# Product data sheet

Specifications

## Motor circuit breaker, TeSys GV4, 3P, 12.5A, Icu 50kA, thermal magnetic multifunction, Everlink terminals

GV4PEM12N

## Main

| | |
|---|---|
| **Range of product** | TeSys GV4 |
| **Range** | TeSys Deca |
| **Device short name** | GV4PEM |
| **Product name** | TeSys GV4 |
| **Product or component type** | Motor circuit breaker |
| **Device application** | Motor protection |
| **Trip unit technology** | Electronic<br>Thermal-magnetic |

## 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** | 3 kW at 400...415 V AC 50/60 Hz<br>3 kW at 500 V AC 50/60 Hz<br>4 kW at 500 V AC 50/60 Hz<br>5.5 kW at 660...690 V AC 50/60 Hz<br>7.5 kW at 660...690 V AC 50/60 Hz<br>4 kW at 400...415 V AC 50/60 Hz<br>5.5 kW at 400...415 V AC 50/60 Hz<br>5.5 kW at 500 V AC 50/60 Hz<br>7.5 kW at 500 V AC 50/60 Hz<br>9 kW at 660...690 V AC 50/60 Hz<br>11 kW at 660...690 V AC 50/60 Hz |
| **Breaking capacity** | 100 kA Icu at 220...240 V AC 50/60 Hz conforming to IEC 60947-2<br>50 kA Icu at 380...415 V AC 50/60 Hz conforming to IEC 60947-2<br>50 kA Icu at 440 V AC 50/60 Hz conforming to IEC 60947-2<br>15 kA Icu at 525 V AC 50/60 Hz conforming to IEC 60947-2<br>65 kA at 208Y/120 V AC 50/60 Hz conforming to UL 60947<br>65 kA at 240 V AC 50/60 Hz conforming to UL 60947<br>35 kA at 480Y/277 V AC 50/60 Hz conforming to UL 60947<br>8 kA Icu at 660...690 V AC 50/60 Hz conforming to IEC 60947-2<br>25 kA Icu at 500 V AC 50/60 Hz conforming to IEC 60947-2<br>18 kA at 600Y/347 V AC 50/60 Hz conforming to UL 60947 |
| **Control type** | Toggle |
| **[In] rated current** | 12.5 A |
| **Magnetic tripping current** | 212 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 |

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

| | |
|---|---|
| **[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** | 40000 cycles for AC-3 at 440 V In/2<br>40000 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<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 |
| **Phase failure sensitivity** | Yes conforming to IEC 60947-4-1 |
| **Height** | 155 mm |
| **Width** | 81 mm |
| **Depth** | 116 mm |
| **Product 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<br>UL 60947-4-1<br>EN/IEC 60947-4-1<br>EN/IEC 60947-2 |
| **Product certifications** | IEC<br>UL<br>CSA<br>CCC<br>EAC<br>ATEX<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** | 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 cm |
| **Package 2 Width** | 30 cm |
| **Package 2 Length** | 40 cm |
| **Package 2 Weight** | 8.8 kg |

## Contractual warranty

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

## Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

Environmental Data explained >

How we assess product sustainability >

### Environmental footprint

| | |
|---|---|
| Total lifecycle Carbon footprint | **90** |
| Environmental Disclosure | **Product Environmental Profile** |

## Use Better

### Materials and Substances

| | |
|---|---|
| Packaging made with recycled cardboard | **Yes** |
| Packaging without single use plastic | **Yes** |
| EU RoHS Directive | **Compliant with Exemptions** |
| SCIP Number | **1b259a2c-3a3c-401a-acdd-f0837efd4018** |
| REACh Regulation | **REACh Declaration** |
| Halogen-free status | **Halogen free plastic parts product** |
| PVC free | **Yes** |

## Use Again

### Repack and remanufacture

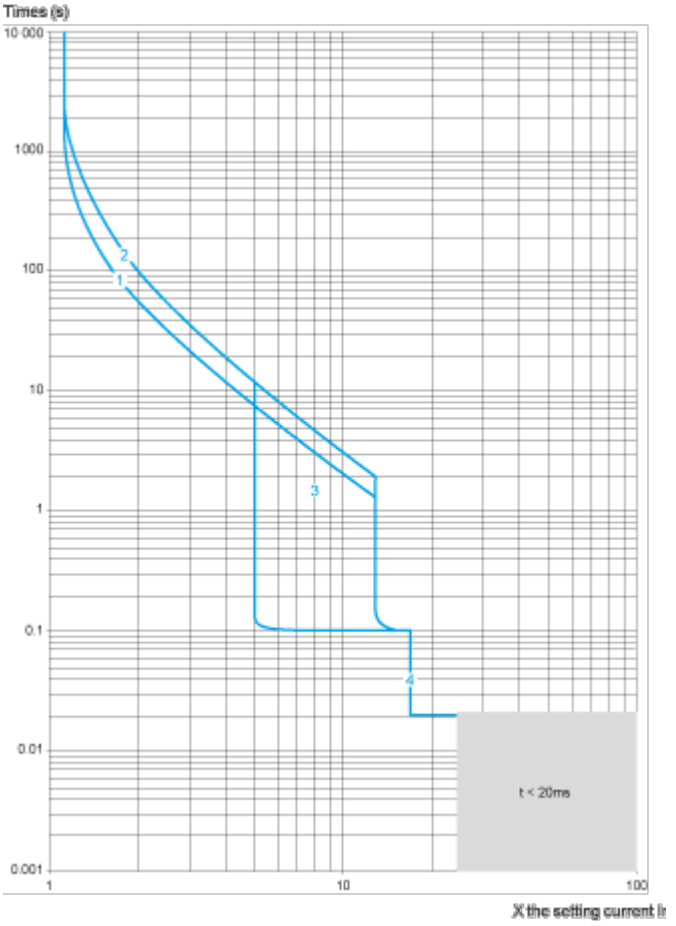
| | |
|---|---|
| End of life manual availability | **End of Life Information** |
| Take-back | **No** |
| WEEE Label | **The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins** |

## Performance Curves

### Thermal-Magnetic Tripping Curves for GV4P, GV4PE, GV4PEM

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

Hot state



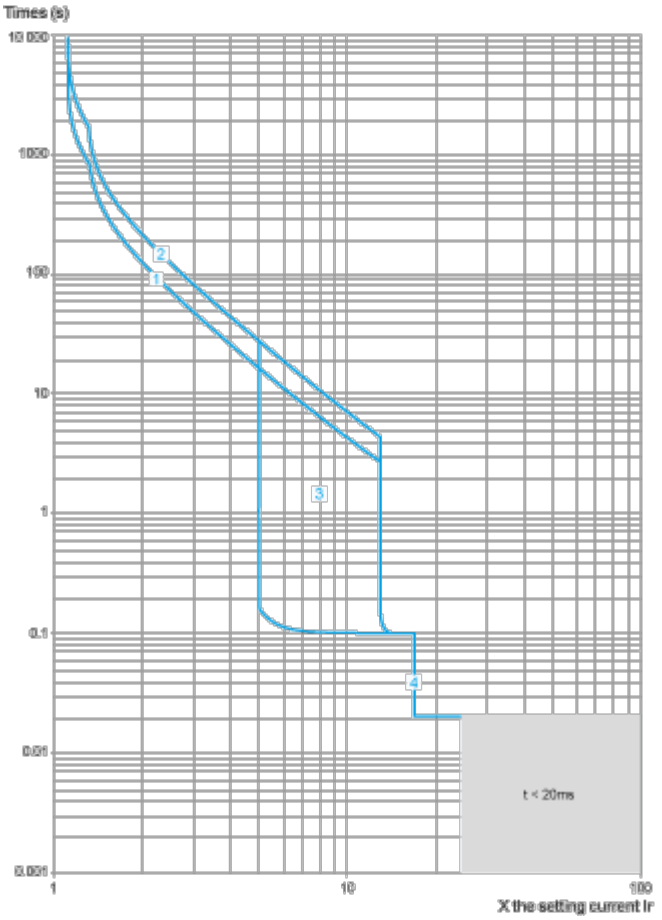

1 Class 10

2 Class 20

3 Isd = 5...13x Ir

4 Ii = 17 In

Cold state




1 Class 10

2 Class 20

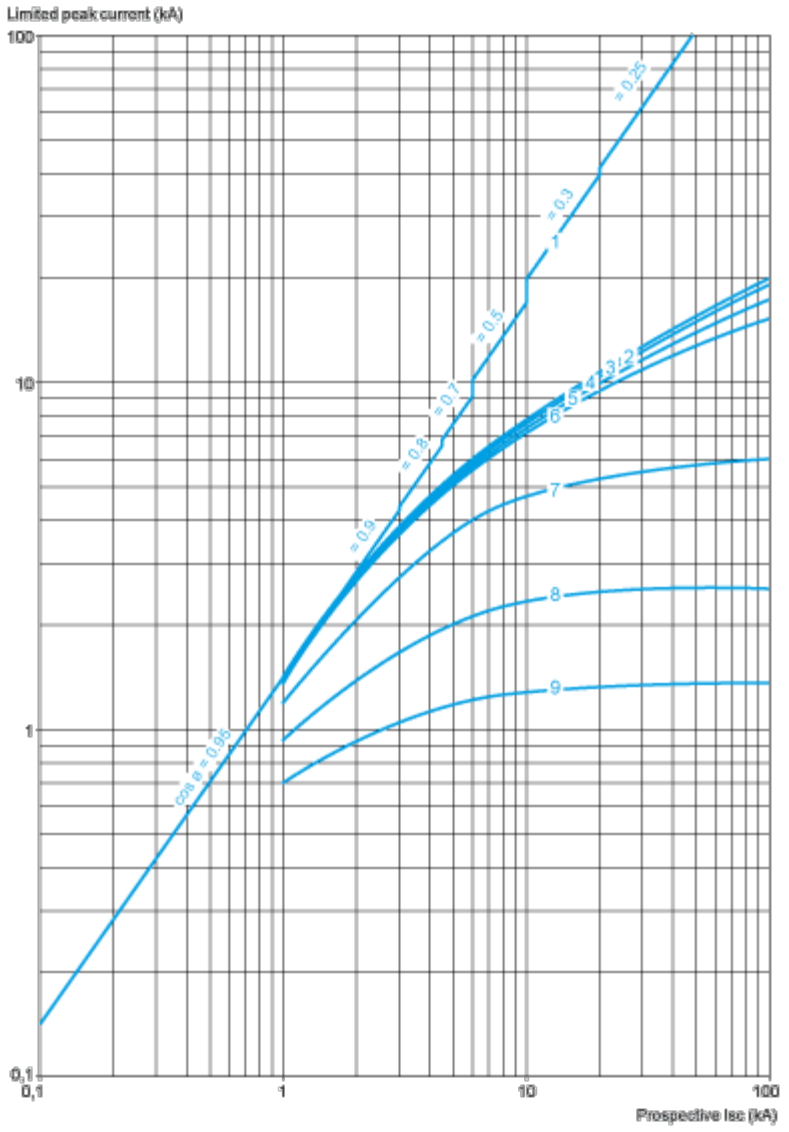
3 Isd = 5...13x Ir

4 Ii = 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

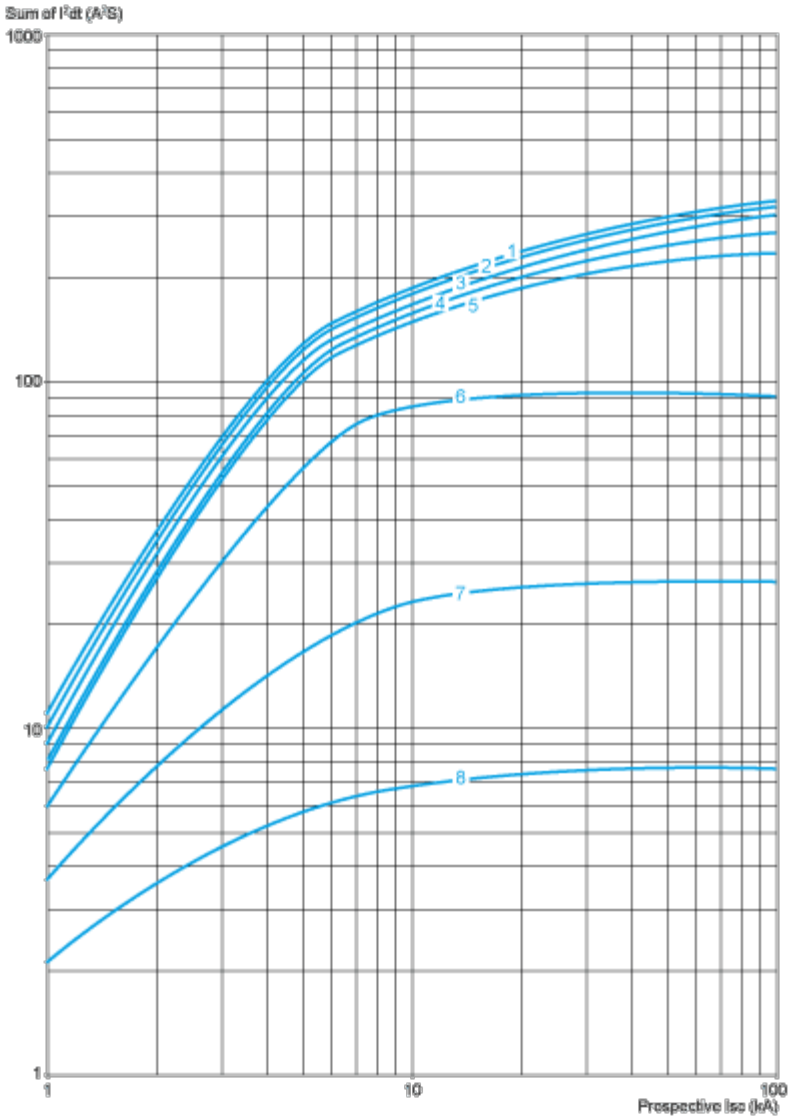
8 GV4P03

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 (prospective Isc) at 1.05 Ue = 435 V

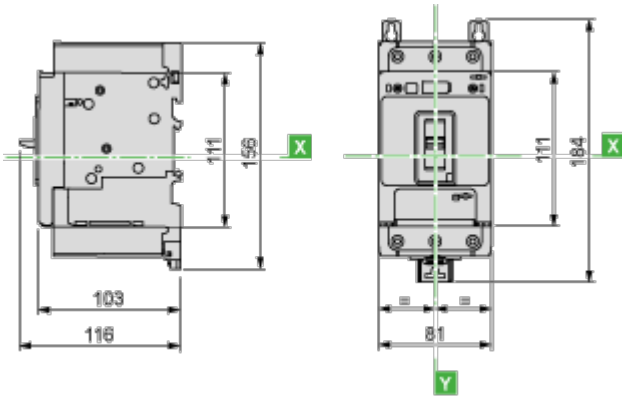



1 GV4P115
2 GV4P80
3 GV4P50
4 GV4P25
5 GV4P12
6 GV4P07
7 GV4P03
8 GV4P02

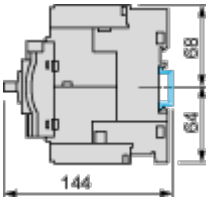
Dimensions Drawings

### GV4 with Toggle: GV4LE, GV4PE, GV4PEM

**With EverLink® Connector**

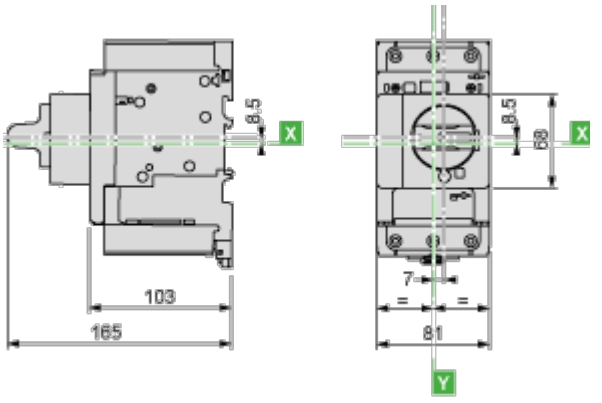



**With Crimp Lug Connector**



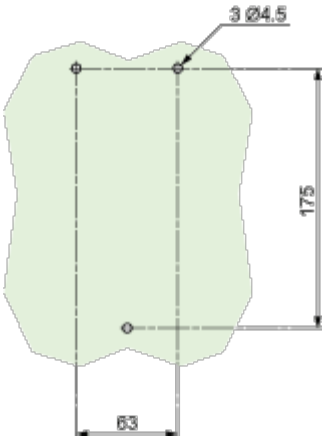

### GV4 with Rotary Handle: GV4L, GV4P, or GV4LE, GV4PE, GV4PEM with GV4ADN01, GV4ADN02 Direct Mounting Rotary Handle

**Dimensions**

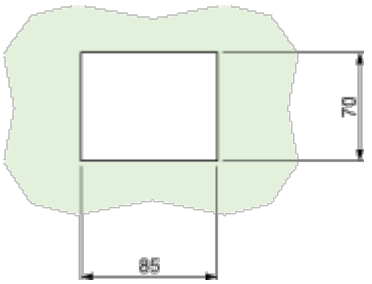



### GV4L, GV4P, GV4LE, GV4PE, GV4PEM

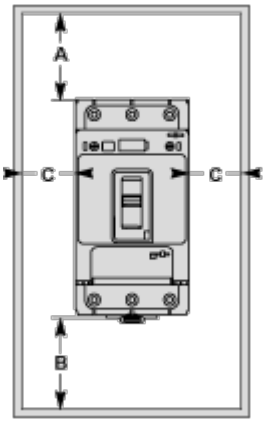
**Panel Mounting with M4 Screws**




**Door Cut-Out for Rotary Handle**




**Minimum Safety Clearance**

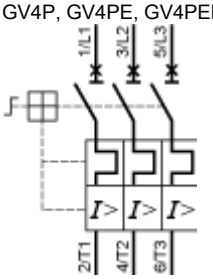



Toggle-type, rotary handle-type: identical clearance values.

| 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 |

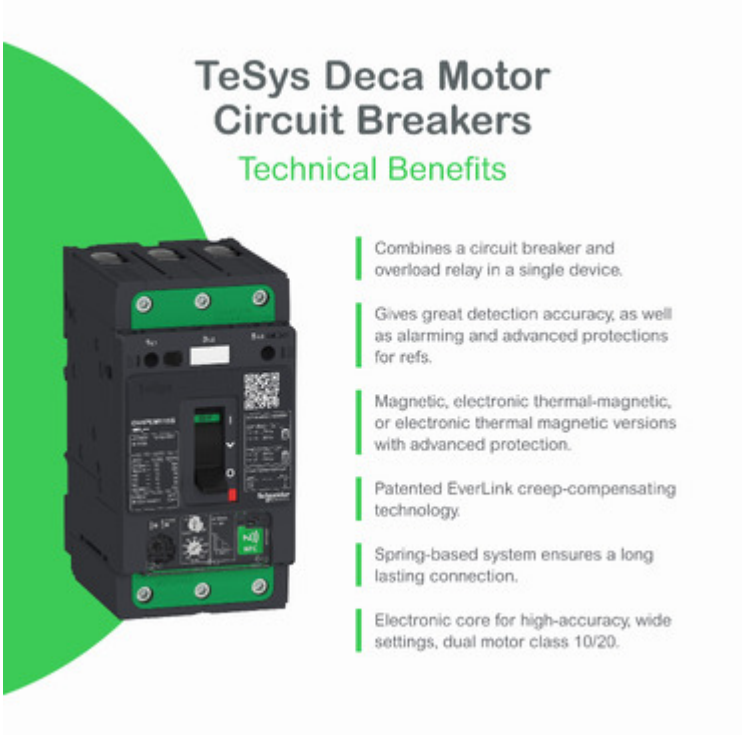
## Connections and Schema

**Magnetic Motor Circuit Breakers**
GV4P, GV4PE, GV4PEM



Offer Marketing Illustration

**Product benefits / Features**



Offer Marketing Illustration

**Product benefits / Features**

Offer Marketing Illustration

**Product benefits / Features**