

Product data sheet

Specifications



Motor circuit breaker, TeSys GV4, 3P, 80A, Icu 50kA, magnetic, lugs terminals

GV4L80N6

Main

| | |
|---------------------------|--------------------------|
| Range Of Product | TeSys GV4 |
| Range | TeSys Deca TeSys Deca |
| Device Short Name | GV4L |
| Product Name | TeSys GV4 TeSys Deca |
| Product Or Component Type | Motor circuit breaker |
| Device Application | Motor protection |
| Trip Unit Technology | Magnetic Electronic |

Complementary

| | |
|---|--|
| Poles Description | 3P |
| Utilisation Category | Category A conforming to IEC 60947-2 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 45 kW at 500 V AC 50/60 Hz 55 kW at 500 V AC 50/60 Hz 22 kW at 400...415 V AC 50/60 Hz 30 kW at 500 V AC 50/60 Hz 37 kW at 660...690 V AC 50/60 Hz 45 kW at 660...690 V AC 50/60 Hz 55 kW at 660...690 V AC 50/60 Hz 30 kW at 400...415 V AC 50/60 Hz 37 kW at 500 V AC 50/60 Hz |
| Breaking Capacity | 100 kA Icu at 220...240 V AC 50/60 Hz conforming to IEC 60947-2 50 kA Icu at 380...415 V AC 50/60 Hz conforming to IEC 60947-2 50 kA Icu at 440 V AC 50/60 Hz conforming to IEC 60947-2 15 kA Icu at 525 V AC 50/60 Hz conforming to IEC 60947-2 8 kA Icu at 660...690 V AC 50/60 Hz conforming to IEC 60947-2 25 kA Icu at 500 V AC 50/60 Hz conforming to IEC 60947-2 |
| Control Type | Rotary handle |
| [In] Rated Current | 80 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 |

Disclaimer: 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

| | |
|---------------------------|--|
| Mechanical Durability | 40000 cycles |
| Electrical Durability | 14000 cycles for AC-3 at 440 V In/2 7000 cycles for AC-3 at 440 V In |
| Maximum Operating Rate | 25 cyc/h |
| Rated Duty | Continuous conforming to IEC 60947-4-1 |
| Connection Pitch | 27 mm without spreaders 35 mm with spreaders |
| Connections - Terminals | Lugs-ring terminals |
| Tightening Torque | 9 N.m for cable 16...95 mm ² 5 N.m for cable 1.5...10 mm ² |
| Mechanical Robustness | Vibrations: +/- 1 mm 2...13.2 Hz conforming to IEC 60068-2-6 Vibrations: 0.7 gn 13.2...100 Hz conforming to IEC 60068-2-6 Shocks: 15 gn 11 ms conforming to IEC 60068-2-27 |
| Height | 155 mm |
| Width | 81 mm |
| Depth | 165 mm |
| Net Weight | 1.65 kg |
| Colour | Grey (RAL 7016) |
| Suitability For Isolation | Yes conforming to IEC 60947-1 |

Environment

| | |
|---------------------------------------|-------------------------------------|
| Standards | EN/IEC 60947-4-1 EN/IEC 60947-2 |
| Product Certifications | IEC CCC EAC 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 | 12.5 cm |
| Package 1 Width | 9 cm |
| Package 1 Length | 22 cm |
| Package 1 Weight | 1.665 kg |

Contractual warranty

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

Sustainability

Green Premium™ label is Schneider Electric’s commitment to delivering products with best-in-class environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO₂ products.

Guide to assessing product sustainability is a white paper that clarifies global eco-label standards and how to interpret environmental declarations.

[Learn more about Green Premium >](#)

[Guide to assess a product’s sustainability >](#)



Transparency RoHS/REACH

Well-being performance

| | | |
|---|------------------------------------|-----|
| ✓ | Mercury Free | |
| ✓ | Rohs Exemption Information | Yes |
| ✓ | Pvc Free | |
| ✓ | Halogen Free Plastic Parts Product | |

Certifications & Standards

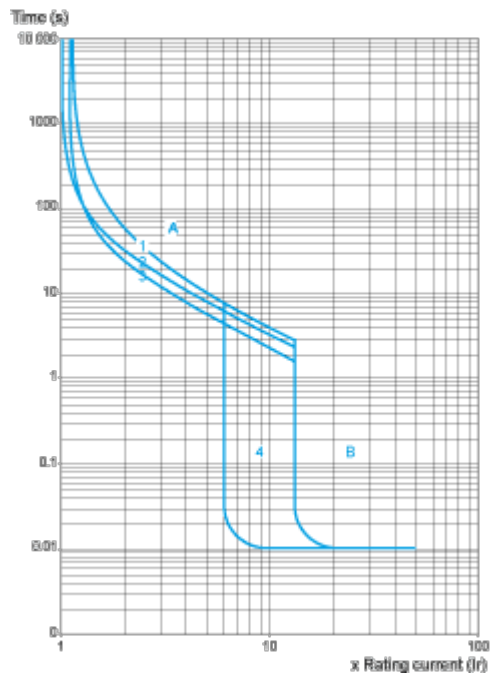
| | |
|--------------------------|---|
| Reach Regulation | REACH Declaration |
| Eu Rohs Directive | Compliant with Exemptions |
| China Rohs Regulation | China RoHS declaration Product out of China RoHS scope. Substance declaration for your information |
| Environmental Disclosure | Product Environmental Profile |
| Weee | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |
| Circularity Profile | End of Life Information |

Performance Curves

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

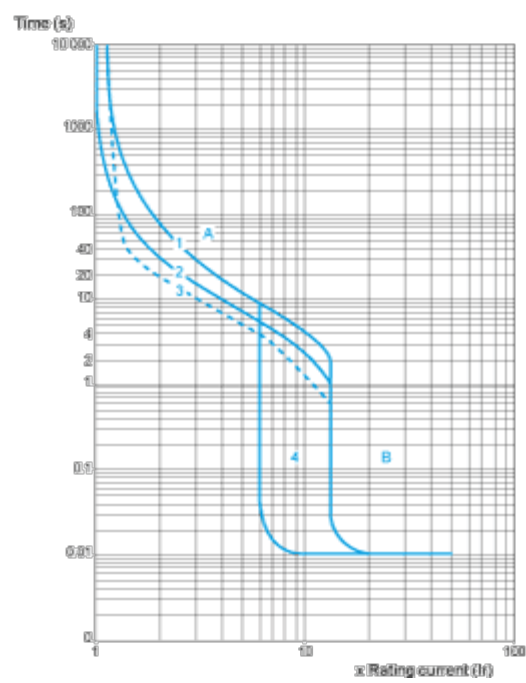
Average Operating Times at 20 °C Related to Multiples of the Setting Current

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



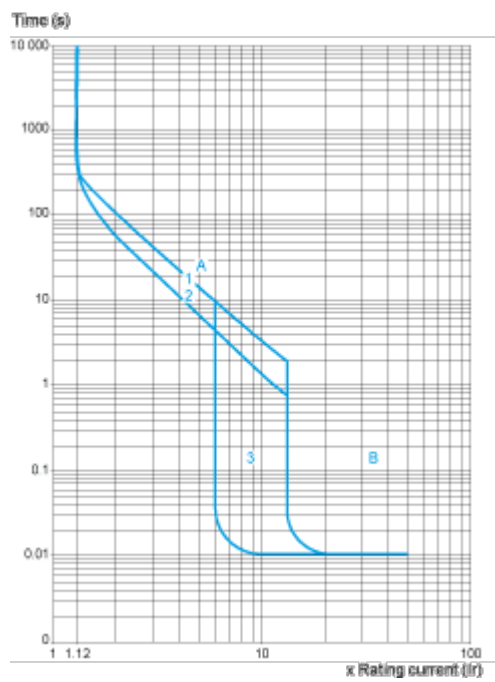
- 1 3 poles from cold state
- 2 2 poles from cold state
- 3 3 poles from hot state
- 4 6...14 Ir
- A Thermal overload relay protection zone
- B GV4L protection zone

GV4L25 and GV4LE25 with LRD 318, LRD325 GV4L50 AND GV4LE50 with LRD 332, LRD 340, LRD 350



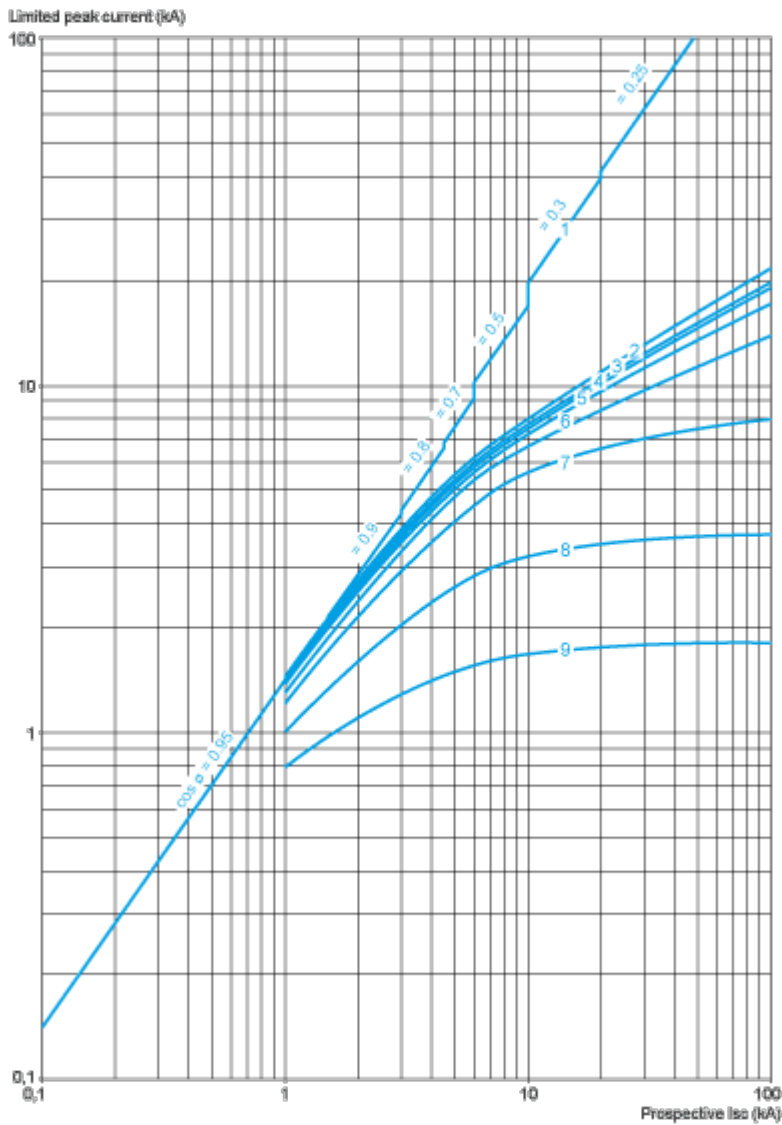
- 1 3 poles from cold state
- 2 2 poles from cold state
- 3 3 poles from hot state
- 4 6...14 I_r
- A Thermal overload relay protection zone
- B GV4L protection zone

GV4L115 and GV4LE115 with Class 10 LR9F5367, LR9D5369 and Class 20 LR9D5567, LR9F5569



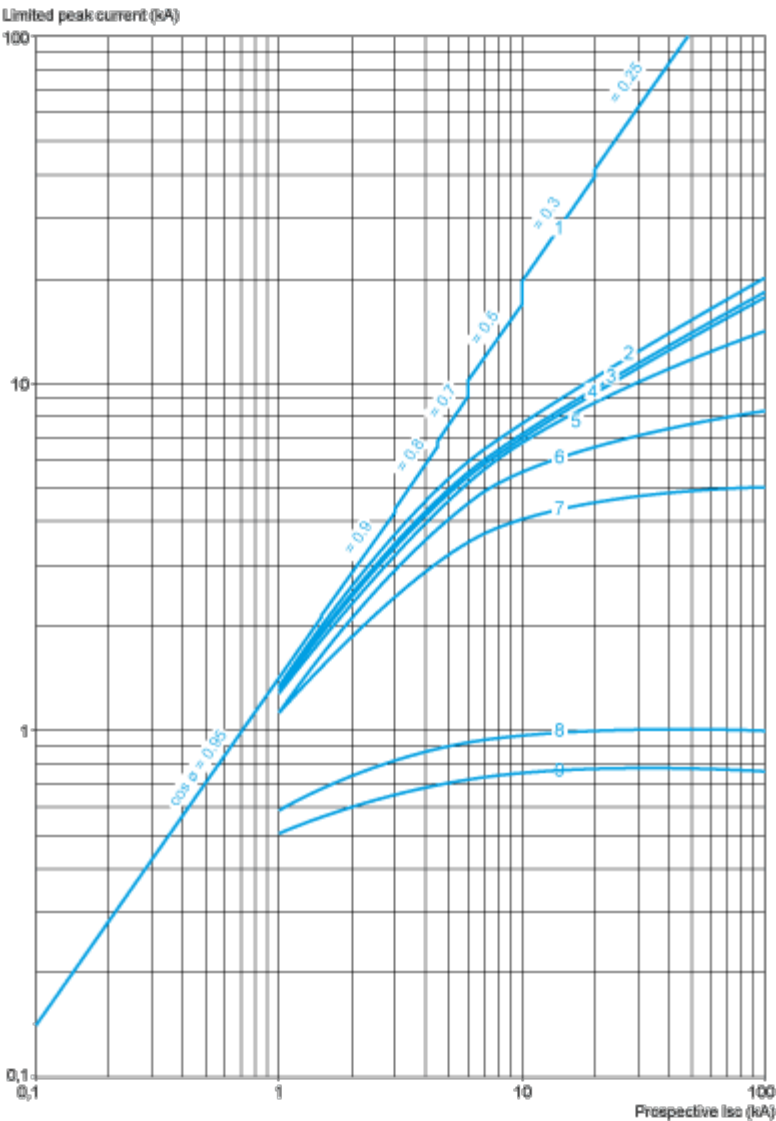
- 1 Cold state curve
- 2 Hot state curve
- 3 6...14 I_r

Current Limitation on Short-Circuit for GV4L, GV4LE (3-Phase 400/415 V)
Dynamic Stress
 $I_{peak} = f(\text{prospective } I_{sc})$ 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
 $I_{peak} = f(\text{prospective } I_{sc})$ at $1.05 U_e = 435 \text{ V}$

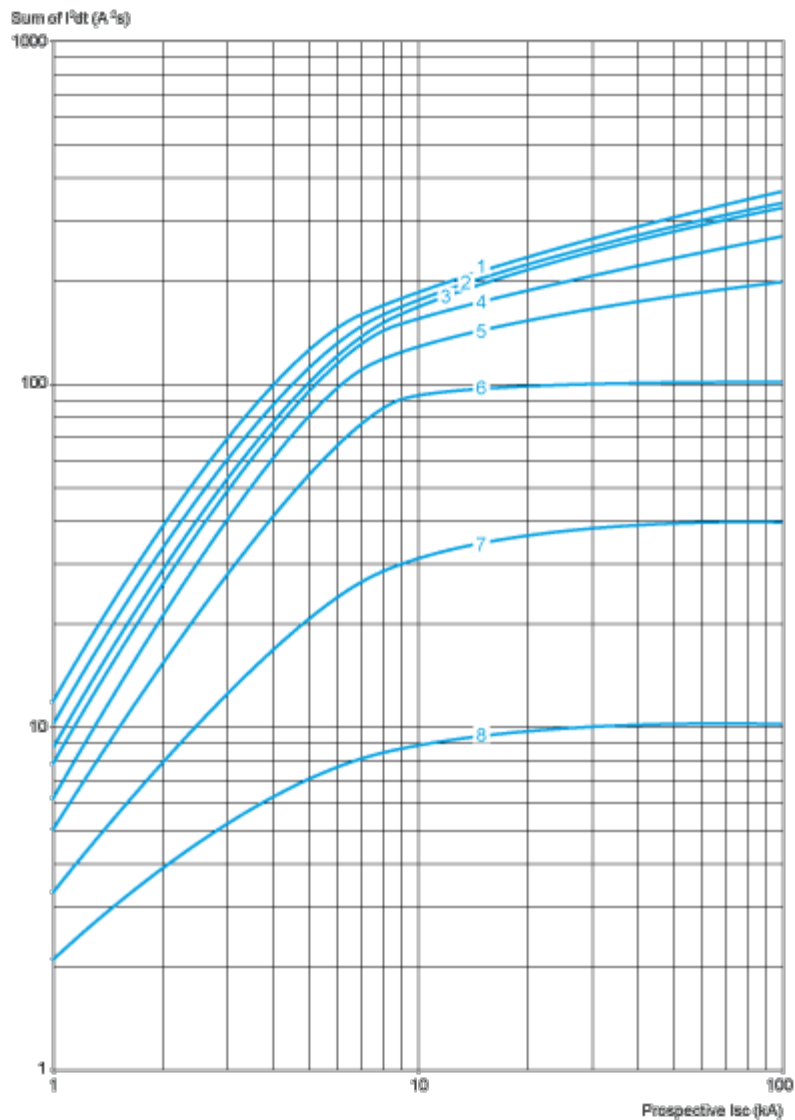


- 1 Maximum peak current
- 2 GV4L115 + LR9D5367 or LR9F5367
- 3 GV4L80 + LRD3361
- 4 GV4L50 + LRD340
- 5 GV4L25 + LRD325
- 6 GV4L12 + LRD313
- 7 GV4L07 + LRD12
- 8 GV4L03 + LRD07
- 9 GV4L02 + LRD07

Thermal Limit on Short-Circuit for GV4L, GV4LE

Thermal Limit in A²s

Sum of I²dt = f (prospective Isc) at 1.05 Ue = 435 V

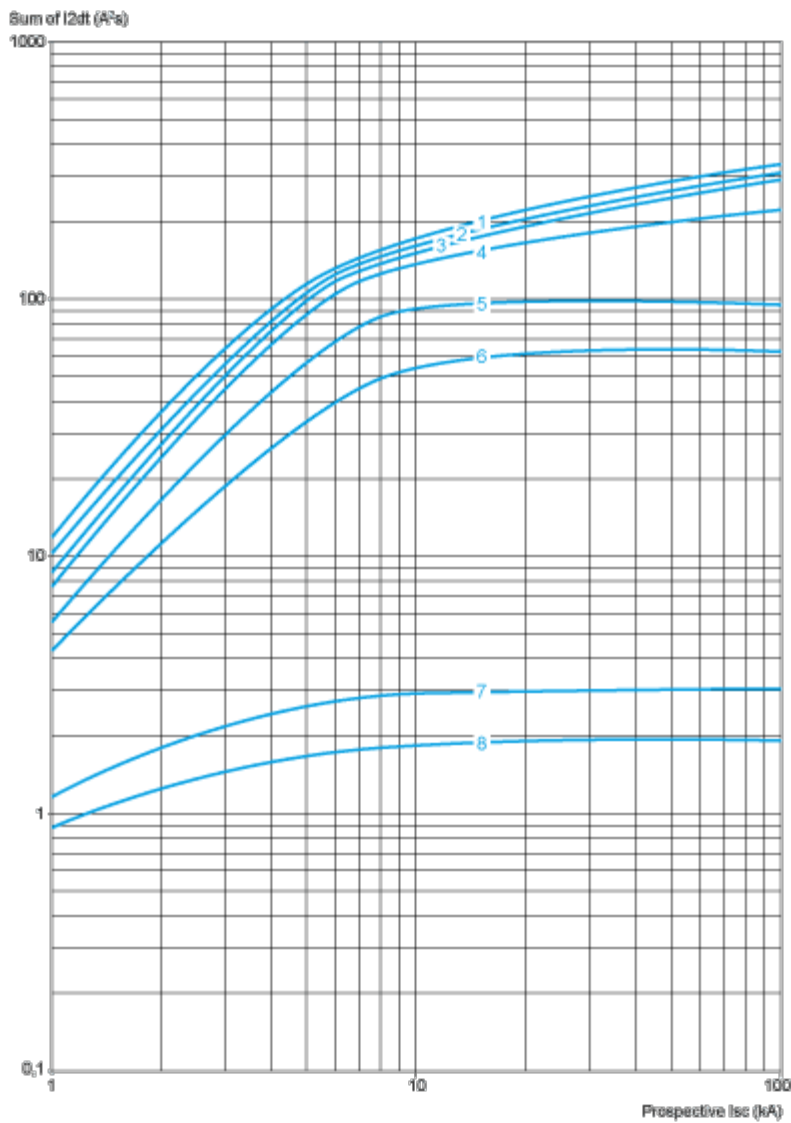


- 1 GV4L115
- 2 GV4L80
- 3 GV4L50
- 4 GV4L25
- 5 GV4L12
- 6 GV4L07
- 7 GV4L03
- 8 GV4L02

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

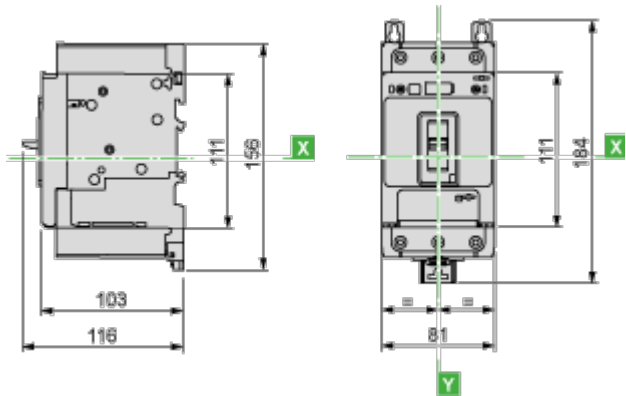


- 1 GV4L115 + LR9D5367 or LR9F5367
- 2 GV4L80 + LRD3361
- 3 GV4L50 + LRD340
- 4 GV4L25 + LRD325
- 5 GV4L12 + LRD313
- 6 GV4L07+ LRD12
- 7 GV4L03+ LRD07
- 8 GV4L02 + LRD07

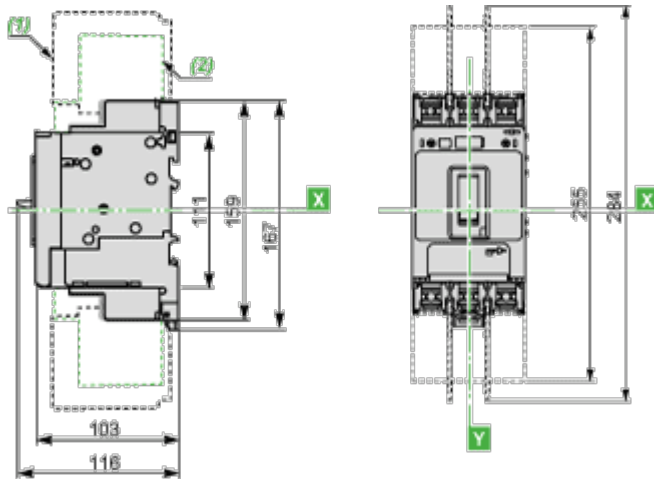
Dimensions Drawings

GV4 with Toggle: GV4LE, GV4PE, GV4PEM

With EverLink® Connector

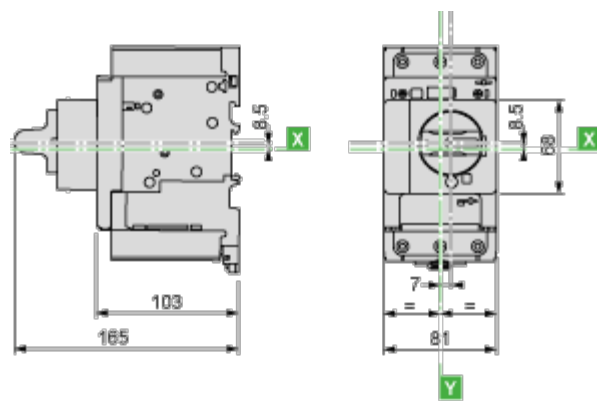


With Crimp Lug Connector

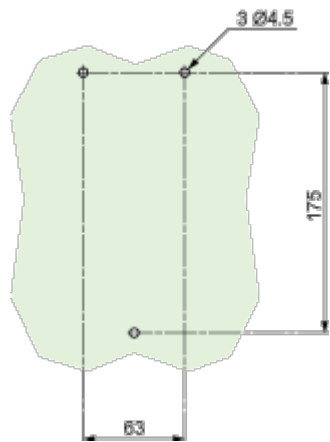


- (1) Interphase barriers
- (2) Long terminal shield

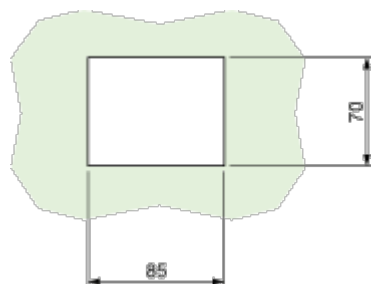
GV4 with Rotary Handle: GV4L, GV4P, or GV4LE, GV4PE, GV4PEM with GV4ADN01, GV4ADN02 Direct Mounting Rotary Handle
Dimensions



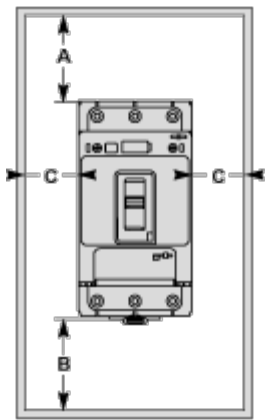
GV4L, GV4P, GV4LE, GV4PE, GV4PEM
Panel Mounting with M4 Screws



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 |

Connections and Schema

Magnetic Motor Circuit Breakers
GV4L, GV4LE

