

# GV2LE08

Motor circuit breaker, TeSys GV2, 3P, 4 A, magnetic, toggle control, screw clamp terminals



## Main

|                                                     |                                                                                                                                                                                                                                                                                                                     |
|-----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range                                               | TeSys                                                                                                                                                                                                                                                                                                               |
| Product name                                        | TeSys GV2                                                                                                                                                                                                                                                                                                           |
| Device short name                                   | GV2LE                                                                                                                                                                                                                                                                                                               |
| Device application                                  | Motor                                                                                                                                                                                                                                                                                                               |
| Poles description                                   | 3P                                                                                                                                                                                                                                                                                                                  |
| Network type                                        | AC                                                                                                                                                                                                                                                                                                                  |
| Utilisation category                                | Category A conforming to IEC 60947-2<br>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<br>100 kA Icu at 400/415 V AC 50/60 Hz conforming to IEC 60947-2<br>100 kA Icu at 440 V AC 50/60 Hz conforming to IEC 60947-2<br>100 kA Icu at 500 V AC 50/60 Hz conforming to IEC 60947-2<br>3 kA Icu at 690 V AC 50/60 Hz conforming to IEC 60947-2 |
| [Ics] rated service short-circuit breaking capacity | 100 % at 500 V AC 50/60 Hz conforming to IEC 60947-2<br>100 % at 230/240 V AC 50/60 Hz conforming to IEC 60947-2<br>100 % at 440 V AC 50/60 Hz conforming to IEC 60947-2<br>100 % at 400/415 V AC 50/60 Hz conforming to IEC 60947-2<br>75 % at 690 V AC 50/60 Hz conforming to IEC 60947-2                         |
| Trip unit technology                                | Magnetic                                                                                                                                                                                                                                                                                                            |
| Magnetic tripping current                           | 51 A                                                                                                                                                                                                                                                                                                                |

## Complementary

|                    |                                                                                                                            |
|--------------------|----------------------------------------------------------------------------------------------------------------------------|
| Fixing mode        | 35 mm symmetrical DIN rail: clipped<br>Panel: screwed (with adaptor plate)                                                 |
| Operating position | Any position                                                                                                               |
| Motor power kW     | 1.5 kW at 400/415 V AC 50/60 Hz<br>1.5 kW at 500 V AC 50/60 Hz<br>3 kW at 690 V AC 50/60 Hz<br>2.2 kW at 500 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 <sup>2</sup> solid<br>Screw clamp terminals 2 cable(s) 1.5...6 mm <sup>2</sup> flexible without cable end<br>Screw clamp terminals 2 cable(s) 1...4 mm <sup>2</sup> 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<br>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                                                                                                                                                                                                                               |
| Net weight                             | 0.33 kg                                                                                                                                                                                                                               |

## Environment

|                                       |                                                                                                          |
|---------------------------------------|----------------------------------------------------------------------------------------------------------|
| Standards                             | EN/IEC 60947-2<br>EN/IEC 60947-4-1<br>CSA C22.2 No 60947-4-1<br>UL 60947-4-1                             |
| Product certifications                | IECEE CB Scheme<br>UL<br>CSA<br>CCC<br>EAC<br>RINA<br>LROS (Lloyds register of shipping)<br>DNV-GL<br>BV |
| 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                                                                                               |

## Offer Sustainability

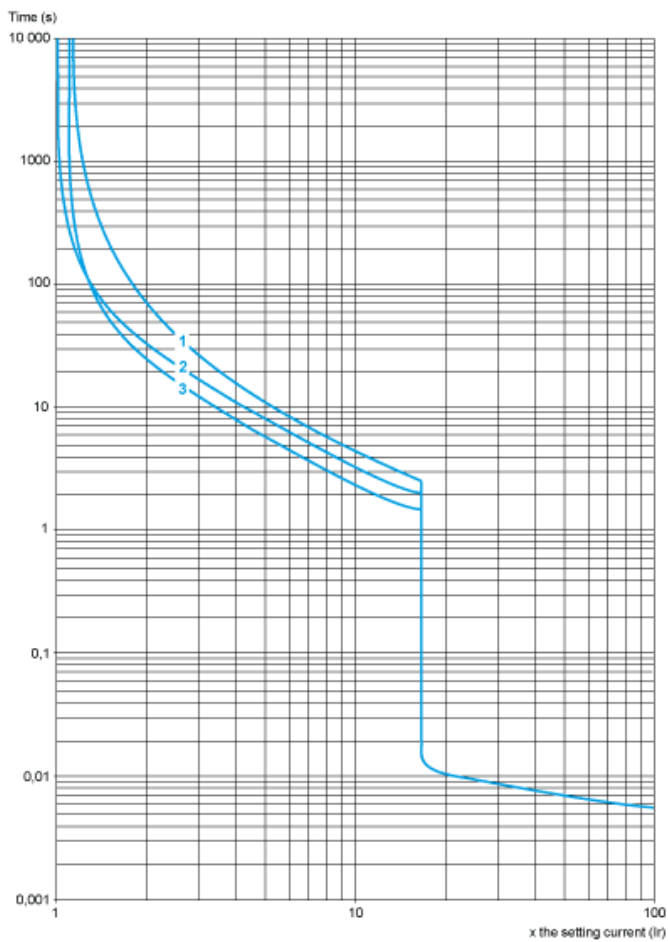
|                            |                                                                                                                             |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Sustainable offer status   | Green Premium product                                                                                                       |
| REACH Regulation           | <a href="#">REACH Declaration</a>                                                                                           |
| EU RoHS Directive          | Compliant<br><a href="#">EU RoHS Declaration</a>                                                                            |
| Mercury free               | Yes                                                                                                                         |
| RoHS exemption information | <a href="#">Yes</a>                                                                                                         |
| China RoHS Regulation      | <a href="#">China RoHS declaration</a><br>Product out of China RoHS scope. Substance declaration for your information       |
| Environmental Disclosure   | <a href="#">Product Environmental Profile</a>                                                                               |
| 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

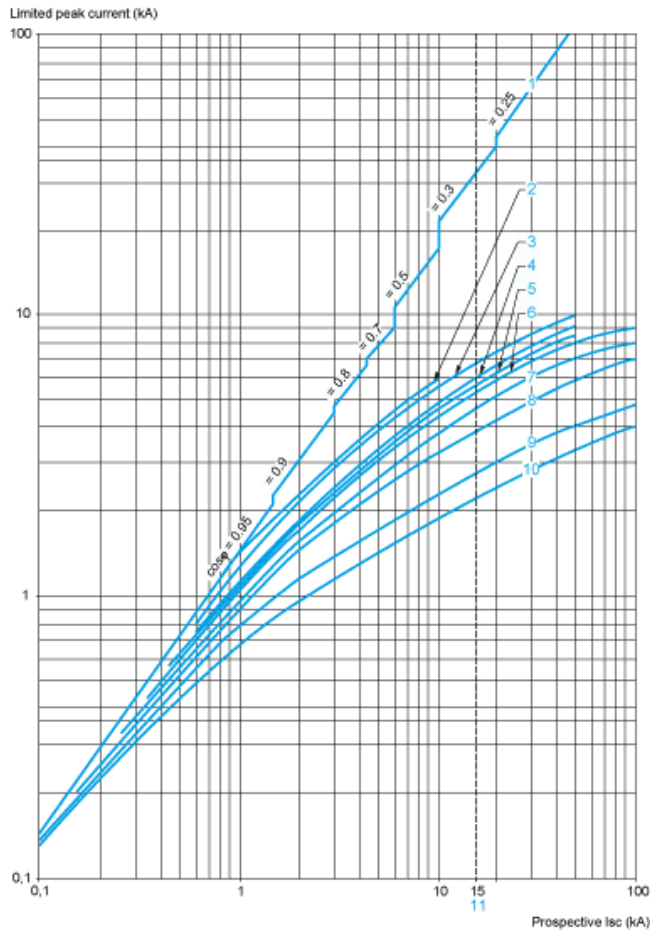


- 1 3 poles from cold state
- 2 2 poles from cold state
- 3 3 poles from hot state

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

Dynamic Stress

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

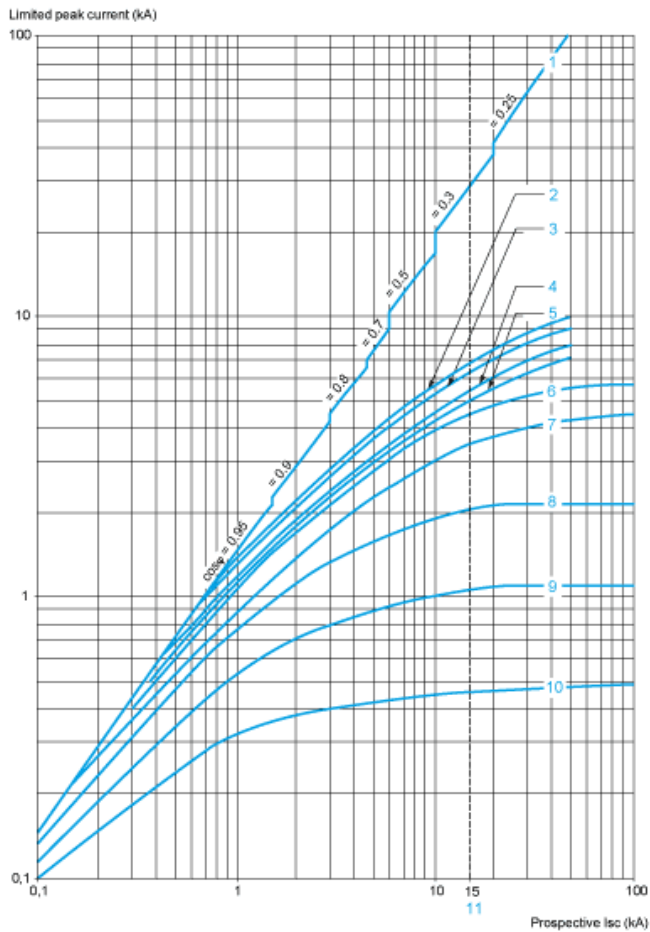


- 1 Maximum peak current
- 2 32 A
- 3 25 A
- 4 18 A
- 5 14 A
- 6 10 A
- 7 6.3 A
- 8 4 A
- 9 2.5 A
- 10 1.6 A
- 11 Limit of rated ultimate breaking capacity on short-circuit of GV2LE (14, 18, 23, and 25 A ratings).

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

#### Dynamic Stress

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

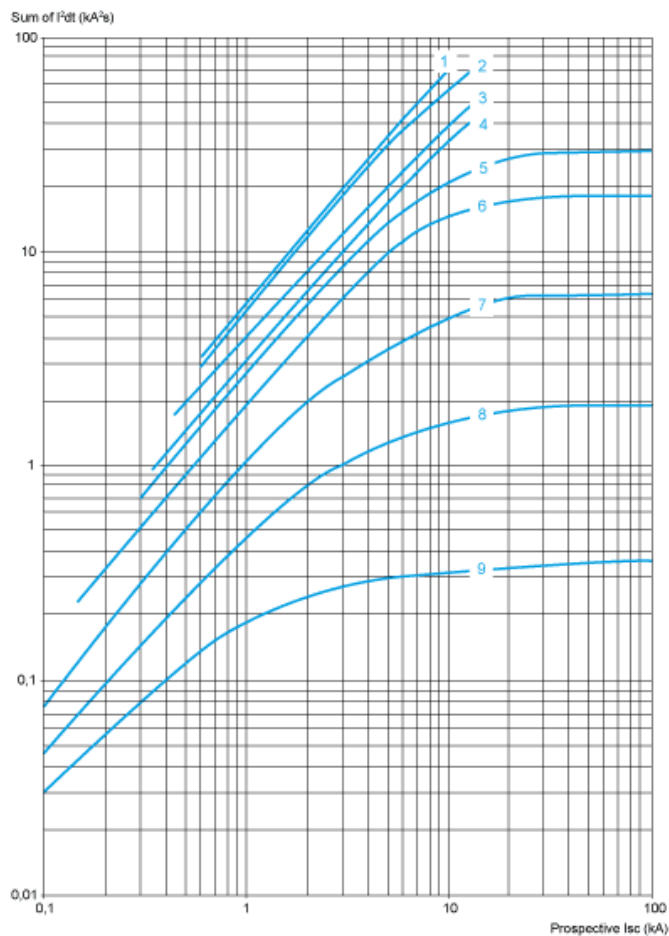


- 1 Maximum peak current
- 2 32 A
- 3 25 A
- 4 18 A
- 5 14 A
- 6 10 A
- 7 6.3 A
- 8 4 A
- 9 2.5 A
- 10 1.6 A
- 11 Limit of rated ultimate breaking capacity on short-circuit of GV2LE (14, 18, 23, and 25 A ratings).

### Thermal Limit on Short-Circuit for GV2LE Only

Thermal Limit in  $\text{kA}^2\text{s}$  in the Magnetic Operating Zone

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

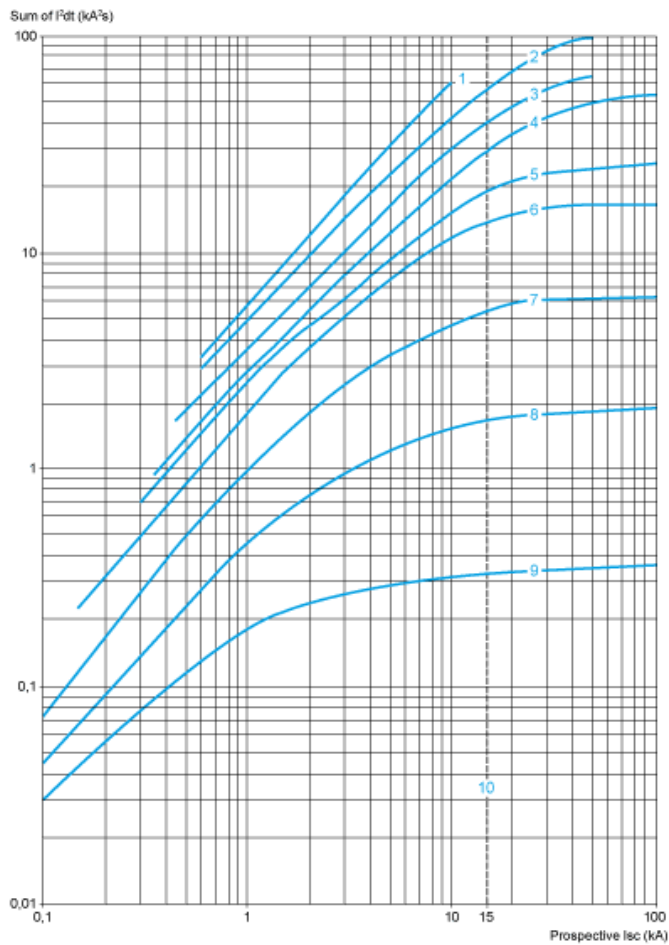


|   |       |
|---|-------|
| 1 | 32 A  |
| 2 | 25 A  |
| 3 | 18 A  |
| 4 | 14 A  |
| 5 | 10 A  |
| 6 | 6.3 A |
| 7 | 4 A   |
| 8 | 2.5 A |
| 9 | 1.6 A |

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

Thermal Limit in  $\text{kA}^2\text{s}$  in the Magnetic Operating Zone

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

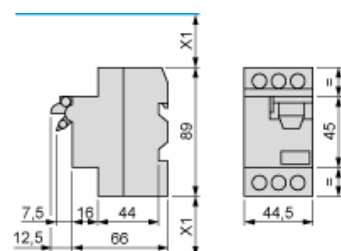


- 1 32 A (GV2LE32)
- 2 25 A and 32 A (GV2L32)
- 3 18 A
- 4 14 A
- 5 10 A
- 6 6.3 A
- 7 4 A
- 8 2.5 A
- 9 1.6 A
- 10 Limit of rated ultimate breaking capacity on short-circuit of GV2 LE (14, 18, 23, and 25 A ratings).



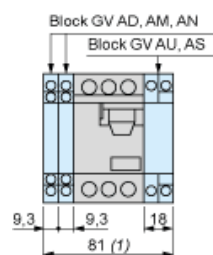
## GV2LE

### Dimensions



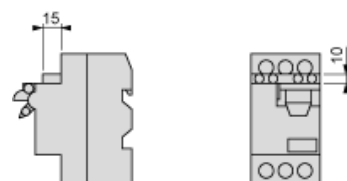
X1 Electrical clearance = 40 mm for  $U_e \leq 690$  V.

GVAD, AM, AN, AU, AS



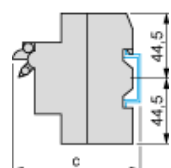
1 Maximum

GVAE



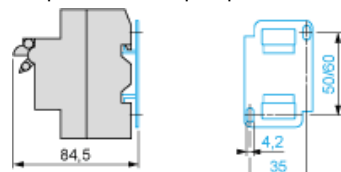
### Mounting

On 35 mm rail

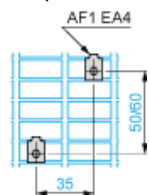


$c = 80$  on AM1 DP200 (35 x 7.5) and 88 on AM1 DE200, ED200 (35 x 15)

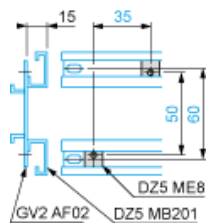
On panel with adapter plate GV2 AF02



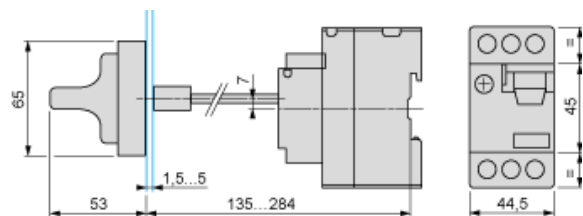
On pre-slotted plate AM1 PA



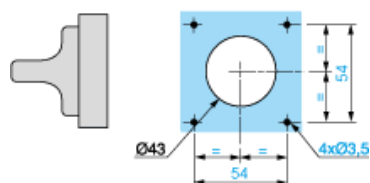
On rails DZ5 MB201



Mounting of External Operator GV2AP03 for GV2LE

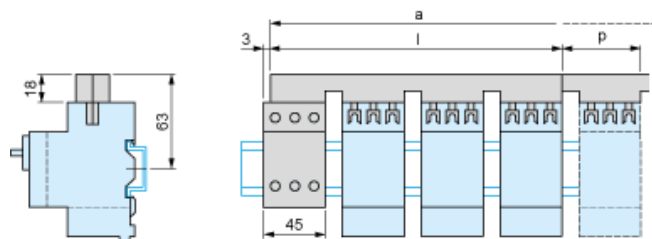


Door cut-out



GV2L and GV2LE

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

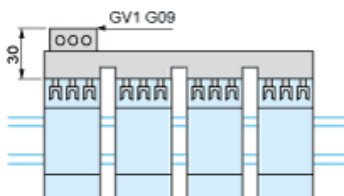


|                     | l   | p  |
|---------------------|-----|----|
| GV2G445 (4 x 45 mm) | 179 | 45 |
| GV2G454 (4 x 54 mm) | 206 | 54 |
| GV2G472 (4 x 72 mm) | 260 | 72 |

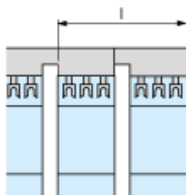
| Number of tap-offs | a   |     |     |     |
|--------------------|-----|-----|-----|-----|
|                    | 5   | 6   | 7   | 8   |
| GV2G445            | 224 | 269 | 314 | 359 |
| GV2G454            | 260 | 314 | 368 | 422 |
| GV2G472            | 332 | 404 | 476 | 548 |

Sets of Busbars for GV2L and GV2LE

Sets of busbars GV2G... with terminal block GV1G09

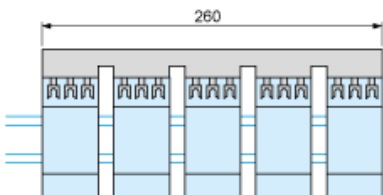


Sets of busbars GV2G245, GV2G254, GV2GR272

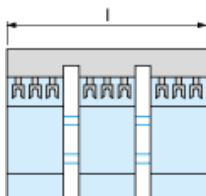


|                     | I   |
|---------------------|-----|
| GV2G245 (2 x 45 mm) | 89  |
| GV2G254 (2 x 54 mm) | 98  |
| GV2G272 (2 x 72 mm) | 116 |

Set of busbars GV2G554



Sets of busbars GV2G345 and GV2G354



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

GV2LE••

