

GV2LE20

Motor circuit breaker, TeSys GV2, 3P, 18 A, magnetic, toggle control, screw clamp terminals



Main

| | |
|---|--|
| Range | TeSys |
| Product name | TeSys GV2 |
| Product or component type | Circuit breaker |
| Device short name | GV2LE |
| Device application | Motor |
| Poles description | 3P |
| Network type | AC |
| Utilisation category | Category A conforming to IEC 60947-2 AC-3 conforming to IEC 60947-4-1 |
| Network frequency | 50/60 Hz conforming to IEC 60947-2 |
| Breaking capacity | 100 KA Icu at 230/240 V AC 50/60 Hz conforming to IEC 60947-2 3 KA Icu at 690 V AC 50/60 Hz conforming to IEC 60947-2 15 KA Icu at 400/415 V AC 50/60 Hz conforming to IEC 60947-2 8 KA Icu at 440 V AC 50/60 Hz conforming to IEC 60947-2 6 KA Icu at 500 V AC 50/60 Hz conforming to IEC 60947-2 |
| [Ics] rated service short-circuit breaking capacity | 100 % at 230/240 V AC 50/60 Hz conforming to IEC 60947-2 75 % at 500 V AC 50/60 Hz conforming to IEC 60947-2 50 % at 400/415 V AC 50/60 Hz conforming to IEC 60947-2 75 % at 690 V AC 50/60 Hz conforming to IEC 60947-2 50 % at 440 V AC 50/60 Hz conforming to IEC 60947-2 |
| Trip unit technology | Magnetic |
| Magnetic tripping current | 223 A |

Complementary

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|--|--|
| Fixing mode | 35 mm symmetrical DIN rail: clipped Panel: screwed (with adaptor plate) |
| Operating position | Any position |
| Motor power kW | 7.5 kW at 400/415 V AC 50/60 Hz 9 kW at 500 V AC 50/60 Hz 15 kW at 690 V AC 50/60 Hz |
| Control type | Toggle |
| [Ue] rated operational voltage | 690 V AC 50/60 Hz conforming to IEC 60947-2 |
| [Ui] rated insulation voltage | 690 V AC 50/60 Hz conforming to IEC 60947-2 |
| [Uimp] rated impulse withstand voltage | IEC 60947-2 6 kV |
| Power dissipation per pole | 1.8 W |
| Mechanical durability | 100000 cycles |
| Electrical durability | 100000 cycles for AC-3 at 415 V |
| Maximum operating rate | 40 cyc/h |
| Rated duty | Continuous conforming to IEC 60947-4-1 |

| | |
|---------------------------|---|
| Connections - terminals | Screw clamp terminals 2 cable(s) 1...6 mm ² solid Screw clamp terminals 2 cable(s) 1.5...6 mm ² flexible without cable end Screw clamp terminals 2 cable(s) 1...4 mm ² flexible with cable end |
| Tightening torque | 1.7 N.m on screw clamp terminals |
| Mechanical robustness | Shocks: 30 Gn conforming to IEC 60068-2-27 Vibrations: 5 Gn, 5...150 Hz conforming to IEC 60068-2-6 |
| Suitability for isolation | Yes conforming to IEC 60947-1 |
| Height | 89 mm |
| Width | 45 mm |
| Depth | 78.5 mm |
| Product weight | 0.33 kg |

Environment

| | |
|---------------------------------------|--|
| Standards | EN/IEC 60947-2 EN/IEC 60947-4-1 CSA C22.2 No 60947-4-1 UL 60947-4-1 |
| Product certifications | IECEE CB Scheme UL CSA CCC EAC RINA LROS (Lloyds register of shipping) DNV-GL BV UKCA |
| Protective treatment | TH |
| IP degree of protection | IP20 conforming to IEC 60529 |
| IK degree of protection | IK04 |
| Ambient air temperature for operation | -20...60 °C |
| Ambient air temperature for storage | -40...80 °C |
| Fire resistance | 960 °C conforming to IEC 60695-2-1 |
| Operating altitude | 0...2000 m |

Packing Units

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|------------------------------|------------|
| Unit Type of Package 1 | PCE |
| Number of Units in Package 1 | 1 |
| Package 1 Weight | 280 g |
| Package 1 Height | 4.6 cm |
| Package 1 width | 8.5 cm |
| Package 1 Length | 9.3 cm |
| Unit Type of Package 2 | S02 |
| Number of Units in Package 2 | 24 |
| Package 2 Weight | 7.052 kg |
| Package 2 Height | 15 cm |
| Package 2 width | 30 cm |
| Package 2 Length | 40 cm |
| Unit Type of Package 3 | P06 |
| Number of Units in Package 3 | 384 |
| Package 3 Weight | 127.908 kg |
| Package 3 Height | 77 cm |
| Package 3 width | 60 cm |
| Package 3 Length | 80 cm |

Offer Sustainability

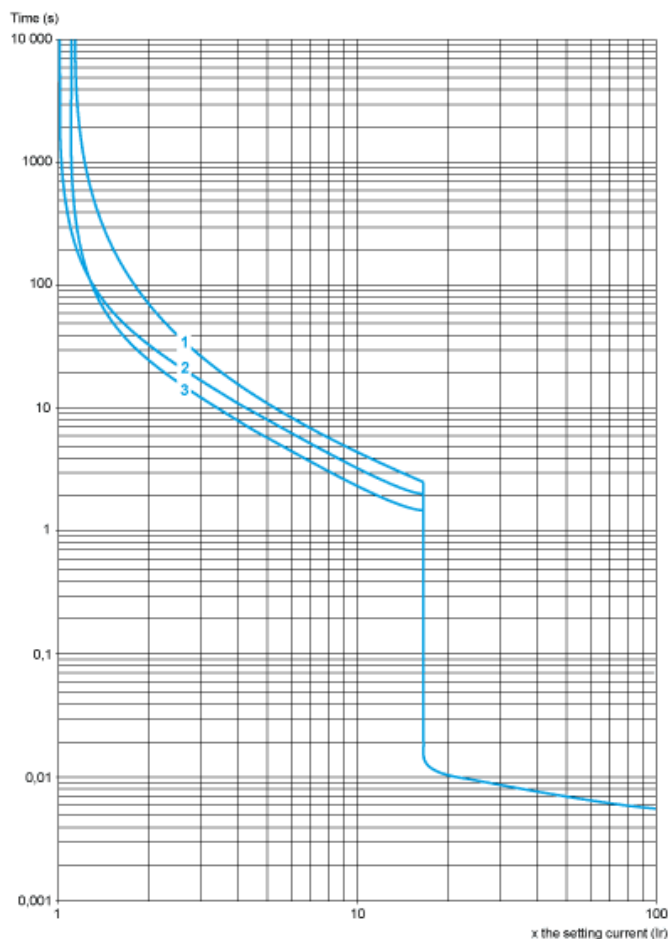
| | |
|----------------------------|---|
| Sustainable offer status | Green Premium product |
| REACH Regulation | REACH Declaration |
| EU RoHS Directive | Compliant EU RoHS Declaration |
| Mercury free | Yes |
| RoHS exemption information | Yes |
| China RoHS Regulation | China RoHS Declaration |
| Environmental Disclosure | Product Environmental Profile |
| WEEE | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |

Contractual warranty

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|----------|-----------|
| Warranty | 18 months |
|----------|-----------|

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

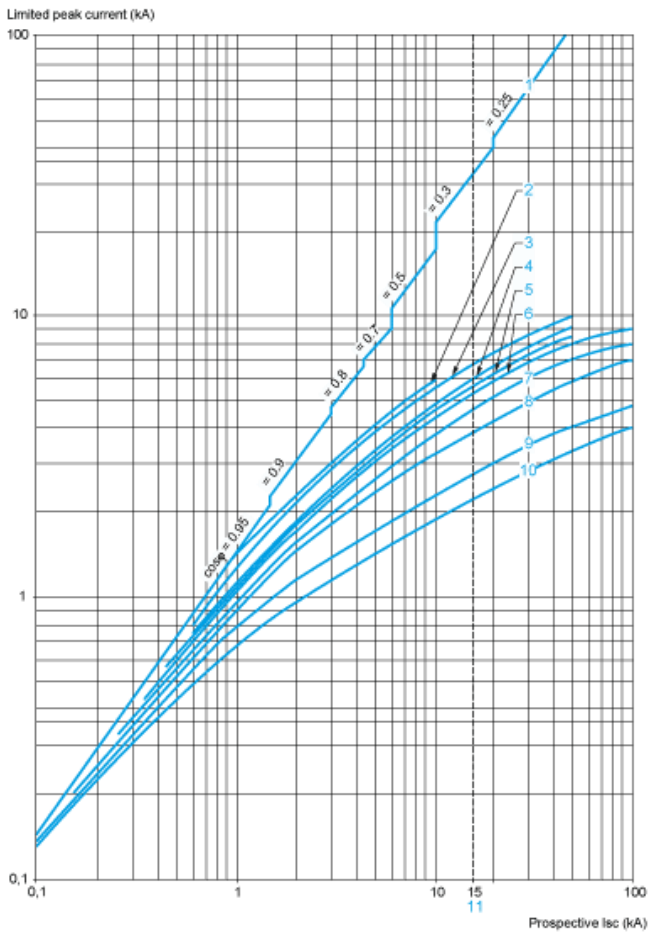


- 1 3 poles from cold state
- 2 2 poles from cold state
- 3 3 poles from hot state

Current Limitation on Short-Circuit for GV2L and GV2LE Only (3-Phase 400/415 V)

Dynamic Stress

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

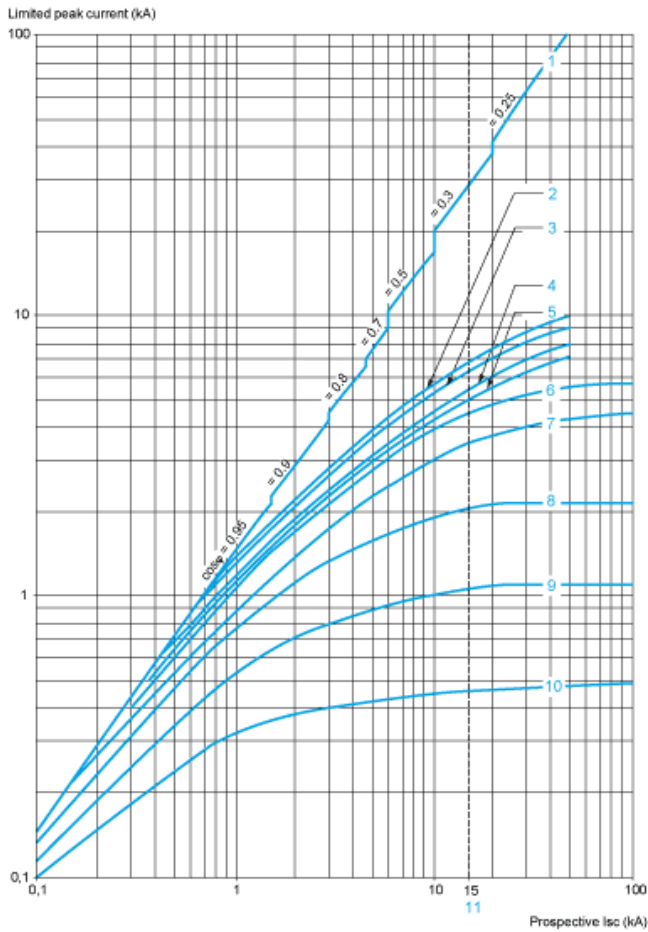


- 1 Maximum peak current
- 2 32 A
- 3 25 A
- 4 18 A
- 5 14 A
- 6 10 A
- 7 6.3 A
- 8 4 A
- 9 2.5 A
- 10 1.6 A
- 11 Limit of rated ultimate breaking capacity on short-circuit of GV2LE (14, 18, 23, and 25 A ratings).

Current Limitation on Short-Circuit for GV2L and GV2LE + Thermal Overload Relay LRD or LR2K (3-Phase 400/415 V)

Dynamic Stress

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

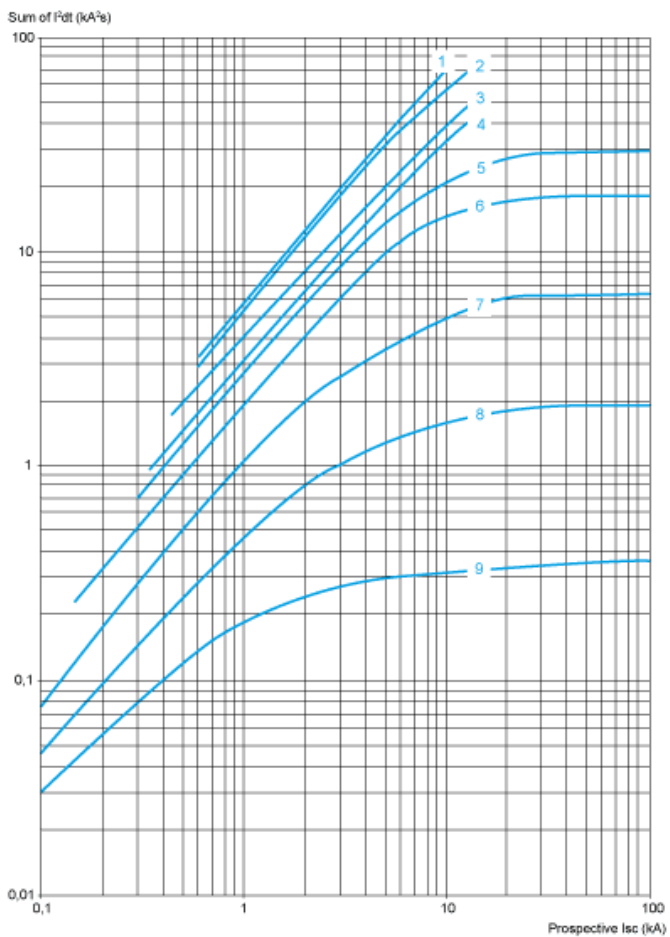


- 1 Maximum peak current
- 2 32 A
- 3 25 A
- 4 18 A
- 5 14 A
- 6 10 A
- 7 6.3 A
- 8 4 A
- 9 2.5 A
- 10 1.6 A
- 11 Limit of rated ultimate breaking capacity on short-circuit of GV2LE (14, 18, 23, and 25 A ratings).

Thermal Limit on Short-Circuit for GV2LE Only

Thermal Limit in kA^2s in the Magnetic Operating Zone

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

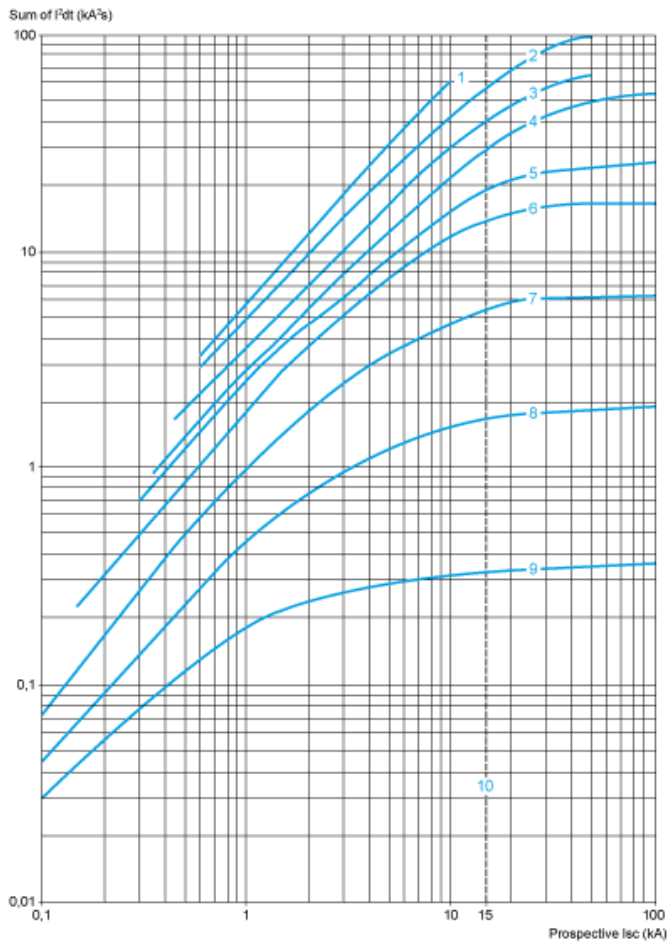


- 1 32 A
- 2 25 A
- 3 18 A
- 4 14 A
- 5 10 A
- 6 6.3 A
- 7 4 A
- 8 2.5 A
- 9 1.6 A

Thermal Limit on Short-Circuit for GV2L and GV2LE + Thermal Overload Relay LRD or LR2K

Thermal Limit in kA^2s in the Magnetic Operating Zone

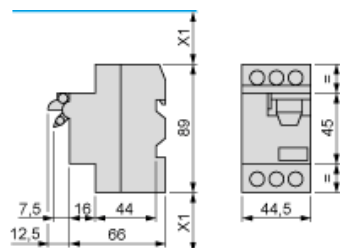
Sum of $I^2dt = f$ (prospective Isc) at $1.05 U_e = 435 V$



- 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).

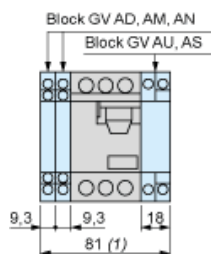
GV2LE

Dimensions



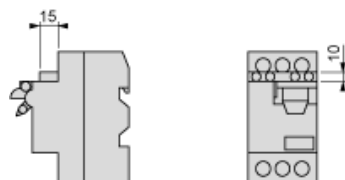
X1 Electrical clearance = 40 mm for $U_e \leq 690$ V.

GVAD, AM, AN, AU, AS



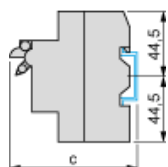
1 Maximum

GVAE



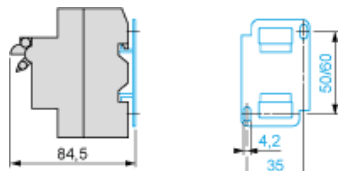
Mounting

On 35 mm rail

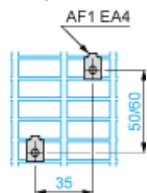


$c = 80$ on AM1 DP200 (35 x 7.5) and 88 on AM1 DE200, ED200 (35 x 15)

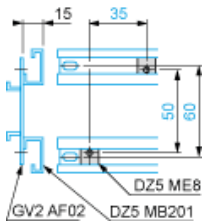
On panel with adapter plate GV2 AF02



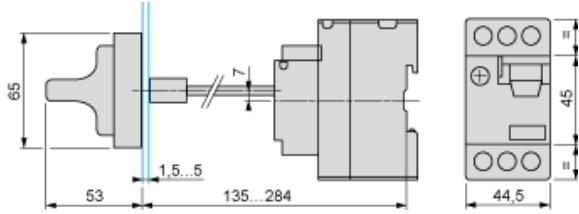
On pre-slotted plate AM1 PA



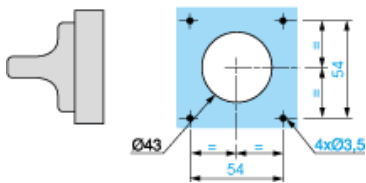
On rails DZ5 MB201



Mounting of External Operator GV2AP03 for GV2LE

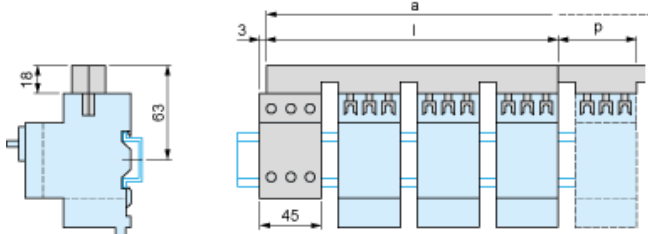


Door cut-out



GV2L and GV2LE

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

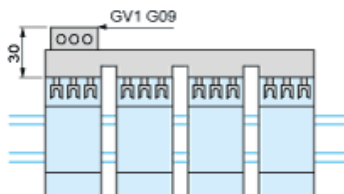


| | l | p |
|---------------------|-----|----|
| GV2G445 (4 x 45 mm) | 179 | 45 |
| GV2G454 (4 x 54 mm) | 206 | 54 |
| GV2G472 (4 x 72 mm) | 260 | 72 |

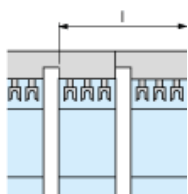
| Number of tap-offs | a | | | |
|--------------------|-----|-----|-----|-----|
| | 5 | 6 | 7 | 8 |
| GV2G445 | 224 | 269 | 314 | 359 |
| GV2G454 | 260 | 314 | 368 | 422 |
| GV2G472 | 332 | 404 | 476 | 548 |

Sets of Busbars for GV2L and GV2LE

Sets of busbars GV2G... with terminal block GV1G09



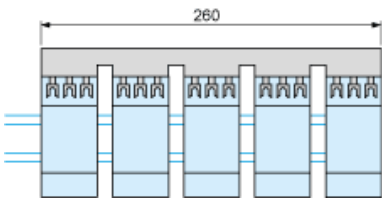
Sets of busbars GV2G245, GV2G254, GV2GR272



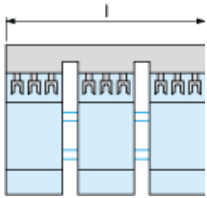
| | l |
|---------------------|----|
| GV2G245 (2 x 45 mm) | 89 |

| | |
|---------------------|-----|
| | l |
| 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 |

GV2LE••

