

# Product datasheet

Specifications



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

GV4PEM80B

Price: 18,389.01 ZAR

## Main

|                           |                                |
|---------------------------|--------------------------------|
| Range Of Product          | TeSys GV4                      |
| Range                     | TeSys Deca<br>TeSys Deca       |
| Device Short Name         | GV4PEM                         |
| Product Name              | TeSys GV4<br>TeSys Deca        |
| 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                              | 37 kW at 400...415 V AC 50/60 Hz<br>45 kW at 500 V AC 50/60 Hz<br>22 kW at 400...415 V AC 50/60 Hz<br>30 kW at 500 V AC 50/60 Hz<br>37 kW at 660...690 V AC 50/60 Hz<br>45 kW at 660...690 V AC 50/60 Hz<br>55 kW at 660...690 V AC 50/60 Hz<br>30 kW at 400...415 V AC 50/60 Hz<br>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<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<br>35 kA at 208Y/120 V AC 50/60 Hz conforming to UL 60947<br>35 kA at 240 V AC 50/60 Hz conforming to UL 60947<br>18 kA at 480Y/277 V AC 50/60 Hz conforming to UL 60947<br>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                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

Excluding VAT and subject to change. Please check with your local distributor through "Where to buy"

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

|                            |                                                                                                                                                                                                                                                                                                      |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Power Dissipation Per Pole | 4.6 W                                                                                                                                                                                                                                                                                                |
| Mechanical Durability      | 40000 cycles                                                                                                                                                                                                                                                                                         |
| Electrical Durability      | 14000 cycles for AC-3 at 440 V In/2<br>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<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                                                                                                                                                                                                                                                                                               |
| 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<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             | 12.5 cm |
| Package 1 Width              | 9 cm    |

|                              |          |
|------------------------------|----------|
| Package 1 Length             | 22 cm    |
| Package 1 Weight             | 1.45 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             | 9.5 kg   |
| Unit Type Of Package 3       | PAL      |
| Number Of Units In Package 3 | 216      |
| Package 3 Height             | 110 cm   |
| Package 3 Width              | 80 cm    |
| Package 3 Length             | 120 cm   |
| Package 3 Weight             | 313.2 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-CO<sub>2</sub> 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         | <a href="#">REACH Declaration</a>                                                                                           |
| Eu Rohs Directive        | Compliant with Exemptions                                                                                                   |
| China Rohs Regulation    | <a href="#">China RoHS declaration</a><br>Product out of China RoHS scope. Substance declaration for your information       |
| Environmental Disclosure | <a href="#">Product Environmental Profile</a>                                                                               |
| Weee                     | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |
| Circularity Profile      | <a href="#">End of Life Information</a>                                                                                     |

Performance Curves

Thermal-Magnetic Tripping Curves for GV4P, GV4PE, GV4PEM  
Average Operating Times at 20 °C Related to Multiples of the Setting Current



- 1 Class 10
- 2 Class 20
- 3  $I_{sd} = 5 \dots 13 \times I_r$
- 4  $I_i = 17 I_r$

Cold state



- 1 Class 10
- 2 Class 20
- 3  $I_{sd} = 5 \dots 13 \times I_r$
- 4  $I_i = 17 I_n$

**Current Limitation on Short-Circuit for GV4P, GV4PE, GV4PEM (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 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  $\text{kA}^2\text{s}$  in the Magnetic Operating Zone

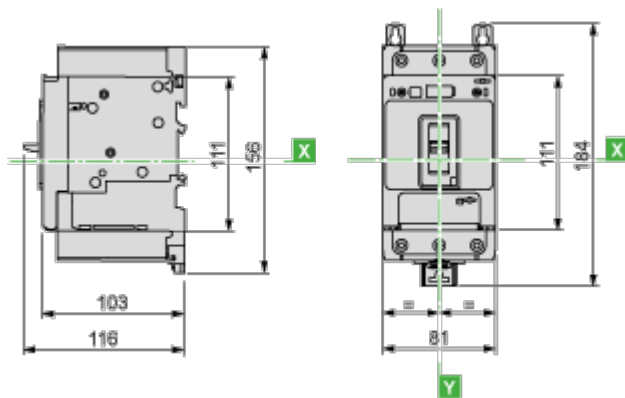
Sum of  $I^2 dt = f(\text{prospective Isc})$  at  $1.05 U_e = 435 \text{ V}$



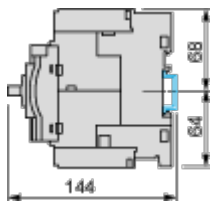
- 1 GV4P115
- 2 GV4P80
- 3 GV4P50
- 4 GV4P25
- 5 GV4P12
- 6 GV4P07
- 7 GV4P03
- 8 GV4P02

Dimensions Drawings

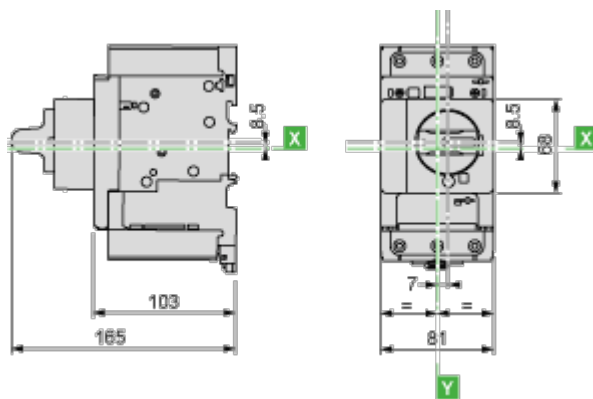
GV4 with Toggle: GV4LE, GV4PE, GV4PEM  
With EverLink® Connector



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.

|                      | 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

