

Product datasheet

Specifications



Motor circuit breaker, TeSys GV4, 3P, 80A, Icu 25kA, thermal magnetic, Everlink terminals

GV4PE80B

Main

| | |
|---------------------------|--------------------------------|
| Range of product | TeSys GV4 |
| Range | TeSys Deca TeSys Deca |
| Device short name | GV4PE |
| Product name | TeSys GV4 TeSys Deca |
| Product or component type | Motor circuit breaker |
| Device application | Motor protection |
| Trip unit technology | Thermal-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 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 | 50 kA Icu at 220...240 V AC 50/60 Hz conforming to IEC 60947-2 25 kA Icu at 380...415 V AC 50/60 Hz conforming to IEC 60947-2 20 kA Icu at 440 V AC 50/60 Hz conforming to IEC 60947-2 10 kA Icu at 500 V AC 50/60 Hz conforming to IEC 60947-2 35 kA at 208Y/120 V AC 50/60 Hz conforming to UL 60947 35 kA at 240 V AC 50/60 Hz conforming to UL 60947 18 kA at 480Y/277 V AC 50/60 Hz conforming to UL 60947 14 kA at 600Y/347 V AC 50/60 Hz conforming to UL 60947 |
| Control type | Toggle |
| [In] rated current | 80 A |
| Magnetic tripping current | 1360 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 | 4.6 W |
| 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 |
| Connections - terminals | EverLink BTR screw connectors (top) 1 cable(s) 1.5...70 mm² - solid EverLink BTR screw connectors (top) 1 cable(s) 1.5...50 mm² - flexible EverLink BTR screw connectors (bottom) 1 cable(s) 2.5...95 mm² - solid EverLink BTR screw connectors (bottom) 1 cable(s) 2.5...70 mm² - flexible |
| Tightening torque | 9 N.m for cable 16...95 mm² 5 N.m for cable 1.5...10 mm² |
| 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 |
| Phase failure sensitivity | Yes conforming to IEC 60947-4-1 |
| Height | 155 mm |
| Width | 81 mm |
| Depth | 116 mm |
| Net weight | 1.45 kg |
| Colour | Grey (RAL 7016) |
| Suitability for isolation | Yes conforming to IEC 60947-1 |

Environment

| | |
|--|--|
| Standards | CSA C22.2 No 60947-4-1 UL 60947-4-1 EN/IEC 60947-4-1 EN/IEC 60947-2 |
| Product certifications | IEC UL CSA CCC EAC ATEX 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 | 17.0 cm |
| Package 1 Width | 11.0 cm |

| | |
|------------------------------|---------|
| Package 1 Length | 22.0 cm |
| Package 1 Weight | 1.67 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 | 9.0 kg |

Offer Sustainability

| | |
|-----------------------------|---|
| REACH Regulation | REACH Declaration |
| EU RoHS Directive | Compliant EU RoHS Declaration |
| Mercury free | Yes |
| China RoHS Regulation | China RoHS declaration Product out of China RoHS scope. Substance declaration for your information |
| RoHS exemption information | Yes |
| 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 |

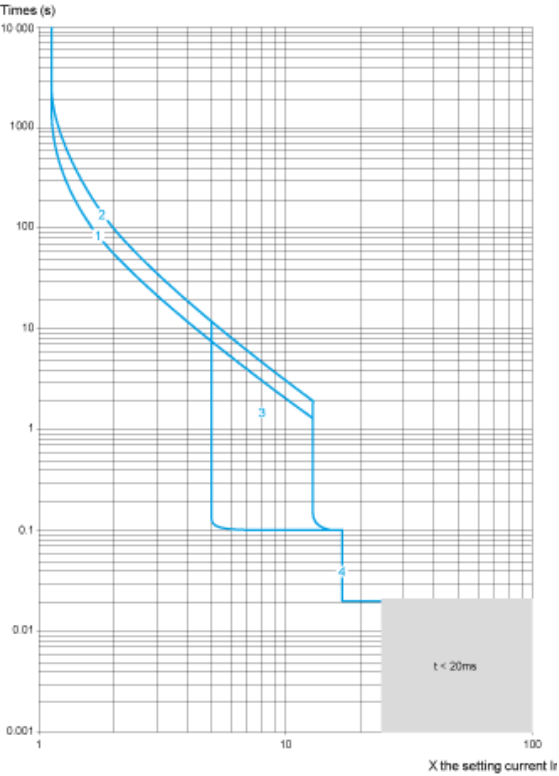
Contractual warranty

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

Thermal-Magnetic Tripping Curves for GV4P, GV4PE, GV4PEM

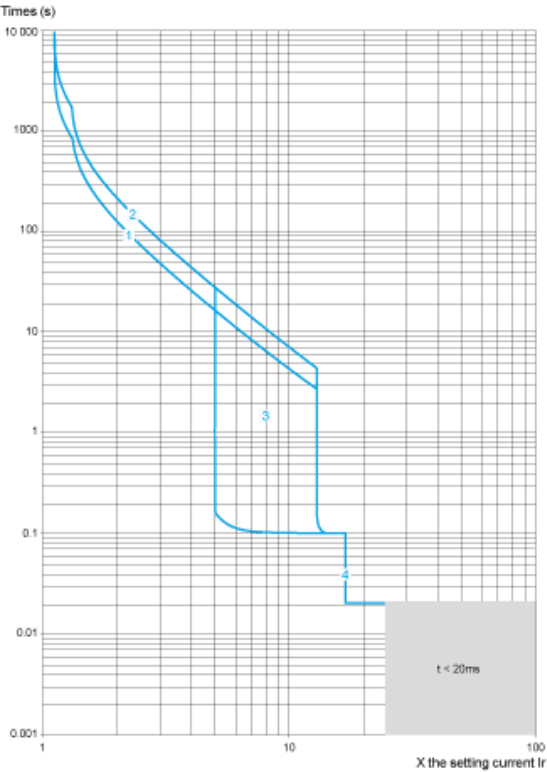
Average Operating Times at 20 °C Related to Multiples of the Setting Current

Hot state



- 1Class 10
- 2Class 20
- 3Isd = 5...13x Ir
- 4Ii = 17 In

Cold state

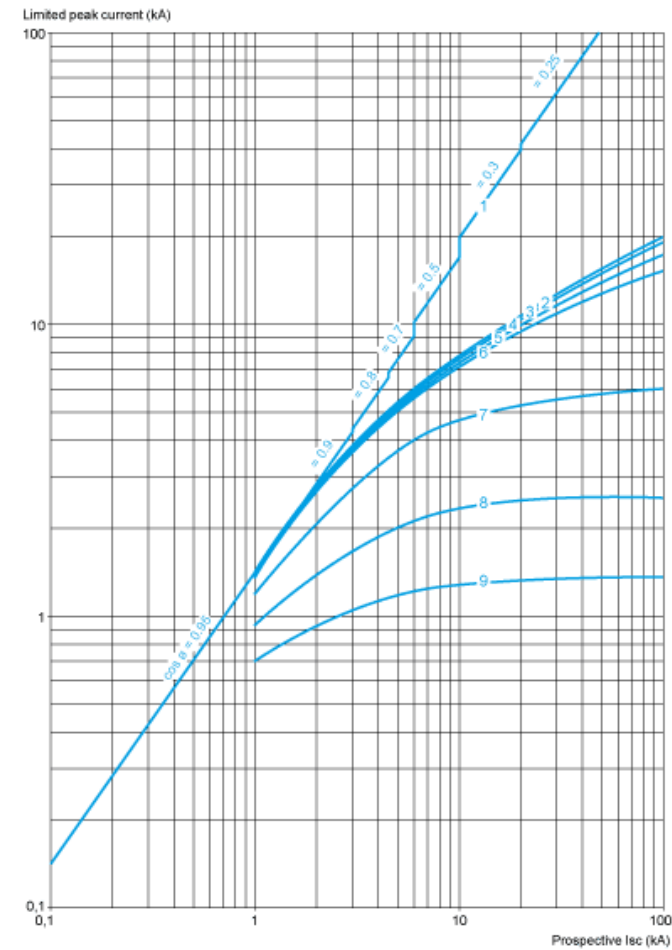


- 1Class 10
- 2Class 20
- 3Isd = 5...13x Ir
- 4Ii = 17 In

Current Limitation on Short-Circuit for GV4P, GV4PE, GV4PEM (3-Phase 400/415 V)

Dynamic Stress

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

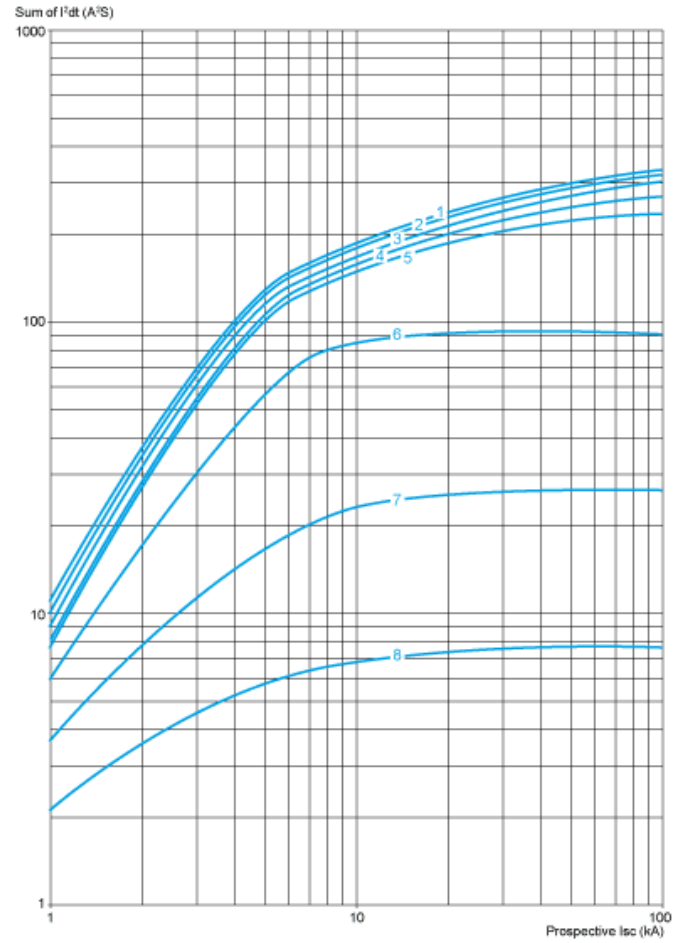


- 1 Maximum peak current
- 2 GV4P115
- 3 GV4P80
- 4 GV4P50
- 5 GV4P25
- 6 GV4P12
- 7 GV4P07
- 8 GV4P03
- 9 GV4P02

Thermal Limit on Short-Circuit for GV4P, GV4PE, GV4PEM

Thermal Limit in kA^2s in the Magnetic Operating Zone

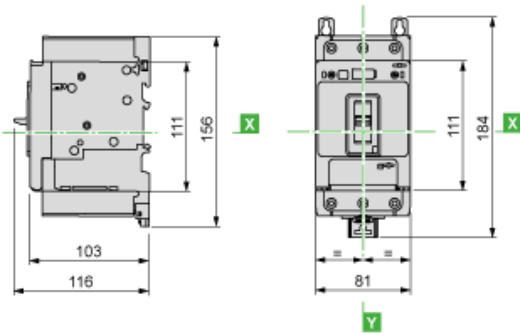
Sum of $I^2dt = f(\text{prospective Isc})$ at $1.05 U_e = 435 \text{ V}$



- 1 GV4P115
- 2 GV4P80
- 3 GV4P50
- 4 GV4P25
- 5 GV4P12
- 6 GV4P07
- 7 GV4P03
- 8 GV4P02

GV4 with Toggle: GV4LE, GV4PE, GV4PEM

With EverLink® Connector

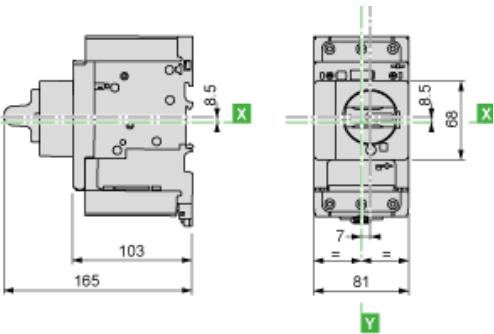


With Crimp Lug Connector



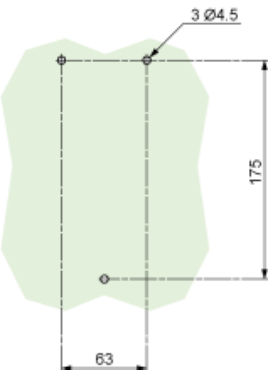
GV4 with Rotary Handle: GV4L, GV4P, or GV4LE, GV4PE, GV4PEM with GV4ADN01, GV4ADN02 Direct Mounting Rotary Handle

Dimensions

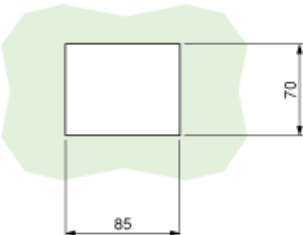


GV4L, GV4P, GV4LE, GV4PE, GV4PEM

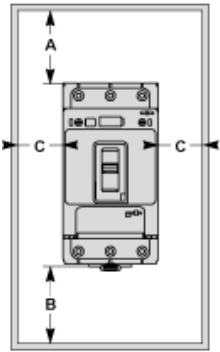
Panel Mounting with M4 Screws



Door Cut-Out for Rotary Handle



Minimum Safety Clearance

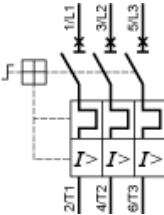


Toggle-type, rotary handle-type: identical clearance values.

| 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

GV4P, GV4PE, GV4PEM



Recommended replacement(s)