

Product data sheet

Characteristics

GV4LE115N

Motor circuit breaker, TeSys GV4, 3P, 115 A, Icu 50 kA, magnetic, EverLink terminals



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 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 Icu 50 kA at 380...415 V AC 50/60 Hz conforming to IEC 60947-2 Icu 50 kA at 440 V AC 50/60 Hz conforming to IEC 60947-2 Icu 15 kA at 525 V AC 50/60 Hz conforming to IEC 60947-2 Icu 8 kA at 660...690 V AC 50/60 Hz conforming to IEC 60947-2 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 50 KA at 380...415 V AC 50/60 Hz conforming to IEC 60947-2 50 KA at 440 V AC 50/60 Hz conforming to IEC 60947-2 25 KA at 500 V AC 50/60 Hz conforming to IEC 60947-2 15 KA at 525 V AC 50/60 Hz conforming to IEC 60947-2 2 kA at 660...690 V AC 50/60 Hz conforming to IEC 60947-2 |
| Magnetic setting range | 690...1610 A |
| Control type | Toggle |

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 45 KW at 400...415 V AC 50/60 Hz 55 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 75 KW at 500 V AC 50/60 Hz 75 KW at 660...690 V AC 50/60 Hz 90 KW at 660...690 V AC 50/60 Hz 110 kW at 660...690 V AC 50/60 Hz |
| [Uimp] rated impulse withstand voltage | 8 kV IEC 60947-2 |
| [Ui] rated insulation voltage | 800 V conforming to IEC 60947-2 |
| Mounting mode | By screws By clips |

| | |
|---------------------------|--|
| Mounting support | 35 mm symmetrical DIN rail Plate 75 mm symmetrical DIN rail |
| 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 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 1 slot(s) for voltage release for electrical remote tripping, plug-in 1 slot(s) for auxiliary switch for open/close contact, plug-in |
| Connection pitch | 27 mm |
| Connections - terminals | Top 1 EverLink BTR screw connectors wire size 1.5...70 mm ² , solid Top 1 EverLink BTR screw connectors wire size 1.5...50 mm ² , flexible Bottom 1 EverLink BTR screw connectors wire size 2.5...95 mm ² , solid Bottom 1 EverLink BTR screw connectors wire size 2.5...70 mm ² , flexible |
| Tightening torque | 9 N.M for 16...95 mm ² 5 N.m for 1.5...10 mm ² |
| Wire stripping length | 20 mm |
| Quality labels | CE |
| Standards | EN/IEC 60947-4-1 EN/IEC 60947-2 |
| Height | 155 mm |
| Width | 81 mm |
| Depth | 116 mm |
| Net weight | 1.5 kg |
| Colour | Grey (RAL 7016) |




Environment

| | |
|---------------------------------------|--|
| Product certifications | IEC CCC EAC 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 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 |
| Ambient air temperature for operation | -25...70 °C |
| Ambient air temperature for storage | -50...85 °C |
| Operating altitude | 0...2000 m without derating 2000...5000 m with derating |

Packing Units

| | |
|------------------------------|---------|
| Unit Type of Package 1 | PCE |
| Number of Units in Package 1 | 1 |
| Package 1 Weight | 1.69 kg |
| Package 1 Height | 11 cm |
| Package 1 width | 16.5 cm |
| Package 1 Length | 21.2 cm |

Offer Sustainability

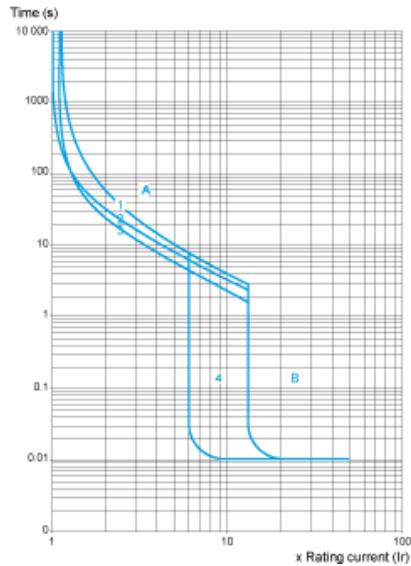
| | |
|----------------------------|---|
| Sustainable offer status | Green Premium product |
| EU RoHS Directive | Compliant  EU RoHS Declaration |
| Mercury free | Yes |
| RoHS exemption information |  Yes |
| China RoHS Regulation |  China RoHS Declaration |

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

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

$I_{peak} = f(\text{prospective } I_{sc})$ 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^2s

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



- 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 $1.05 U_e = 435 V$



- 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

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

