



## Main

|                                       |  |
|---------------------------------------|--|
| Range                                 | TeSys  |
| Product name                          | TeSys GV4  |
| Device short name                     | GV4L   |
| Product or component type             | Circuit breaker  |
| Device application                    | Motor protection   |
| Poles description                     | 3P   |
| Utilisation category                  | Category A   |
| Trip unit technology                  | Magnetic<br>Electronic   |
| Protection type                       | Short-circuit  |
| [In] rated current                    | 115 A  |
| Breaking capacity                     | Icu 100 kA at 220...240 V AC 50/60 Hz conforming to IEC 60947-2<br>Icu 50 kA at 380...415 V AC 50/60 Hz conforming to IEC 60947-2<br>Icu 50 kA at 440 V AC 50/60 Hz conforming to IEC 60947-2<br>Icu 15 kA at 525 V AC 50/60 Hz conforming to IEC 60947-2<br>Icu 8 kA at 660...690 V AC 50/60 Hz conforming to IEC 60947-2<br>Icu 25 kA at 500 V AC 50/60 Hz conforming to IEC 60947-2 |
| [Ics] rated service breaking capacity | 100 kA at 220...240 V AC 50/60 Hz conforming to IEC 60947-2<br>50 kA at 380...415 V AC 50/60 Hz conforming to IEC 60947-2<br>50 kA at 440 V AC 50/60 Hz conforming to IEC 60947-2<br>25 kA at 500 V AC 50/60 Hz conforming to IEC 60947-2<br>15 kA at 525 V AC 50/60 Hz conforming to IEC 60947-2<br>2 kA at 660...690 V AC 50/60 Hz conforming to IEC 60947-2                         |
| Magnetic setting range                | 690...1610 A   |
| Control type                          | Rotary handle  |

## Complementary

|                                |  |
|--------------------------------|--|
| [Ue] rated operational voltage | 690 V AC 50/60 Hz conforming to IEC 60947-2  |
| Motor power kW                 | 37 kW at 400...415 V AC 50/60 Hz<br>45 kW at 400...415 V AC 50/60 Hz<br>55 kW at 400...415 V AC 50/60 Hz<br>45 kW at 500 V AC 50/60 Hz |

|  |  |
|--|--|
|  | 55 kW at 500 V AC 50/60 Hz<br>75 kW at 500 V AC 50/60 Hz<br>75 kW at 660...690 V AC 50/60 Hz<br>90 kW at 660...690 V AC 50/60 Hz<br>110 kW at 660...690 V AC 50/60 Hz  |
| [Uimp] rated impulse withstand voltage | IEC 60947-2 8 kV   |
| [Ui] rated insulation voltage          | 800 V conforming to IEC 60947-2  |
| Mounting mode                          | By clips<br>By screws  |
| Mounting support                       | 35 mm symmetrical DIN rail<br>75 mm symmetrical DIN rail<br>Plate  |
| Suitability for isolation              | Yes conforming to IEC 60947-1  |
| Mechanical durability                  | 40000 cycles   |
| Electrical durability                  | 10000 cycles for AC-3 at 440 V In/2<br>5000 cycles for AC-3 at 440 V In  |
| Local signalling                       | Green indicatorpresence of auxiliary contacts:   |
| Number of slots                        | 1 slot(s) for alarm switch for fault signalling contact, plug-in<br>1 slot(s) for voltage release for electrical remote tripping, plug-in<br>1 slot(s) for auxiliary switch for open/close contact, plug-in  |
| Toggle padlocking (with accessories)   | Padlock in OFF or ON position  |
| Connection pitch                       | 27 mm  |
| Connections - terminals                | Top 1 EverLink BTR screw connectors wire size 1.5...70 mm <sup>2</sup> , solid<br>Top 1 EverLink BTR screw connectors wire size 1.5...50 mm <sup>2</sup> , flexible<br>Bottom 1 EverLink BTR screw connectors wire size 2.5...95 mm <sup>2</sup> , solid<br>Bottom 1 EverLink BTR screw connectors wire size 2.5...70 mm <sup>2</sup> , flexible |
| Tightening torque                      | 9 N.m for 16...95 mm <sup>2</sup><br>5 N.m for 1.5...10 mm <sup>2</sup>  |
| Wire stripping length                  | 20 mm  |
| Quality labels                         | CE   |
| Standards                              | EN/IEC 60947-4-1<br>EN/IEC 60947-2   |
| Height                                 | 155 mm   |
| Width                                  | 81 mm  |
| Depth                                  | 165 mm   |
| Net weight                             | 1.65 kg  |
| Colour                                 | Grey (RAL 7016)  |

## Environment

|                                       |  |
|---------------------------------------|--|
| Product certifications                | IEC<br>CCC<br>EAC<br>EU-RO MR  |
| Tropicalisation                       | 2 conforming to IEC 68-2   |
| IP degree of protection               | IP40 front face conforming to IEC 60529  |
| IK degree of protection               | IK07 conforming to IEC 62262   |
| Pollution degree                      | 3 conforming to IEC 60947-1  |
| Mechanical robustness                 | Vibrations: +/- 1 mm 2...13.2 Hz conforming to IEC 60068-2-6<br>Vibrations: 0.7 gn 13.2...100 Hz conforming to IEC 60068-2-6<br>Shocks: 15 gn 11 ms conforming to IEC 60068-2-27 |
| Ambient air temperature for operation | -25...70 °C  |
| Ambient air temperature for storage   | -50...85 °C  |
| Operating altitude                    | 0...2000 m without derating<br>2000...5000 m with derating   |

## Offer Sustainability

|                          |  |
|--------------------------|--|
| Sustainable offer status | Green Premium product                            |
| 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>   |
| Circularity Profile        | <a href="#">End of Life Information</a>   |
| WEEE                       | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |

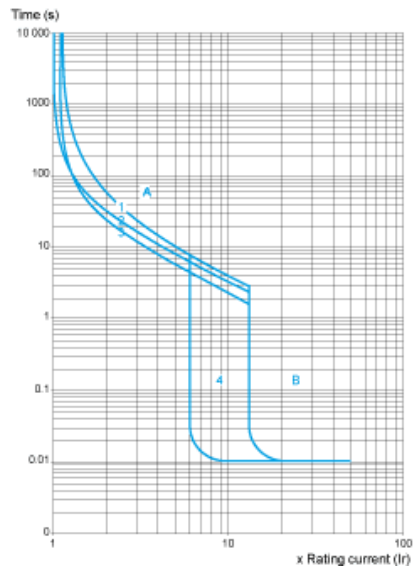
### Contractual warranty

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

Tripping Curves for GV4L and GV4LE Combined with Thermal Overload Relay LRD or LR9

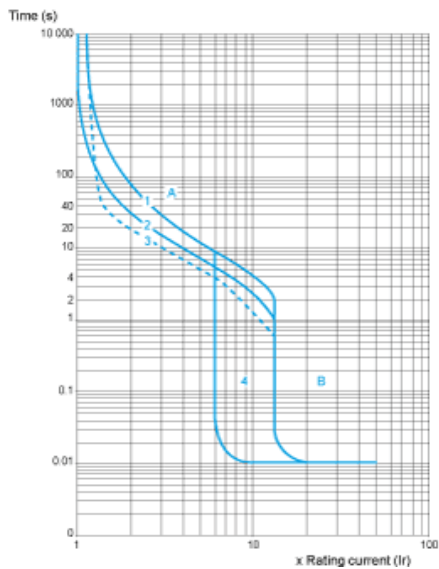
Average Operating Times at 20 °C Related to Multiples of the Setting Current

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



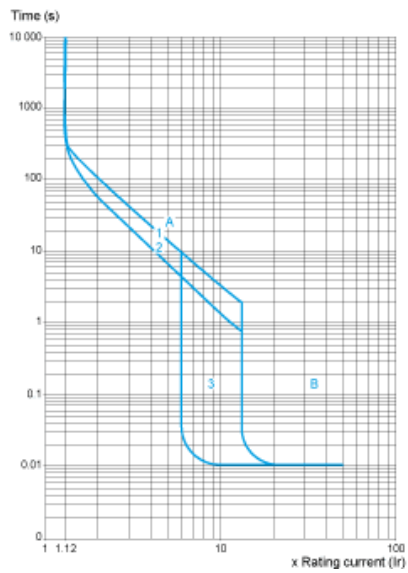
- 1 3 poles from cold state
- 2 2 poles from cold state
- 3 3 poles from hot state
- 4 6...14 Ir
- A Thermal overload relay protection zone
- B GV4L protection zone

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

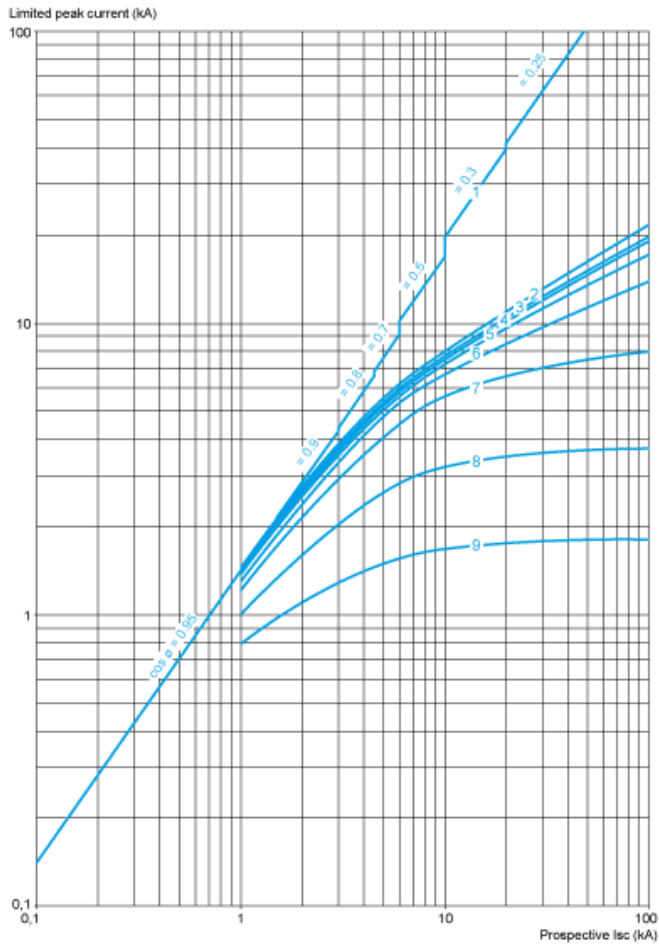


- 1 Cold state curve
- 2 Hot state curve
- 3 6...14 Ir

### Current Limitation on Short-Circuit for GV4L, GV4LE (3-Phase 400/415 V)

Dynamic Stress

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

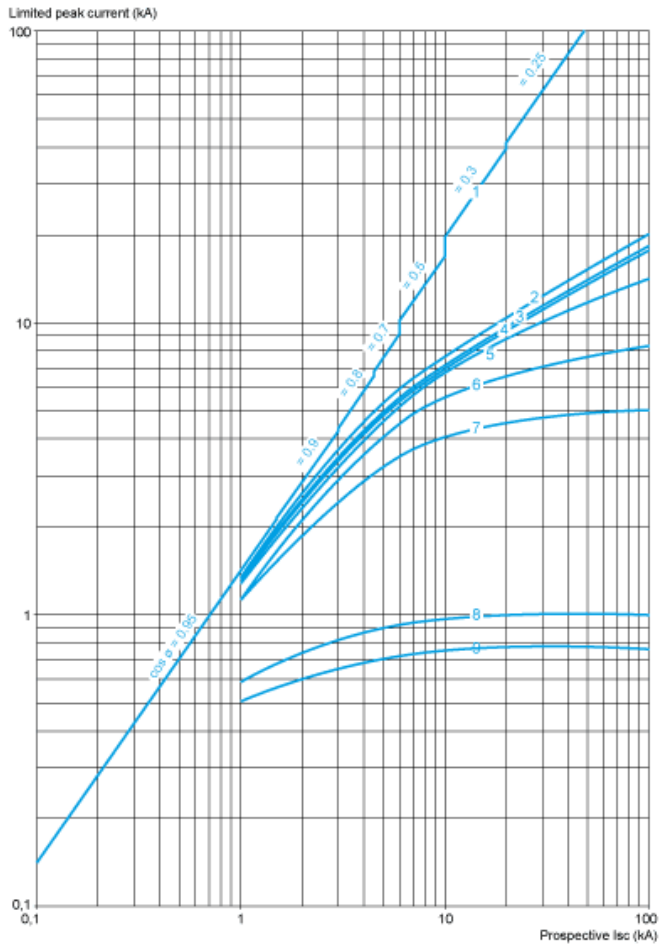


- 1 Maximum peak current
- 2 GV4L115
- 3 GV4L80
- 4 GV4L50
- 5 GV4L25
- 6 GV4L12
- 7 GV4L07
- 8 GV4L03
- 9 GV4L02

Current Limitation on Short-Circuit for GV4L, GV4LE + Thermal Overload Relay LRD or LR9 (3-Phase 400/415 V)

Dynamic Stress

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

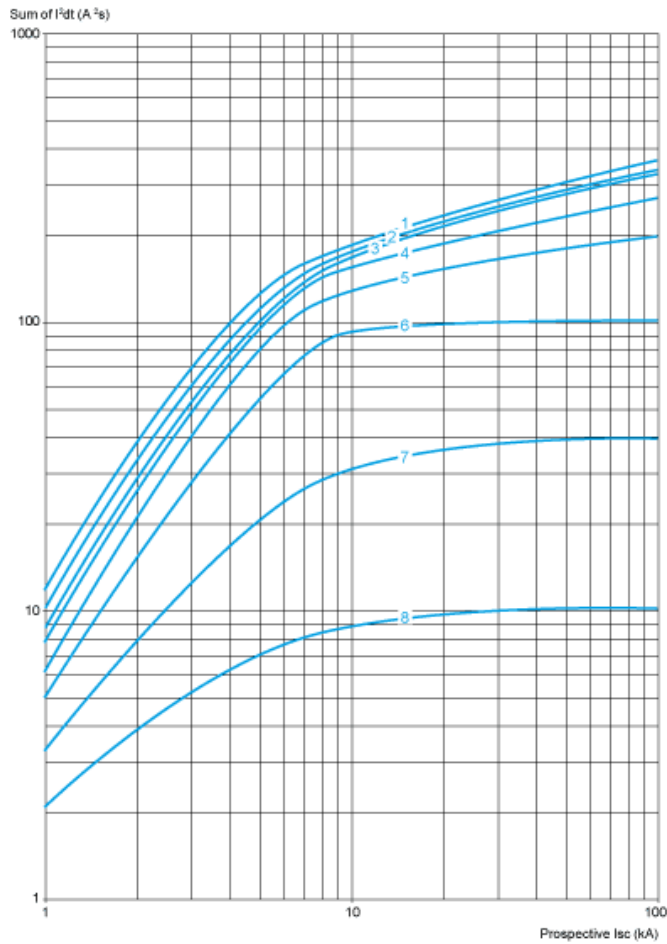


- 1 Maximum peak current
- 2 GV4L115 + LR9D5367 or LR9F5367
- 3 GV4L80 + LRD3361
- 4 GV4L50 + LRD340
- 5 GV4L25 + LRD325
- 6 GV4L12 + LRD313
- 7 GV4L07 + LRD12
- 8 GV4L03 + LRD07
- 9 GV4L02 + LRD07

### Thermal Limit on Short-Circuit for GV4L, GV4LE

Thermal Limit in A<sup>2</sup>s

Sum of I<sup>2</sup>dt = f (prospective Isc) at 1.05 Ue = 435 V



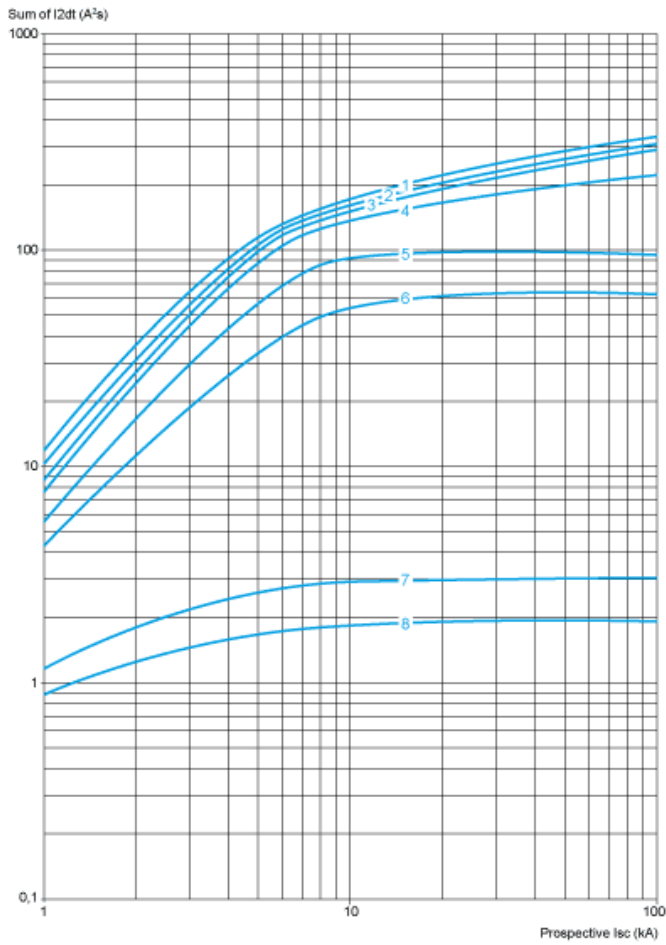
- 1 GV4L115
- 2 GV4L80
- 3 GV4L50
- 4 GV4L25
- 5 GV4L12
- 6 GV4L07
- 7 GV4L03
- 8 GV4L02

### Current Limitation on Short-Circuit for GV4L, GV4LE + Thermal Overload Relay LRD or LR9

Thermal Limit in kA in the Magnetic Operating Zone

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

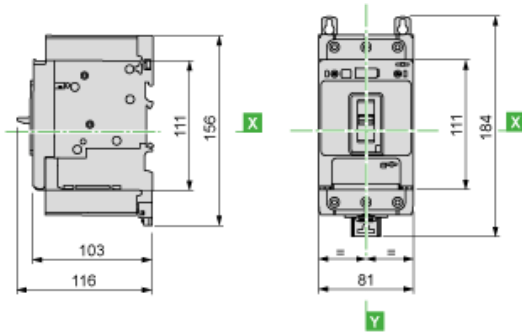




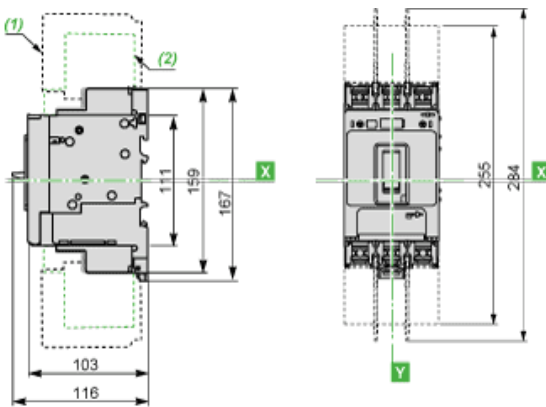
- 1 GV4L115 + LR9D5367 or LR9F5367
- 2 GV4L80 + LRD3361
- 3 GV4L50 + LRD340
- 4 GV4L25 + LRD325
- 5 GV4L12 + LRD313
- 6 GV4L07+ LRD12
- 7 GV4L03+ LRD07
- 8 GV4L02 + LRD07

GV4 with Toggle: GV4LE, GV4PE, GV4PEM

With EverLink® Connector



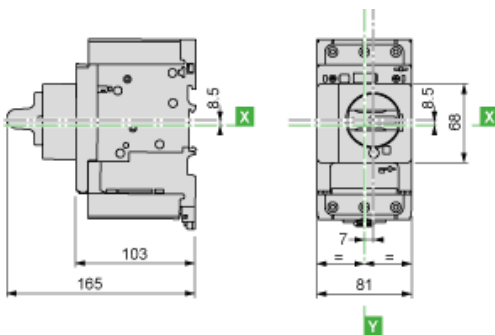
With Crimp Lug Connector



- (1) Interphases barriers
- (2) Long terminal shield

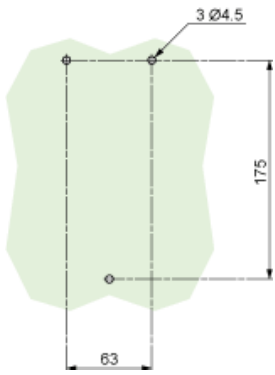
GV4 with Rotary Handle: GV4L, GV4P, or GV4LE, GV4PE, GV4PEM with GV4ADN01, GV4ADN02 Direct Mounting Rotary Handle

Dimensions

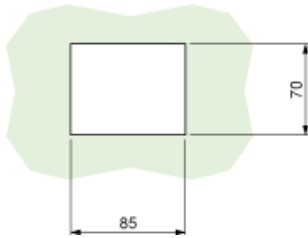


GV4L, GV4P, GV4LE, GV4PE, GV4PEM

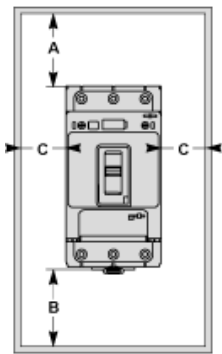
Panel Mounting with M4 Screws



Door Cut-Out for Rotary Handle



Minimum Safety Clearance



Toggle-type, rotary handle-type: identical clearance values.

| Safety Clearance (mm) |                     |   |   |                  |   |   |
|-----------------------|---------------------|---|---|------------------|---|---|
|                       | Painted Sheet Metal |   |   | Bare Sheet Metal |   |   |
|                       | A                   | B | C | A                | B | C |
| No accessory          | 30                  | 0 | 0 | 40               | 0 | 5 |
| Interphase barriers   | 0                   | 0 | 0 | 0                | 0 | 5 |
| Long terminal shield  | 0                   | 0 | 0 | 0                | 0 | 5 |

Magnetic Motor Circuit Breakers

GV4L, GV4LE

