

# Product data sheet

Specifications



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

GV4PE12N6

## Main

|                           |                                |
|---------------------------|--------------------------------|
| Range                     | TeSys Deca                     |
| Range of product          | TeSys GV4                      |
| Device short name         | GV4PE                          |
| 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| [Uimp] rated impulse withstand voltage      | 8 kV conforming to IEC 60947-2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

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      | 5000 cycles for AC-3 at 415 V opening<br>5000 cycles for AC-3 at 415 V closing                                                                                                   |
| maximum operating rate     | 25 cyc/h                                                                                                                                                                         |
| Rated duty                 | Continuous conforming to IEC 60947-4-1                                                                                                                                           |
| Connection pitch           | 27 mm without spreaders<br>35 mm with spreaders                                                                                                                                  |
| Connections - terminals    | Lugs-ring terminals                                                                                                                                                              |
| 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 cm |
| Package 1 Width              | 11 cm |

|                              |          |
|------------------------------|----------|
| Package 1 Length             | 22 cm    |
| Package 1 Weight             | 1.418 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 | 256      |
| Package 3 Height             | 110 cm   |
| Package 3 Width              | 80 cm    |
| Package 3 Length             | 120 cm   |
| Package 3 Weight             | 396 kg   |

### Contractual warranty

|                      |    |
|----------------------|----|
| Warranty (in months) | 18 |
|----------------------|----|



## 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                       | 87 kg CO2 eq.                                 |
| Carbon footprint of the manufacturing phase [A1 to A3] | 9 kg CO2 eq.                                  |
| Carbon footprint of the distribution phase [A4]        | 0.4 kg CO2 eq.                                |
| Carbon footprint of the installation phase [A5]        | 0.3 kg CO2 eq.                                |
| Carbon footprint of the use phase [B2, B3, B4, B6]     | 74 kg CO2 eq.                                 |
| Carbon footprint of the end-of-life phase [C1 to C4]   | 3 kg CO2 eq.                                  |
| Environmental Disclosure                               | <a href="#">Product Environmental Profile</a> |

## Use Better



### Materials and Substances

|                                        |                                                                                        |
|----------------------------------------|----------------------------------------------------------------------------------------|
| Packaging made with recycled cardboard | Yes                                                                                    |
| Packaging without single use plastic   | Yes                                                                                    |
| SCIP Number                            | 1b259a2c-3a3c-401a-acdd-f0837efd4018                                                   |
| EU RoHS Directive                      | <a href="#">Compliant By Exemption</a>                                                 |
| REACH Regulation                       | <a href="#">Reference contains Substances of Very High Concern above the threshold</a> |
| Halogen-free status                    | Halogen free plastic parts product                                                     |
| PVC free                               | Yes                                                                                    |

## Use Longer



### Lifetime extension

|        |    |
|--------|----|
| Repair | No |
|--------|----|

## Use Again

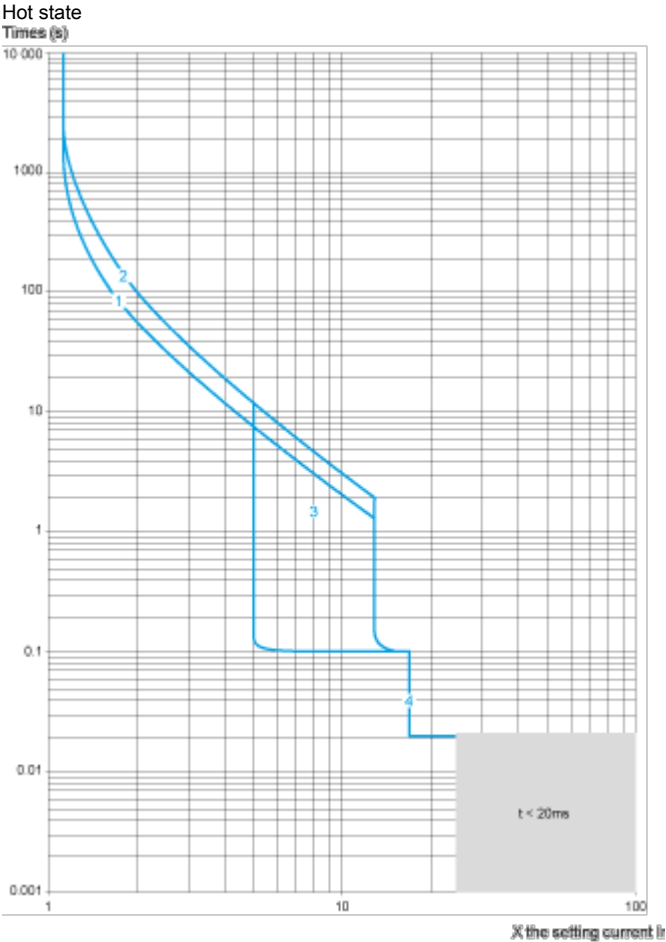


### Repack and remanufacture

|                                 |                                                                                                                                                                                                                 |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Recyclability potential, in %   | 49                                                                                                                                                                                                              |
| End of life manual availability | <a href="#">End of Life Information</a>                                                                                                                                                                         |
| 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 |

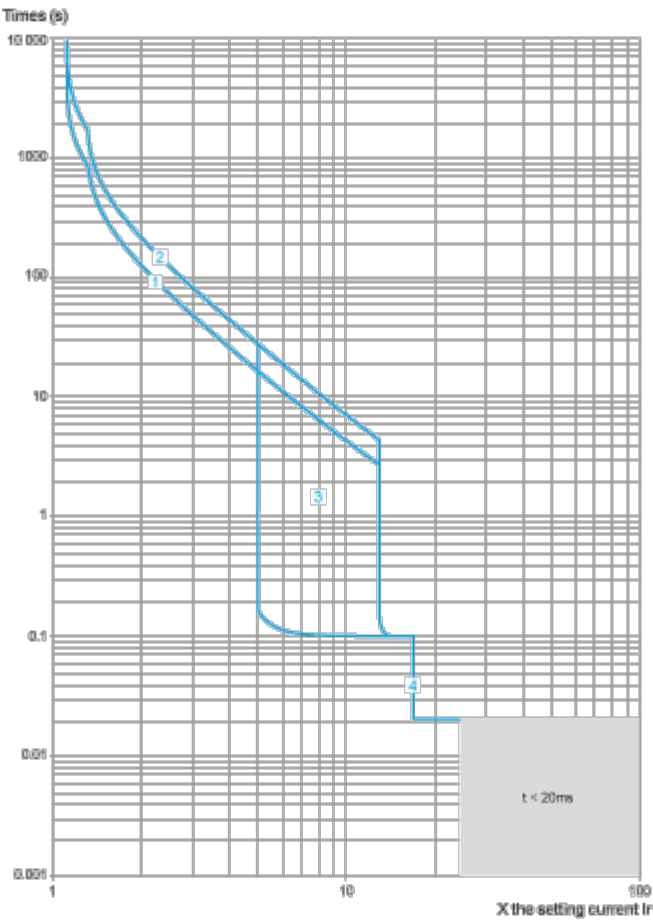
Performance Curves

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



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

Cold state

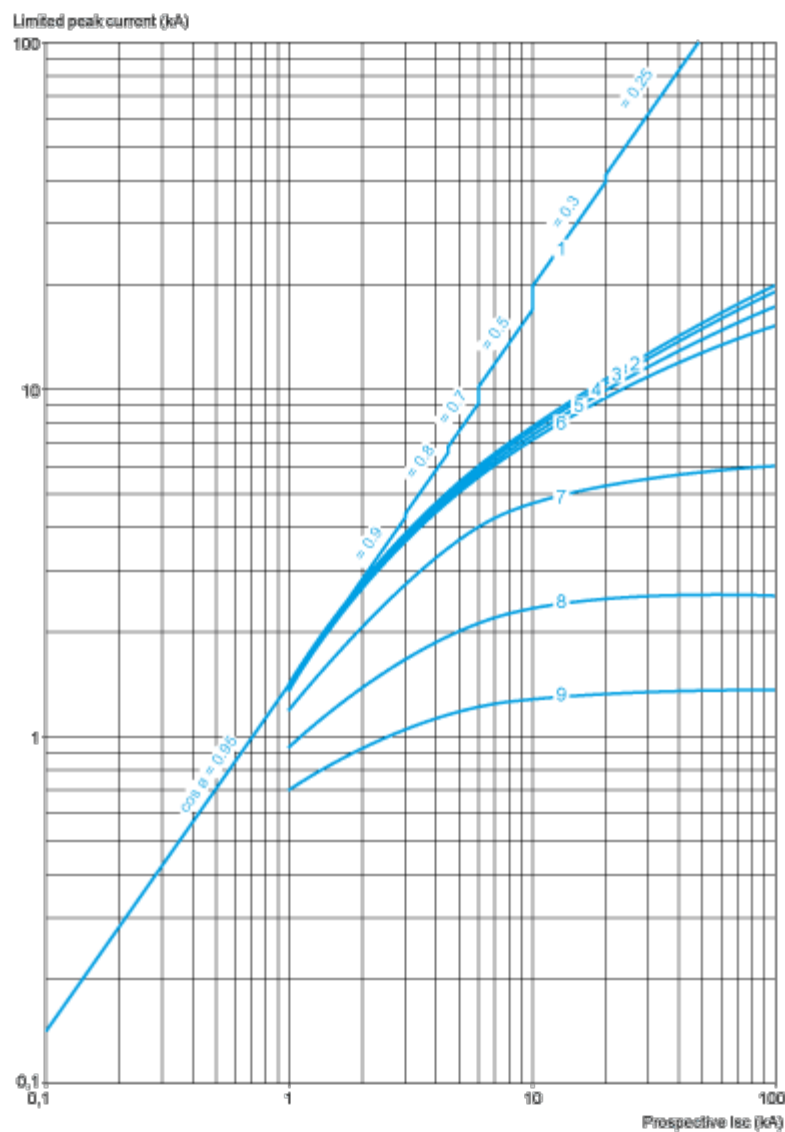


- 1 Class 10
- 2 Class 20
- 3  $I_{sd} = 5...13 \times I_r$
- 4  $I_i = 17 I_n$

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

Dynamic Stress

$I_{peak} = f$  (prospective  $I_{sc}$ ) at  $1.05 U_e = 435$  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<sup>2</sup>s in the Magnetic Operating Zone

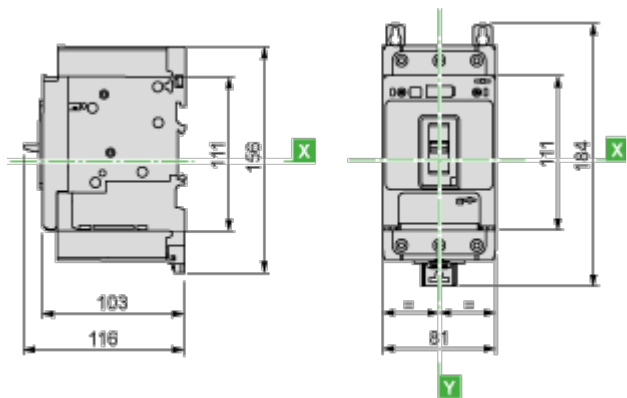
Sum of I<sup>2</sup>dt = f (prospective Isc) at 1.05 Ue = 435 V



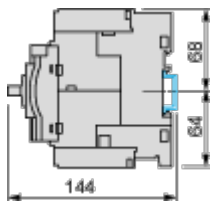
- 1 GV4P115
- 2 GV4P80
- 3 GV4P50
- 4 GV4P25
- 5 GV4P12
- 6 GV4P07
- 7 GV4P03
- 8 GV4P02

Dimensions Drawings

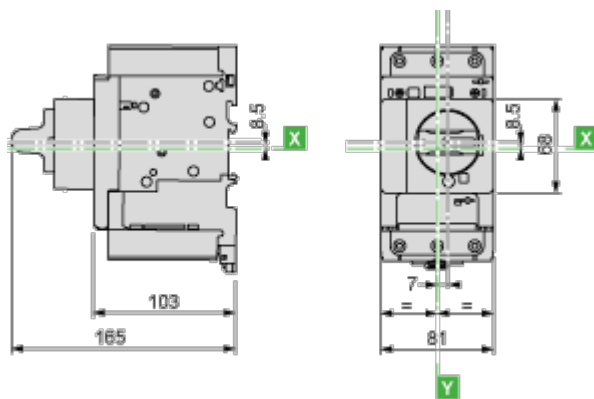
GV4 with Toggle: GV4LE, GV4PE, GV4PEM  
With EverLink® Connector



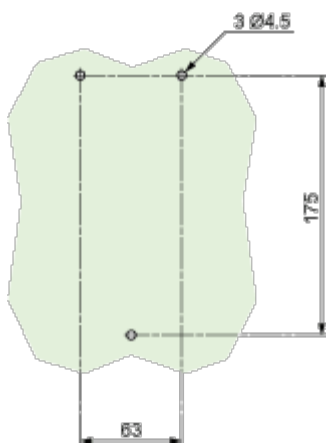
With Crimp Lug Connector



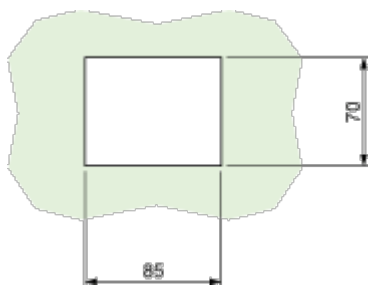
GV4 with Rotary Handle: GV4L, GV4P, or GV4LE, GV4PE, GV4PEM with GV4ADN01, GV4ADN02 Direct Mounting Rotary Handle  
Dimensions



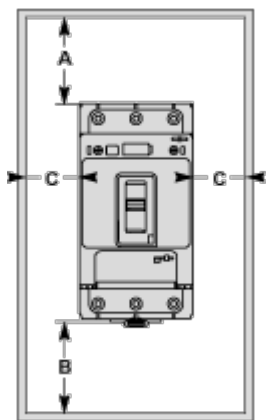
GV4L, GV4P, GV4LE, GV4PE, GV4PEM  
Panel Mounting with M4 Screws



Door Cut-Out for Rotary Handle



Minimum Safety Clearance

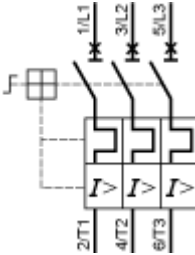


Toggle-type, rotary handle-type: identical clearance values.

| 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



### TeSys Deca Motor Circuit Breakers

Range Accessories



Auxiliary contact



Energy sensor



Voltage release



Long terminal shield



EverLink terminal block



Spreaders



Sealing accessories



Torque limiting breakaway bits

Offer Marketing Illustration

Product benefits / Features

TeSys Deca  
Motor Circuit Breakers



Increase safety

Featuring EverLink technology, double rotary contact system, and Reflex tripping mechanism to ensure your operations run smoothly and securely.



Improve efficiency

With a compact design, hassle-free installation with one-click spring terminal accessories, while easy monitoring with visible auxiliaries.



Save time

Simple to specify, install and use for all applications and easy access to facilitate maintenance on site.



Offer Marketing Illustration

Product benefits / Features

A black and green TeSys Deca Motor Circuit Breaker (GV4PE12N6) is shown against a green circular background. The device has a black body with green terminal blocks at the top and bottom. It features a central handle with a green indicator and a digital display on the right side. The front panel has various labels and a QR code.

### TeSys Deca Motor Circuit Breakers

#### Technical Benefits

- Combines a circuit breaker and overload relay in a single device.
- Gives great detection accuracy, as well as alarming and advanced protections for refs.
- Magnetic, electronic thermal-magnetic, or electronic thermal magnetic versions with advanced protection.
- Patented EverLink creep-compensating technology.
- Spring-based system ensures a long lasting connection.
- Electronic core for high-accuracy, wide settings, dual motor class 10/20.