

Product datasheet

Specifications



Motor circuit breaker, TeSys GV2, 3P, 1 A, magnetic, rotary handle, screw clamp terminals

GV2L05

Main

| | |
|---------------------------|-------------------------|
| Range | TeSys Deca |
| Product name | TeSys GV2 TeSys Deca |
| Product or component type | Motor circuit breaker |
| Device short name | GV2L |
| Device application | Motor protection |
| Trip unit technology | Magnetic |

Complementary

| | |
|---|---|
| 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 |
| Fixing mode | 35 mm symmetrical DIN rail: clipped Panel: screwed (with 2 x M4 screws) |
| Motor power kW | 0.25 kW at 400/415 V AC 50/60 Hz 0.37 kW at 400/415 V AC 50/60 Hz 0.37 kW at 500 V AC 50/60 Hz 0.55 kW at 690 V AC 50/60 Hz 0.75 kW at 690 V AC 50/60 Hz |
| Breaking capacity | 100 kA Icu at 230/240 V AC 50/60 Hz conforming to IEC 60947-2 100 kA Icu at 400/415 V AC 50/60 Hz conforming to IEC 60947-2 100 kA Icu at 440 V AC 50/60 Hz conforming to IEC 60947-2 100 kA Icu at 500 V AC 50/60 Hz conforming to IEC 60947-2 100 kA Icu at 690 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 60947-2 100 % at 400/415 V AC 50/60 Hz conforming to IEC 60947-2 100 % at 440 V AC 50/60 Hz conforming to IEC 60947-2 100 % at 500 V AC 50/60 Hz conforming to IEC 60947-2 100 % at 690 V AC 50/60 Hz conforming to IEC 60947-2 |
| Control type | Rotary handle |
| [In] rated current | 1 A |
| Magnetic tripping current | 13 A |
| [Ith] conventional free air thermal current | 1 A conforming to IEC 60947-4-1 |
| [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 | 6 kV conforming to IEC 60947-2 |
| Suitability for isolation | Yes conforming to IEC 60947-1 § 7-1-6 |
| Power dissipation per pole | 1.8 W |
| Mechanical durability | 100000 cycles |
| Electrical durability | 100000 cycles for AC-3 at 415 V In |
| Rated duty | Continuous conforming to IEC 60947-4-1 |
| Tightening torque | 1.7 N.m - on screw clamp terminal |
| Width | 45 mm |
| Height | 89 mm |
| Depth | 97 mm |
| Net weight | 0.33 kg |
| Colour | Dark grey |

Environment

| | |
|--|--|
| Standards | EN/IEC 60947-2 EN/IEC 60947-4-1 UL 60947-4-1 CSA C22.2 No 60947-4-1 |
| Product certifications | CCC UL CSA EAC LROS (Lloyds register of shipping) BV RINA DNV-GL UKCA IECEE CB Scheme |
| IK degree of protection | IK04 |
| IP degree of protection | IP20 conforming to IEC 60529 |
| Climatic withstand | conforming to IACS E10 |
| Ambient air temperature for storage | -40...80 °C |
| Fire resistance | 960 °C conforming to IEC 60695-2-11 |
| Ambient air temperature for operation | -20...60 °C |
| Mechanical robustness | Shocks: 30 Gn for 11 ms Vibrations: 5 Gn, 5...150 Hz |
| Operating altitude | 2000 m |

Packing Units

| | |
|-------------------------------------|-----------|
| Unit Type of Package 1 | PCE |
| Number of Units in Package 1 | 1 |
| Package 1 Height | 4.800 cm |
| Package 1 Width | 9.300 cm |
| Package 1 Length | 10.000 cm |
| Package 1 Weight | 252.000 g |
| Unit Type of Package 2 | S02 |
| Number of Units in Package 2 | 20 |
| Package 2 Height | 15.000 cm |
| Package 2 Width | 30.000 cm |

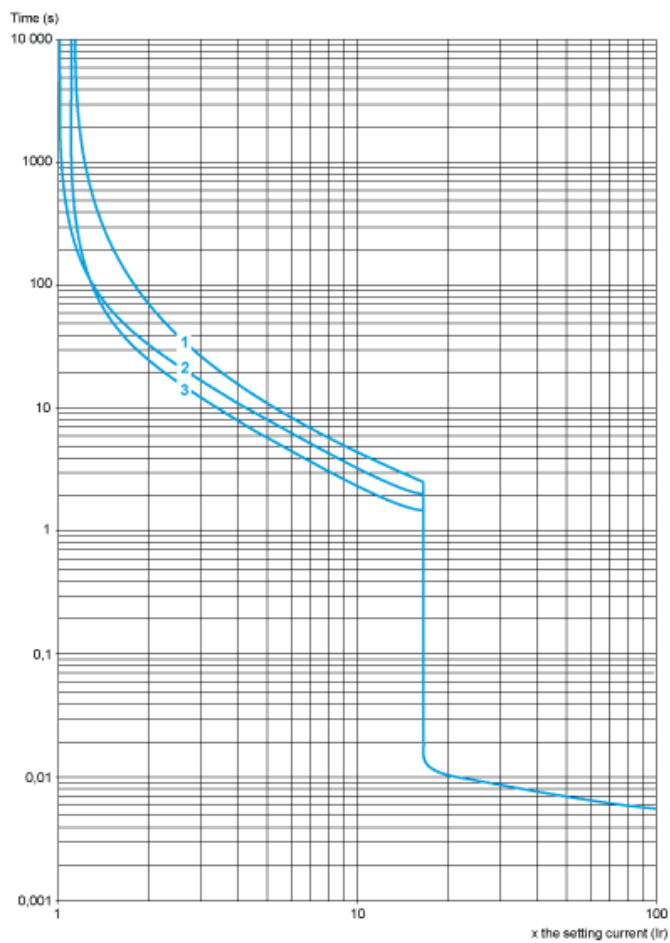
| | |
|-----------------------------|---|
| Package 2 Length | 40.000 cm |
| Package 2 Weight | 5.402 kg |
| Offer Sustainability | |
| Sustainable offer status | Green Premium product |
| REACH Regulation | REACH Declaration |
| EU RoHS Directive | Compliant EU RoHS Declaration |
| Mercury free | Yes |
| China RoHS Regulation | China RoHS declaration Product out of China RoHS scope. Substance declaration for your information |
| RoHS exemption information | Yes |
| Environmental Disclosure | Product Environmental Profile |
| Circularity Profile | End of Life Information |
| WEEE | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |

Contractual warranty

| | |
|----------|-----------|
| 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

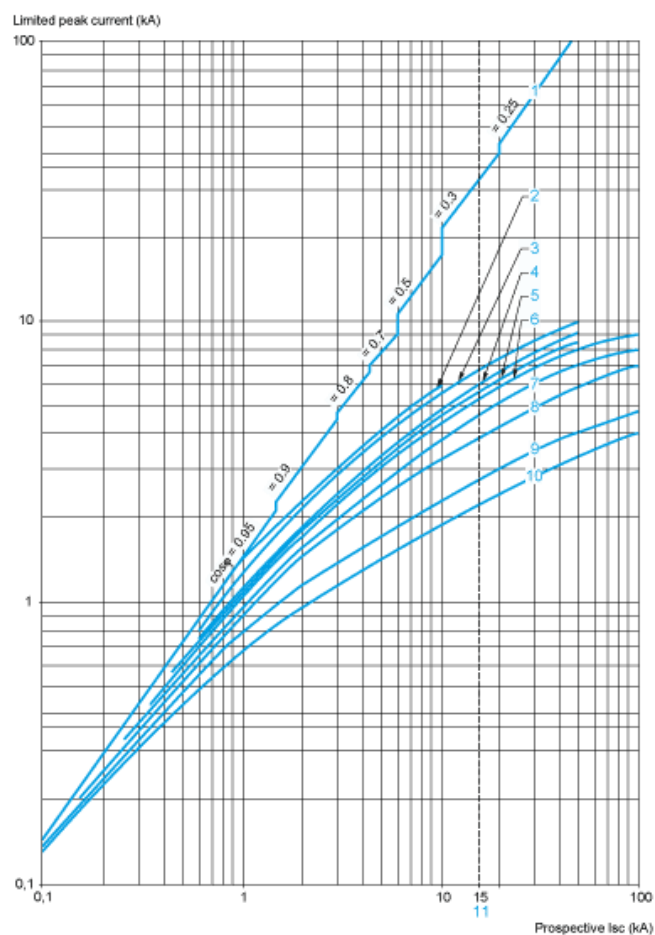
2 poles from cold state
- 3

3 poles from hot state

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

Dynamic Stress

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

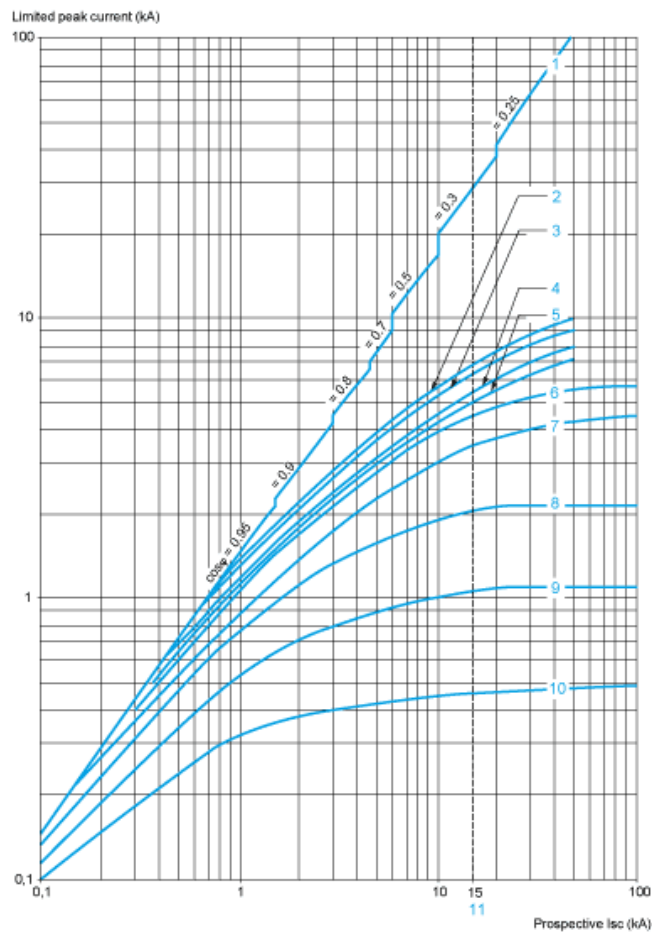


- 1 Maximum peak current
- 2 32 A
- 3 25 A
- 4 18 A
- 5 14 A
- 6 10 A
- 7 6.3 A
- 8 4 A
- 9 2.5 A
- 10 1.6 A
- 11 Limit of rated ultimate breaking capacity on short-circuit of GV2LE (14, 18, 23, and 25 A ratings).

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

Dynamic Stress

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

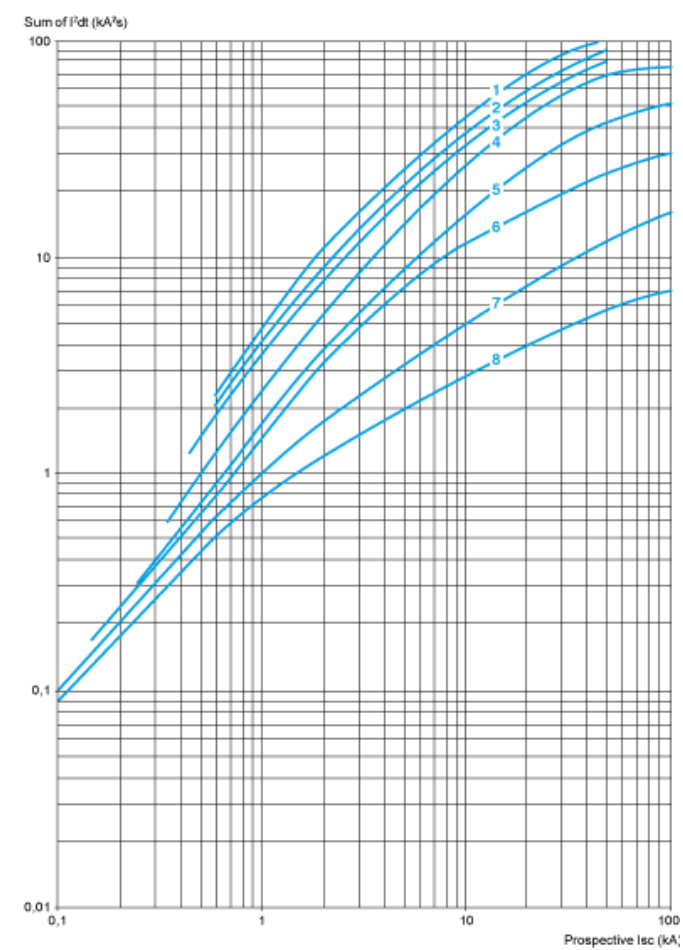


- 1 Maximum peak current
- 2 32 A
- 3 25 A
- 4 18 A
- 5 14 A
- 6 10 A
- 7 6.3 A
- 8 4 A
- 9 2.5 A
- 10 1.6 A
- 11 Limit of rated ultimate breaking capacity on short-circuit of GV2LE (14, 18, 23, and 25 A ratings).

Thermal Limit on Short-Circuit for GV2L Only

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

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

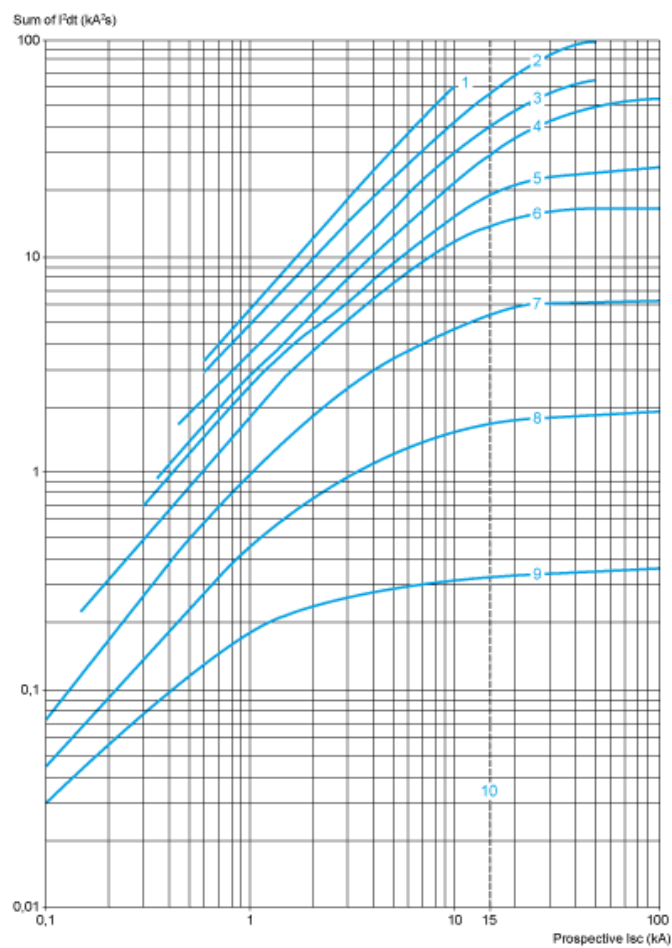


- 1 25 A and 32 A
- 2 18 A
- 3 14 A
- 4 10 A
- 5 6.3 A
- 6 4 A
- 7 2.5 A
- 8 1.6 A

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

Thermal Limit in kA²s in the Magnetic Operating Zone

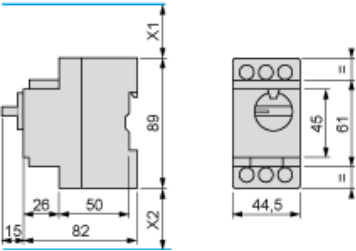
Sum of $I^2dt = f$ (prospective I_{sc}) at 1.05 $U_e = 435$ V



- 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).

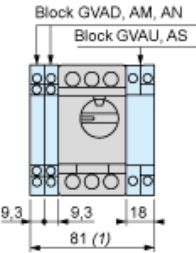
GV2L

Dimensions



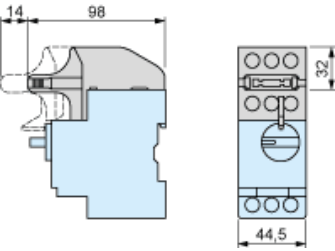
X1 Electrical clearance = 40 mm for $U_e \leq 415$ V, or 80 mm for $U_e = 440$ V, or 120 mm for $U_e = 500$ and 690 V.
X2 = 40 mm.

GVAD, AM, AN, AU, AS



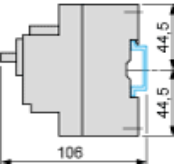
1 Maximum

GV2AK00



Mounting

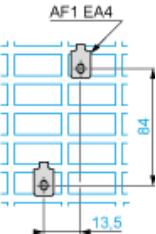
On rail AM1 DE200, AM1 ED200 (35 x 15)



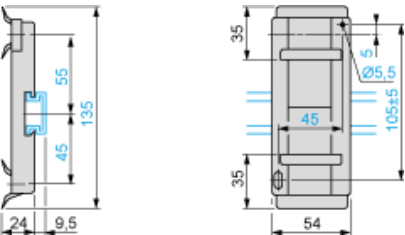
Panel mounted



On pre-slotted mounting plate AM1 PA



Adapter Plate GK2AF01

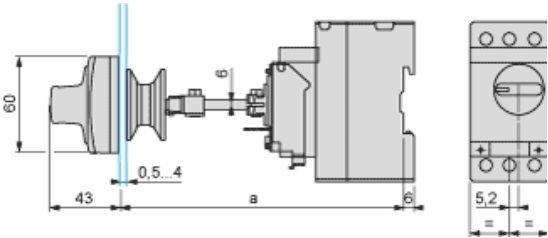


7.5 mm Height Compensation Plate GV1F03

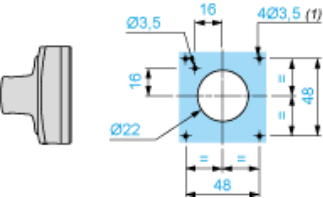


Mounting

Mounting of External Operator GV2APN01, GV2APN02 or GV2APN04 for Motor Circuit Breakers GV2L

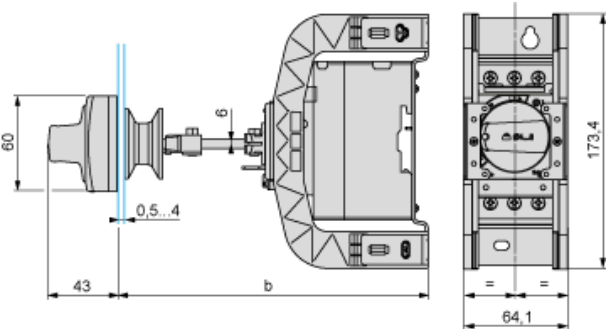


Door cut-out



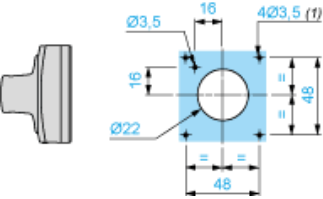
(1) For IP65 only.

Mounting of External Operator GVAPH02 for Motor Circuit Breakers GV2L



| | b | |
|---------------------------------|---------|---------|
| | Minimum | Maximum |
| GV2 APN.. + GV APH02 | 151 | 250 |
| GV2 APN.. + GV APH02 + GV APK11 | 250 | 445 |

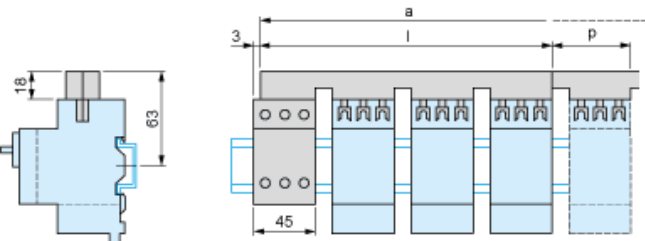
Door cut-out



(1) For IP65 only.

GV2L and GV2LE

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

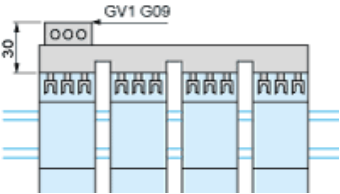


| | l | | p | |
|---------------------|-----|--|----|--|
| GV2G445 (4 x 45 mm) | 179 | | 45 | |
| GV2G454 (4 x 54 mm) | 206 | | 54 | |
| GV2G472 (4 x 72 mm) | 260 | | 72 | |

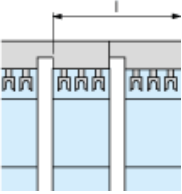
| Number of tap-offs | a | | | |
|--------------------|-----|-----|-----|-----|
| | 5 | 6 | 7 | 8 |
| GV2G445 | 224 | 269 | 314 | 359 |
| GV2G454 | 260 | 314 | 368 | 422 |
| GV2G472 | 332 | 404 | 476 | 548 |

Sets of Busbars for GV2L and GV2LE

Sets of busbars GV2G... with terminal block GV1G09

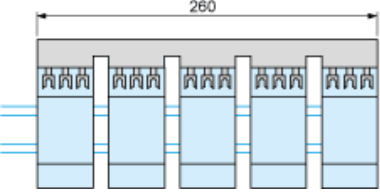


Sets of busbars GV2G245, GV2G254, GV2GR272

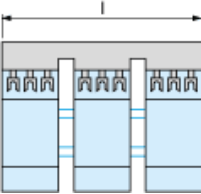


| | I |
|---------------------|-----|
| GV2G245 (2 x 45 mm) | 89 |
| GV2G254 (2 x 54 mm) | 98 |
| GV2G272 (2 x 72 mm) | 116 |

Set of busbars GV2G554

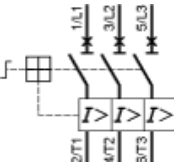


Sets of busbars GV2G345 and GV2G354



| | I |
|---------------------|-----|
| GV2G345 (3 x 45 mm) | 134 |
| GV2G354 (3 x 54 mm) | 152 |

GV2L••



Recommended replacement(s)