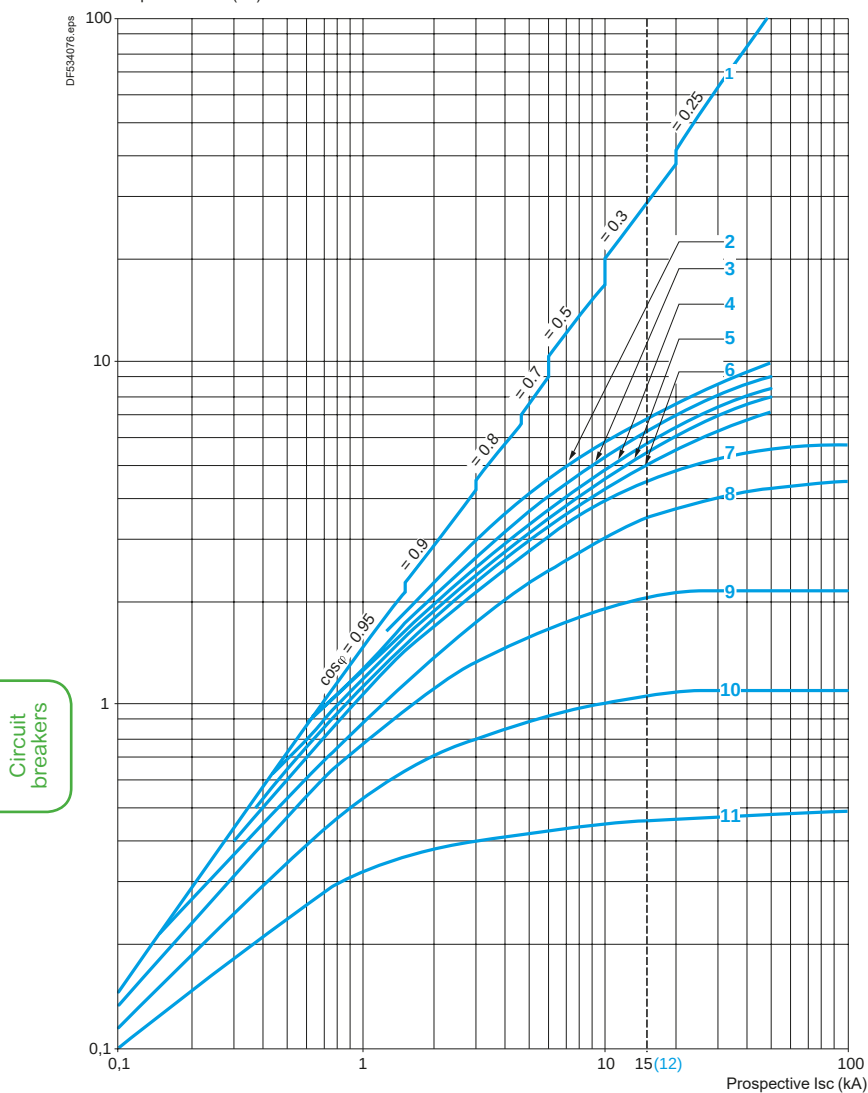
Thermal-magnetic motor circuit breakers GV2ME and GV2P

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

Dynamic stress

$I_{peak} = f(\text{prospective } I_{sc}) \text{ at } 1.05 U_e = 435 \text{ V}$

Limited peak current (kA)



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)

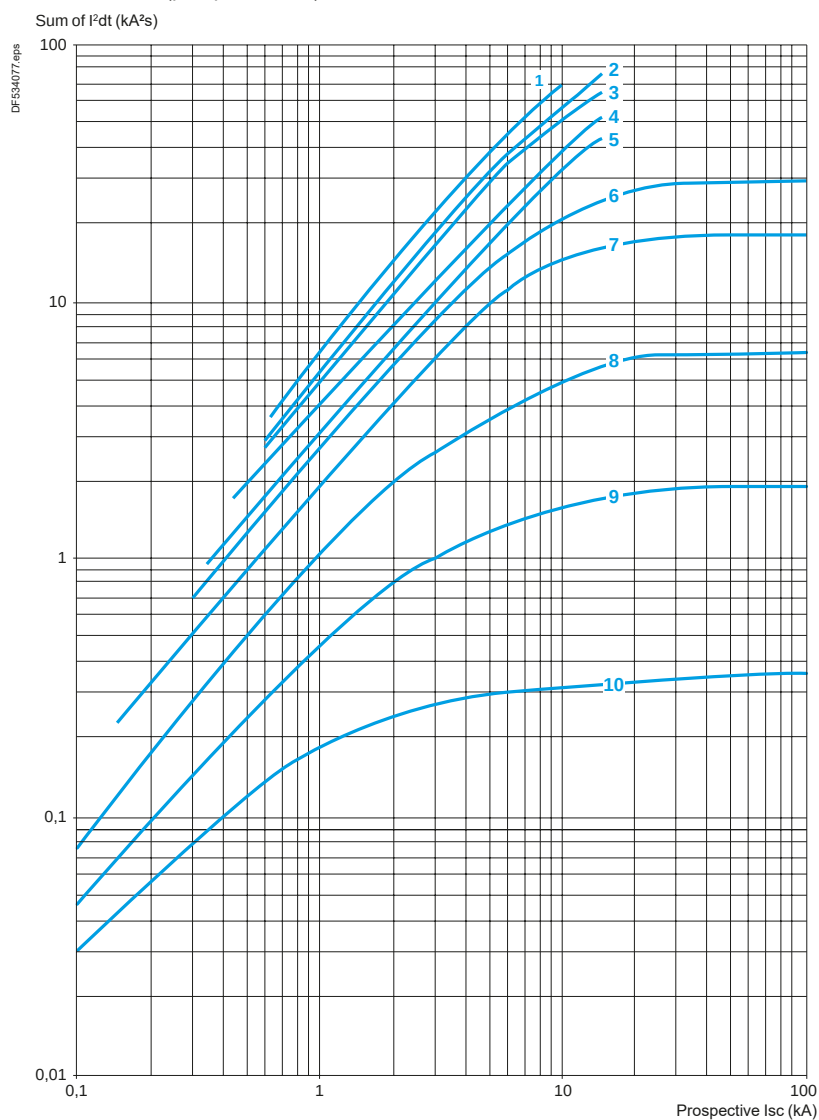
TeSys protection components

Thermal-magnetic motor circuit breakers GV2ME and GV2RT

Thermal limit on short-circuit for GV2ME and GV2RT

Thermal limit in kA^2s in the magnetic operating zone

Sum of $I^2dt = f$ (prospective I_{sc}) at $1.05 U_e = 435 \text{ V}$

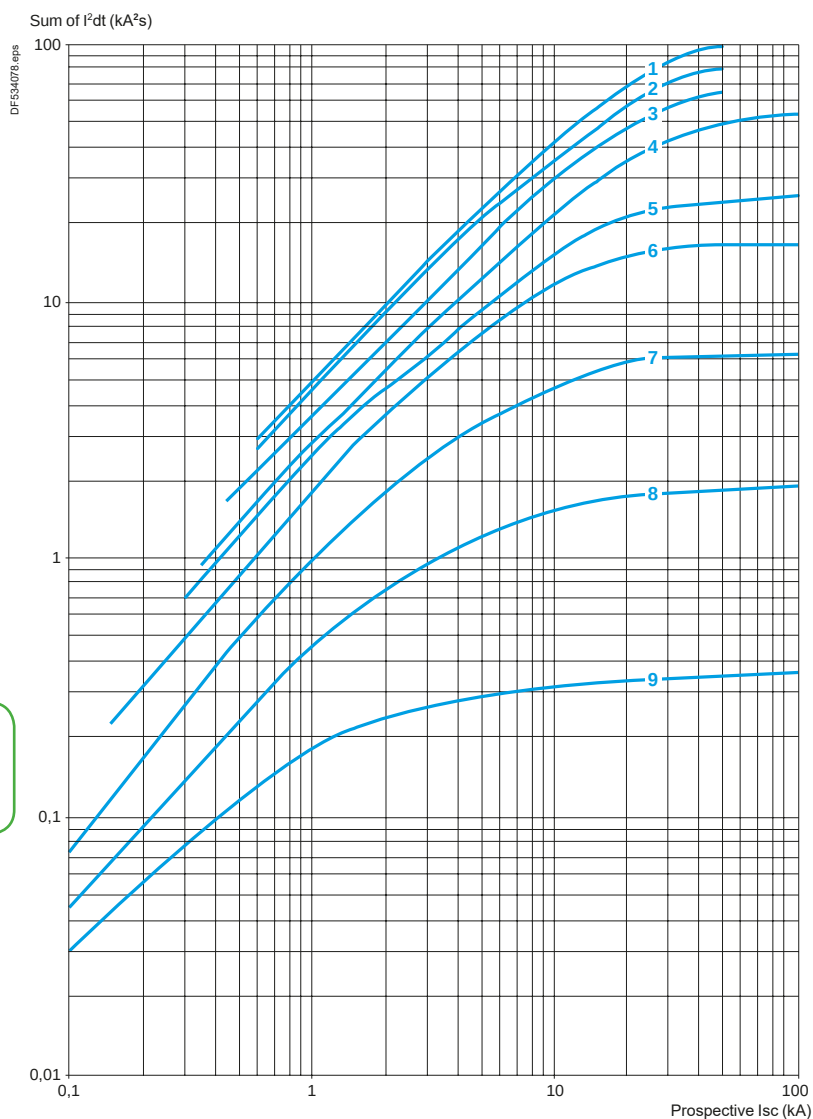


- 1 24 - 32 A
- 2 20 - 25 A
- 3 17 - 23 A
- 4 13 - 18 A
- 5 9 - 14 A
- 6 6 - 10 A
- 7 4 - 6.3 A
- 8 2.5 - 4 A
- 9 1.6 - 2.5 A
- 10 1 - 1.6 A

Thermal limit on short-circuit for GV2P

Thermal limit in kA²s in the magnetic operating zone

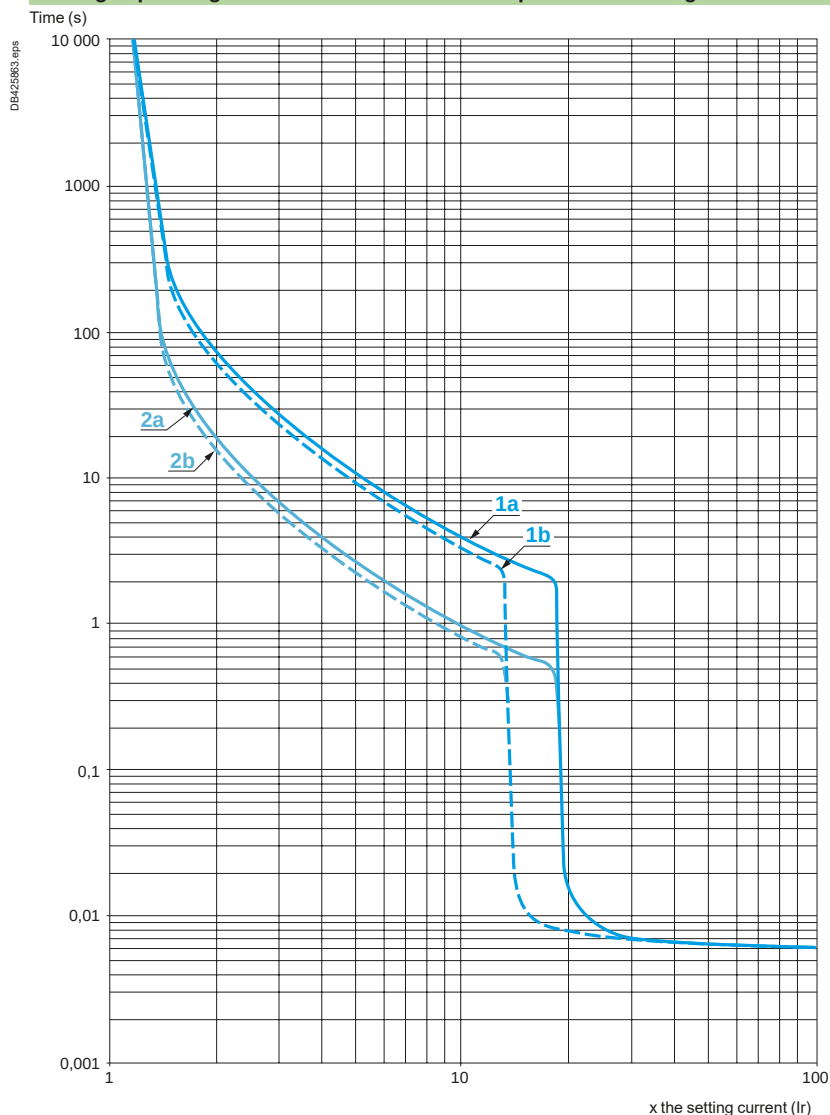
Sum of $I^2dt = f$ (prospective I_{sc}) at 1.05 $U_e = 435$ V



- 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

Thermal-magnetic tripping curves

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



1a 3 poles from cold state (I_r mini.): GV3P

1b 3 poles from cold state (I_r maxi.): GV3P

2a 3 poles from hot state (I_r mini.): GV3P

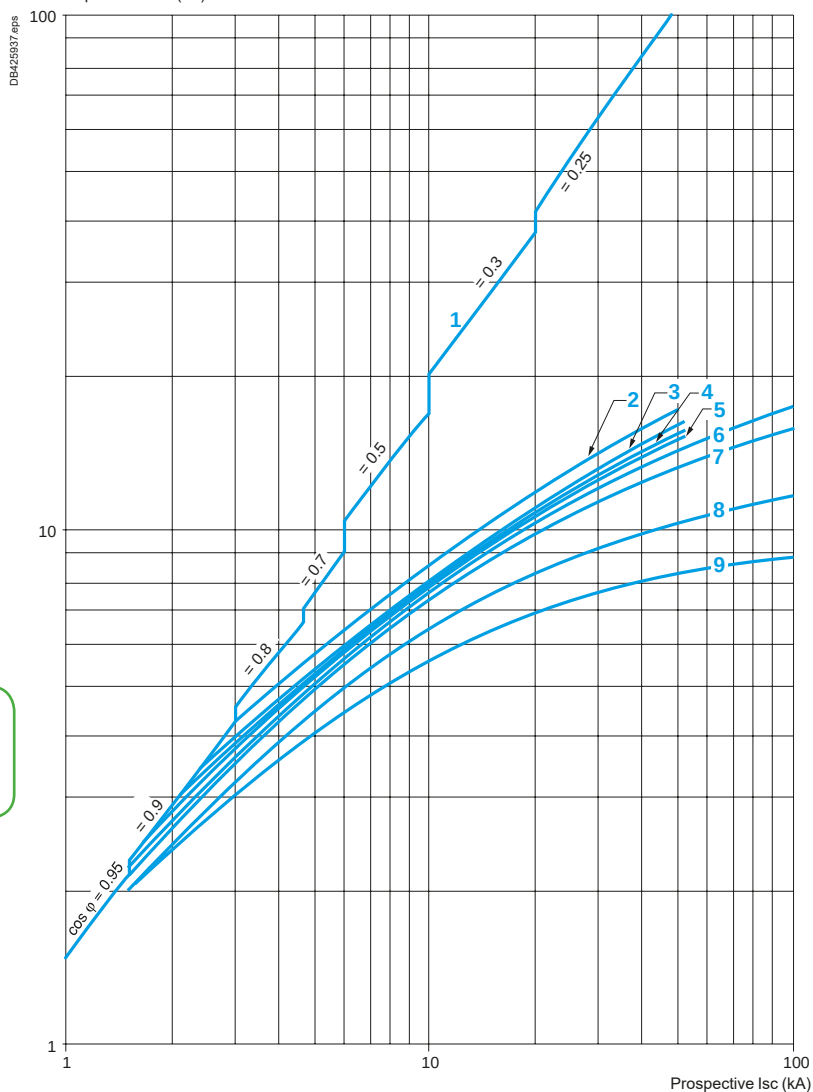
2b 3 poles from hot state (I_r maxi.): GV3P

Current limitation on short-circuit (3-phase 400/415 V)

Dynamic stress

$I_{peak} = f(\text{prospective } I_{sc}) \text{ at } 1.05 U_e = 435 \text{ V}$

Limited peak current (kA)



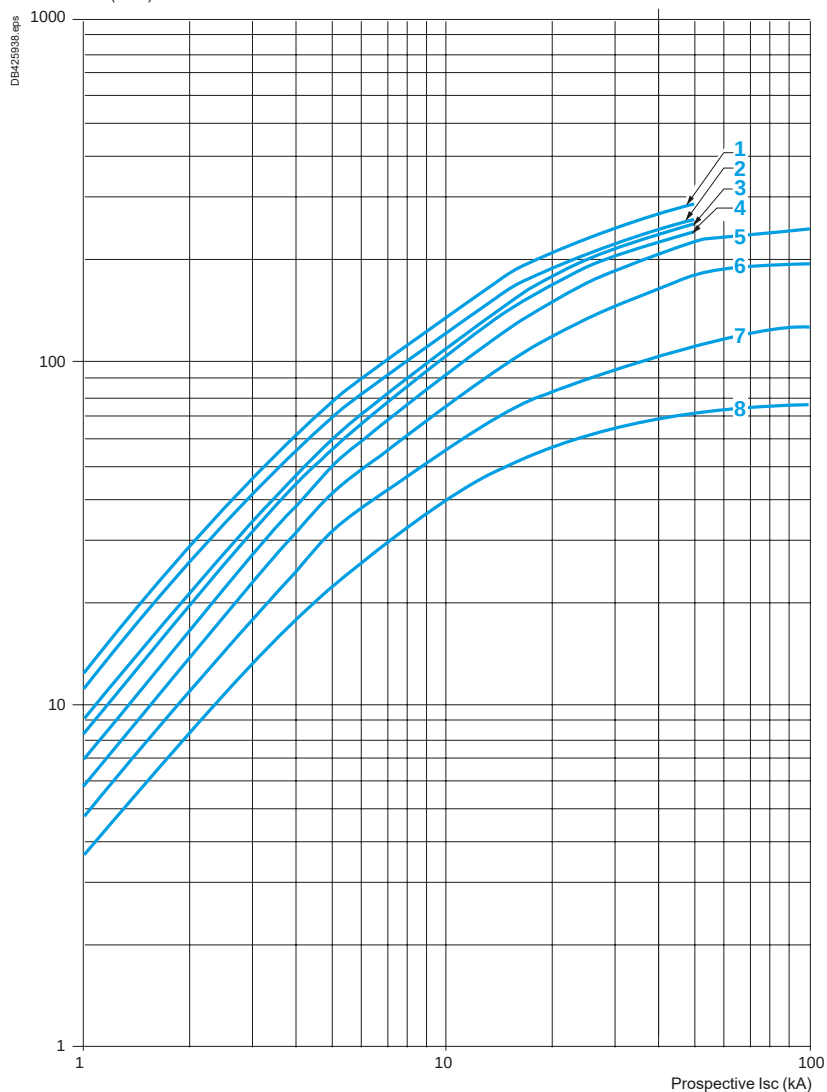
- 1 Maximum peak current
- 2 70-80 A (GV3P80); 62-73 A (GV3P73)
- 3 48-65 A (GV3P65)
- 4 37-50 A (GV3P50)
- 5 30-40 A (GV3P40)
- 6 23-32 A (GV3P32)
- 7 17-25 A (GV3P25)
- 8 12-18 A (GV3P18)
- 9 9-13 A (GV3P13)

Maximum thermal limit on short-circuit

Thermal limit in kA^2s in the magnetic operating zone

Sum of $I^2dt = f$ (prospective I_{sc}) at $1.05 U_e = 435 \text{ V}$

Sum of I^2dt (kA^2s)

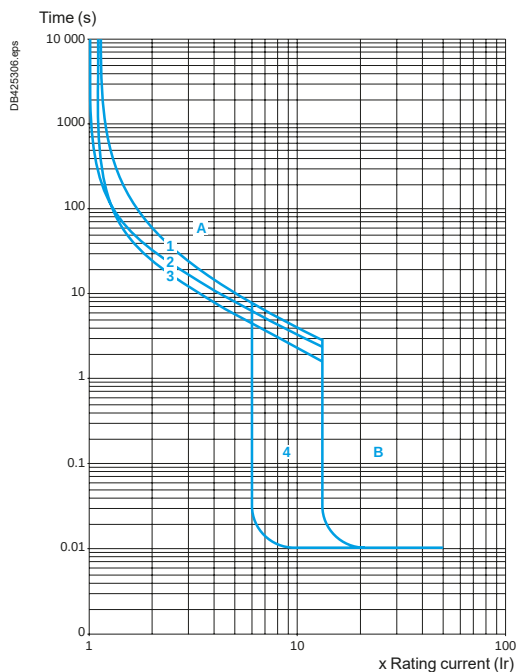


- 1 70-80 (GV3P80) - 62-73 (GV3P73)
- 2 48-65 A (GV3P65)
- 3 37-50 A (GV3P50)
- 4 30-40 A (GV3P40)
- 5 23-32 A (GV3P32)
- 6 17-25 A (GV3P25)
- 7 12-18 A (GV3P18)
- 8 9-13 A (GV3P13)

Tripping curves for GV4L and GV4LE combined with thermal overload relay LRD or LR9

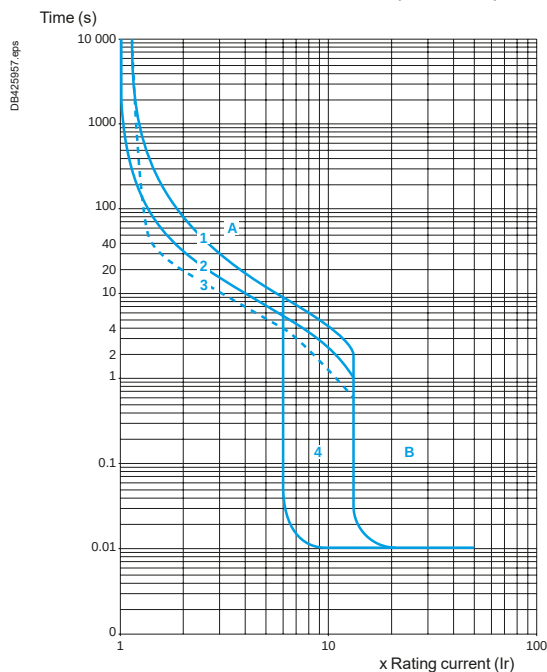
Average operating times at 20 °C related to multiples of the setting current

GV4L02 and GV4LE02 to 12 with LRD05 to LRD14,
GV4L80 and GV4LE80 with LRD3363



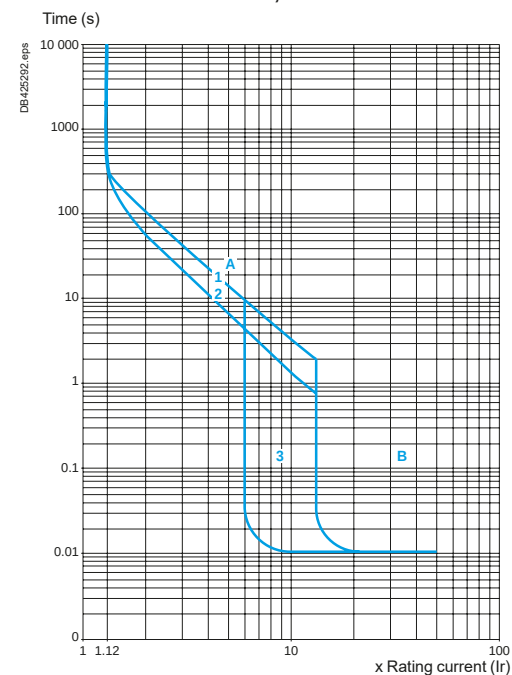
- 1 3 poles from cold state
- 2 2 poles from cold state
- 3 3 poles from hot state
- 4 6...14 Ir
- A Thermal overload relay protection zone
- B GV4L protection zone

GV4L25 AND GV4LE25 with LRD 318, LRD325
GV4L50 AND GV4LE50 with LRD 332, LRD 340, LRD 350



- 1 3 poles from cold state
- 2 2 poles from cold state
- 3 3 poles from hot state
- 4 6...14 Ir
- A Thermal overload relay protection zone
- B GV4L protection zone

GV4L115 and GV4LE115 with class 10 LR9F5367, LR9D5369
and class 20 LR9D5567, LR9F5569

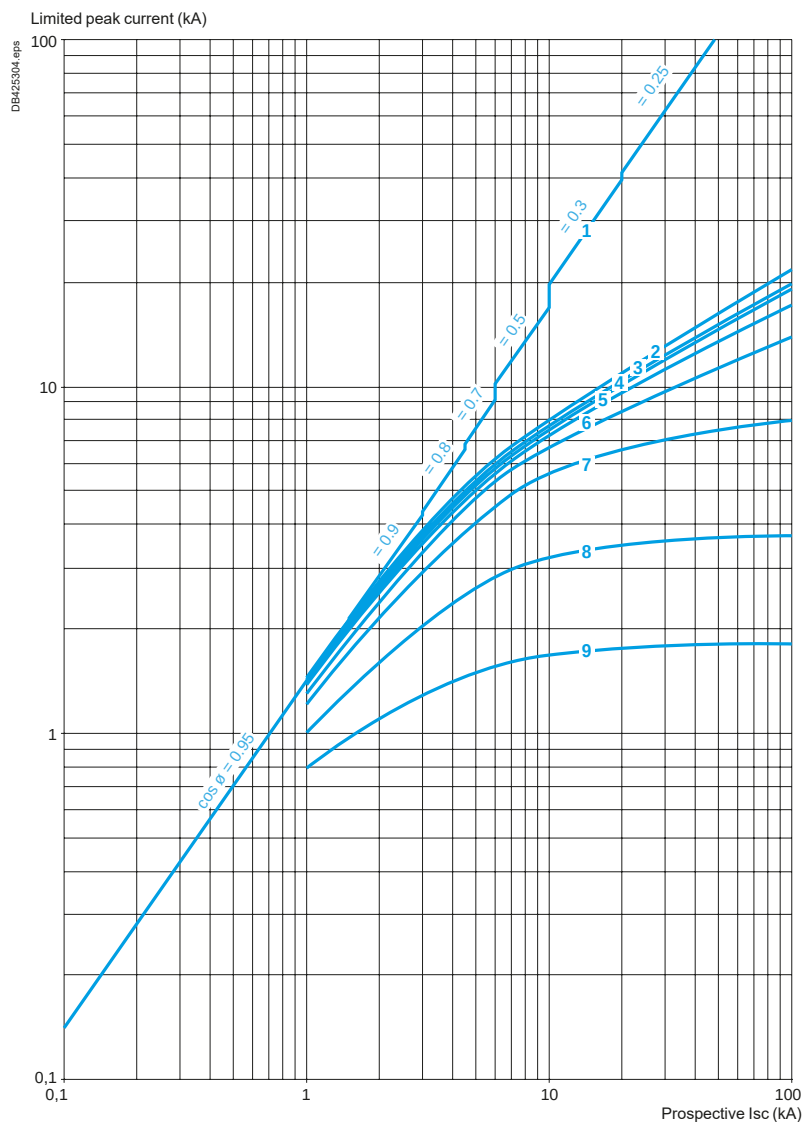


- 1 Cold state curve
- 2 Hot state curve
- 3 6...14 Ir

Current limitation on short-circuit for GV4L, GV4LE (3-phase 400/415 V)

Dynamic stress

$I_{peak} = f(\text{prospective } I_{sc}) \text{ at } 1.05 U_e = 435 \text{ V}$



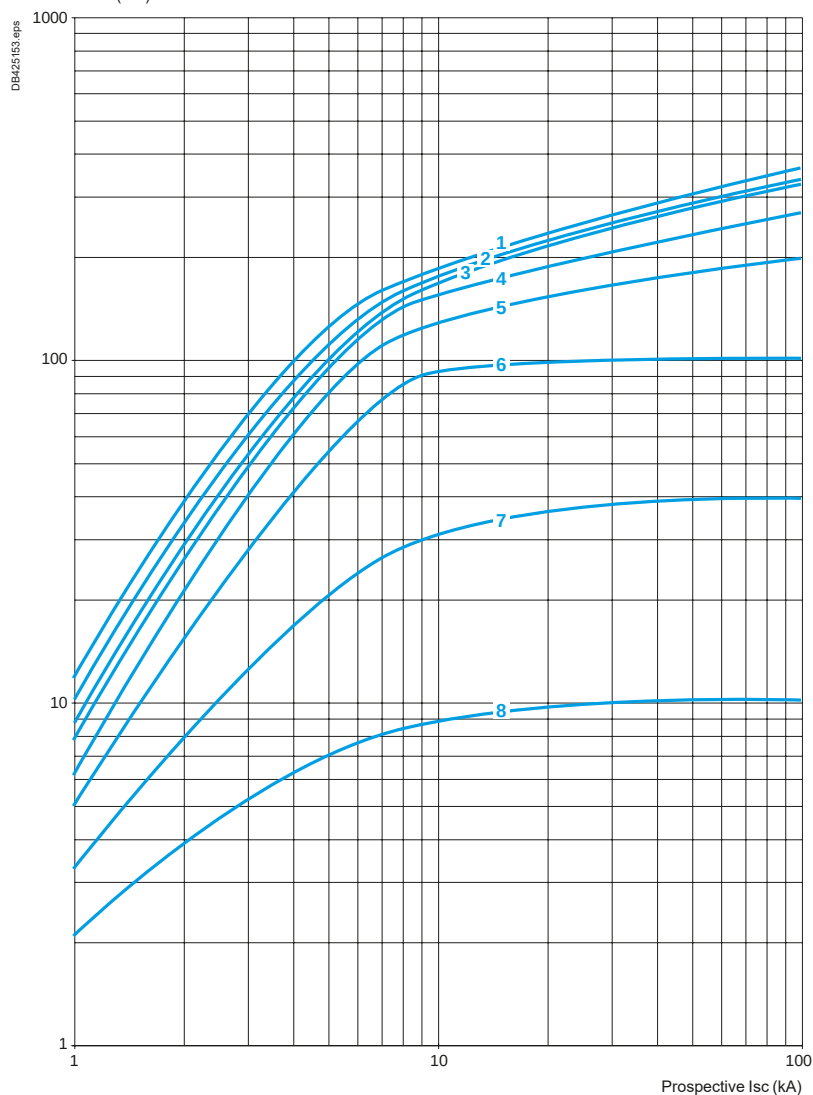
- 1 Maximum peak current
- 2 GV4L115
- 3 GV4L80
- 4 GV4L50
- 5 GV4L25
- 6 GV4L12
- 7 GV4L07
- 8 GV4L03
- 9 GV4L02

Thermal limit on short-circuit for GV4L, GV4LE

Thermal limit in A²s

Sum of $I^2dt = f$ (prospective I_{sc}) at $1.05 U_e = 435 V$

Sum of I^2dt (A²s)



- 1 GV4L115
- 2 GV4L80
- 3 GV4L50
- 4 GV4L25
- 5 GV4L12
- 6 GV4L07
- 7 GV4L03
- 8 GV4L02