# Product data sheet
## Characteristics

# GV4LE115B
## Motor circuit breaker, TeSys GV4, 3P, 115 A, Icu 25 kA, magnetic, EverLink terminals

### Main

| | |
|---|---|
| Range of product | TeSys GV4 |
| Range | TeSys Deca<br>TeSys Deca |
| Device short name | GV4L |
| Product name | TeSys GV4<br>TeSys Deca |
| Product or component type | Motor circuit breaker |
| Device application | Motor protection |
| Trip unit technology | Magnetic<br>Electronic |

### Complementary

| | |
|---|---|
| Poles description | 3P |
| Utilisation category | Category A conforming to IEC 60947-2<br>AC-3 conforming to IEC 60947-4-1 |
| Operating position | Any position |
| 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<br>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 |
| Breaking capacity | 50 KA Icu at 220...240 V AC 50/60 Hz conforming to IEC 60947-2<br>25 KA Icu at 380...415 V AC 50/60 Hz conforming to IEC 60947-2<br>20 KA Icu at 440 V AC 50/60 Hz conforming to IEC 60947-2<br>10 kA Icu at 500 V AC 50/60 Hz conforming to IEC 60947-2 |
| Control type | Toggle |
| [In] rated current | 115 A |
| Magnetic tripping current | 480…1120 A |
| [Ue] rated operational voltage | 690 V AC 50/60 Hz conforming to IEC 60947-2 |
| [Ui] rated insulation voltage | 800 V AC 50/60 Hz conforming to IEC 60947-2 |
| [Ith] conventional free air thermal current | 115 A conforming to IEC 60947-4-1 |
| [Uimp] rated impulse withstand voltage | 8 kV conforming to IEC 60947-2 |
| Power dissipation per pole | 6.1 W |
| Mechanical durability | 40000 cycles |
| Electrical durability | 10000 Cycles for AC-3 In/2<br>5000 Cycles for AC-3 In<br>At 440 V |
| Maximum operating rate | 25 cyc/h |
| Rated duty | Continuous conforming to IEC 60947-4-1 |
| Connections - terminals | EverLink BTR screw connectors (top) 1 cable(s) 1.5…70 mm² - solid<br>EverLink BTR screw connectors (top) 1 cable(s) 1.5…50 mm² - flexible<br>EverLink BTR screw connectors (bottom) 1 cable(s) 2.5…95 mm² - solid<br>EverLink BTR screw connectors (bottom) 1 cable(s) 2.5…70 mm² - flexible |
| Tightening torque | 9 N.M for cable 16…95 mm²<br>5 N.m for cable 1.5…10 mm² |
| 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 |

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein.
This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications.
It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof.
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| | |
|---|---|
| Height | 155 mm |
| Width | 81 mm |
| Depth | 116 mm |
| Net weight | 1.5 kg |
| Colour | Grey (RAL 7016) |
| Suitability for isolation | Yes conforming to IEC 60947-1 |

## Environment

| | |
|---|---|
| Standards | EN/IEC 60947-2<br>EN/IEC 60947-4-1 |
| Product certifications | IEC<br>CCC<br>EAC<br>EU-RO MR |
| Climatic withstand | Conforming to IACS E10 |
| IK degree of protection | IK07 conforming to IEC 62262 |
| Pollution degree | 3 |
| IP degree of protection | IP40 conforming to IEC 60529 |
| Ambient air temperature for storage | -50…85 °C |
| Fire resistance | 960 °C conforming to IEC 60695-2-11 |
| Operating altitude | 5000 m |
| Ambient air temperature for operation | -25…70 °C |

## Packing Units

| | |
|---|---|
| Unit Type of Package 1 | PCE |
| Number of Units in Package 1 | 1 |
| Package 1 Height | 11.0 cm |
| Package 1 Width | 16.5 cm |
| Package 1 Length | 22.0 cm |
| Package 1 Weight | 1.7 kg |
| Unit Type of Package 2 | S03 |
| Number of Units in Package 2 | 5 |
| Package 2 Height | 30.0 cm |
| Package 2 Width | 30.0 cm |
| Package 2 Length | 40.0 cm |
| Package 2 Weight | 8.5 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 |
| 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 |
| PVC free | Yes |
| Halogen content performance | Halogen free plastic parts product |

## Contractual warranty

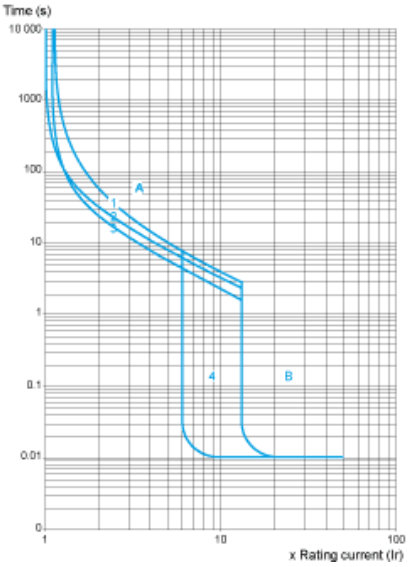
| | |
|---|---|
| Warranty | 18 months |

# GV4LE115B

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

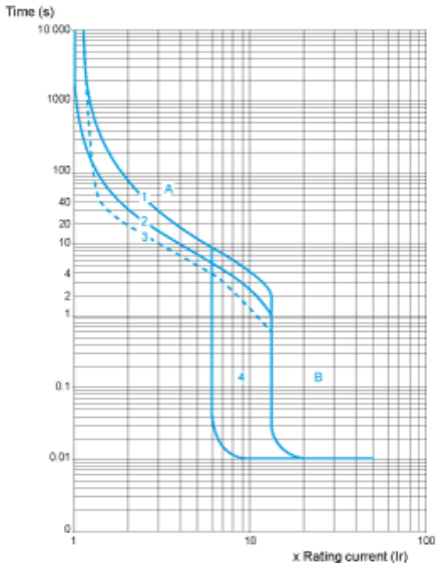
Average Operating Times at 20 °C Related to Multiples of the Setting Current

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



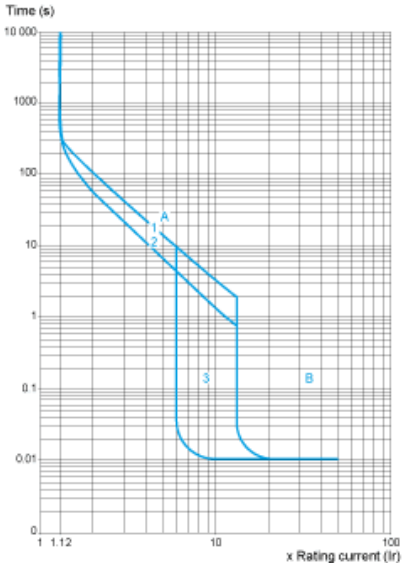

1 3 poles from cold state
2 2 poles from cold state
3 3 poles from hot state
4 6...14 Ir
A Thermal overload relay protection zone
B GV4L protection zone

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

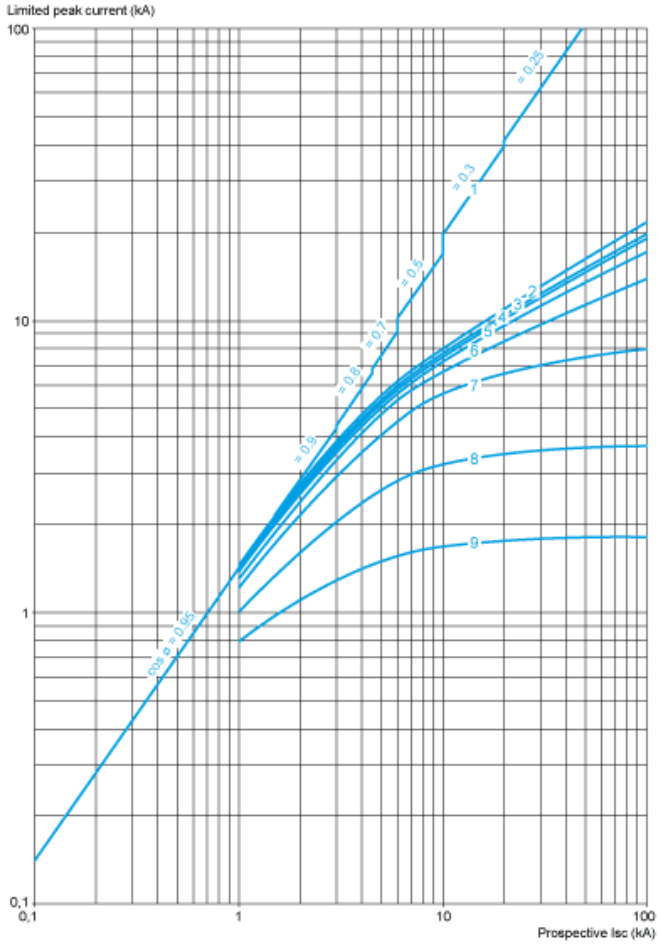



1 Cold state curve
2 Hot state curve
3 6...14 Ir

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

Dynamic Stress

I peak = f (prospective Isc) at 1.05 Ue = 435 V




1 Maximum peak current
2 GV4L115
3 GV4L80
4 GV4L50
5 GV4L25
6 GV4L12
7 GV4L07
8 GV4L03
9 GV4L02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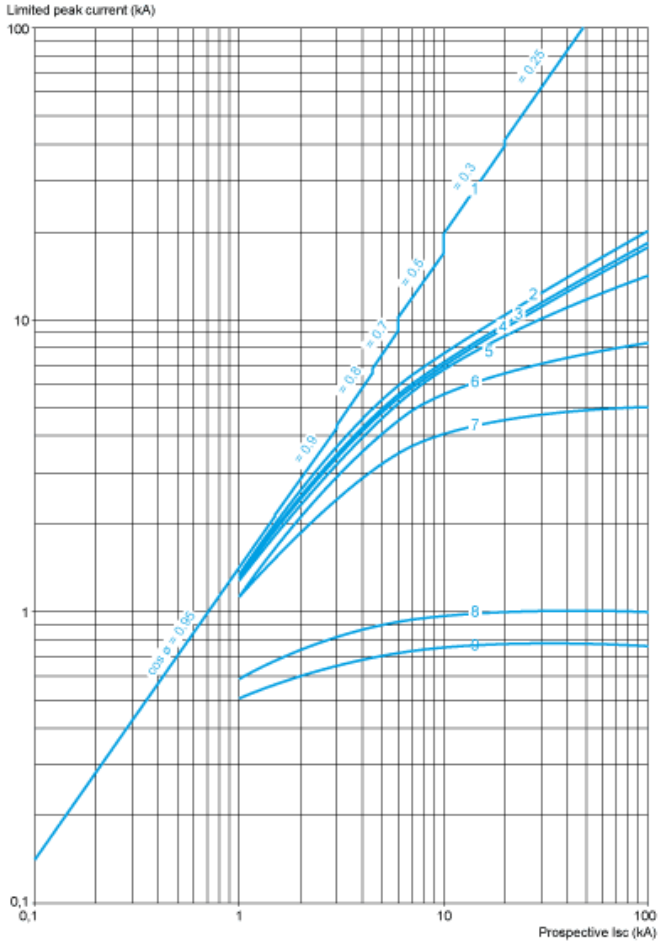
## Current Limitation on Short-Circuit for GV4L, GV4LE + Thermal Overload Relay LRD or LR9 (3-Phase 400/415 V)

Dynamic Stress

I peak = f (prospective Isc) at 1.05 Ue = 435 V

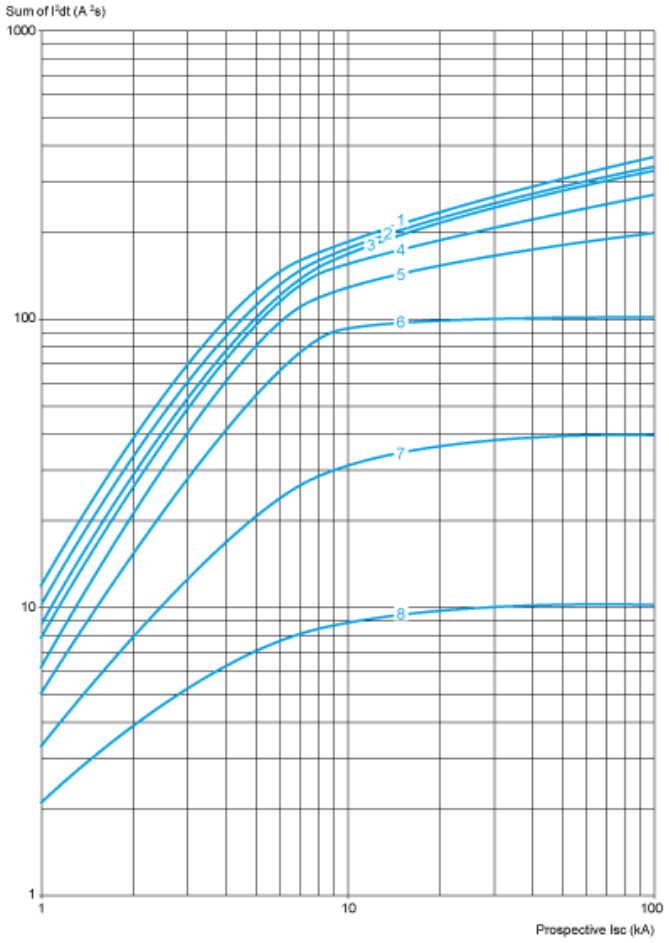



1 Maximum peak current
2 GV4L115 + LR9D5367 or LR9F5367
3 GV4L80 + LRD3361
4 GV4L50 + LRD340
5 GV4L25 + LRD325
6 GV4L12 + LRD313
7 GV4L07 + LRD12
8 GV4L03 + LRD07
9 GV4L02 + LRD07

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

Thermal Limit in $A^2s$

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

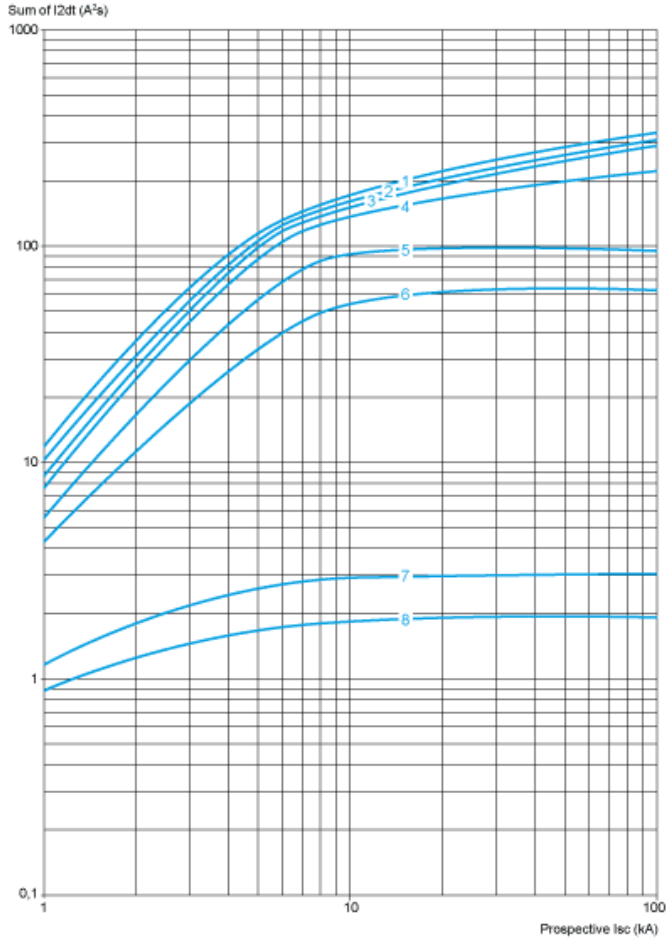



1 GV4L115
2 GV4L80
3 GV4L50
4 GV4L25
5 GV4L12
6 GV4L07
7 GV4L03
8 GV4L02

## 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 (prospective Isc) at 1.05 Ue = 435 V

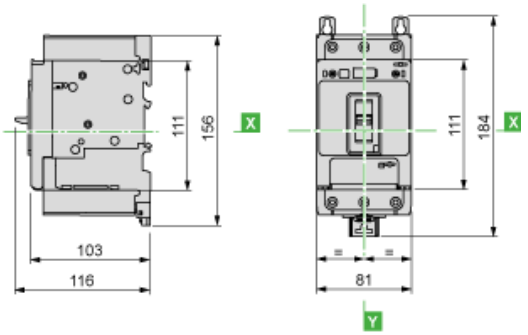



1 GV4L115 + LR9D5367 or LR9F5367
2 GV4L80 + LRD3361
3 GV4L50 + LRD340
4 GV4L25 + LRD325
5 GV4L12 + LRD313
6 GV4L07+ LRD12
7 GV4L03+ LRD07
8 GV4L02 + LRD07

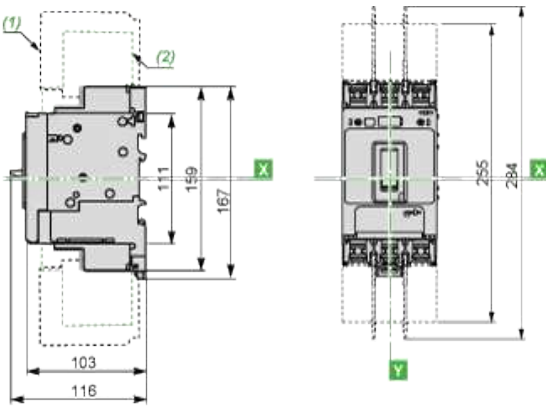
# GV4LE115B

## GV4 with Toggle: GV4LE, GV4PE, GV4PEM

With EverLink® Connector



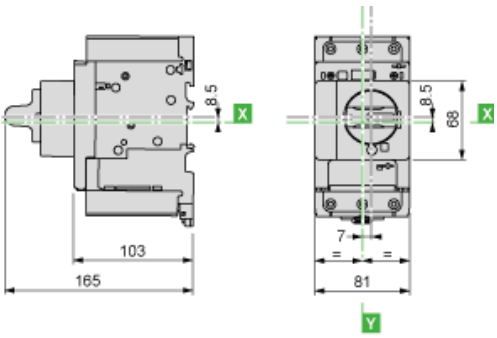

With Crimp Lug Connector




(1) Interphases barriers
(2) Long terminal shield

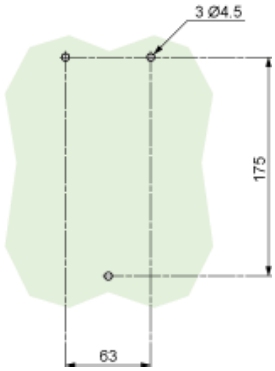
## GV4 with Rotary Handle: GV4L, GV4P, or GV4LE, GV4PE, GV4PEM with GV4ADN01, GV4ADN02 Direct Mounting Rotary Handle

Dimensions

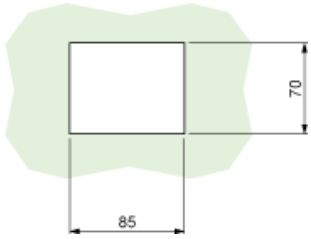



## GV4L, GV4P, GV4LE, GV4PE, GV4PEM

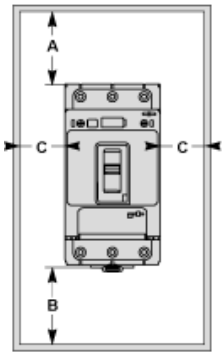
Panel Mounting with M4 Screws




Door Cut-Out for Rotary Handle

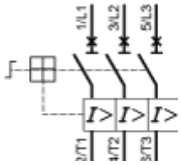



Minimum Safety Clearance




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 |

# GV4LE115B

Magnetic Motor Circuit Breakers
GV4L, GV4LE