

# GV4PEM115S6

Motor circuit breaker, TeSys GV4, 3P, 115A,  
Icu 100kA, thermal magnetic multifunction, lugs  
terminals





## Main

|  |   |
|--|---|
| Range  | TeSys   |
| Product name   | TeSys GV4   |
| Product or component type                              | Multifunction circuit breaker   |
| Device short name                                      | GV4PEM  |
| Device application                                     | Motor protection  |
| Protection type  | Long start<br>Short-circuit<br>Overload<br>Phase loss<br>Jam<br>Short time short-circuit protection<br>Ground fault protection<br>Phase unbalance<br>Locked rotor   |
| Utilisation category                                   | Category A  |
| Suitability for isolation                              | Yes conforming to IEC 60947-1   |
| Poles description                                      | 3P  |
| [Ue] rated operational voltage                         | 690 V AC 50/60 Hz conforming to IEC 60947-2   |
| [In] rated current                                     | 115 A   |
| Trip unit technology                                   | Thermal-magnetic<br>Electronic  |
| Magnetic tripping current                              | 1955 A  |
| [I <sub>sd</sub> ] short-time pick-up adjustment range | 5...13 x I <sub>r</sub>   |
| Thermal protection adjustment range                    | 65...115 A  |
| Motor tripping class                                   | 10<br>20  |
| Phase failure sensitivity                              | Yes conforming to IEC 60947-4-1   |
| Breaking capacity                                      | I <sub>cu</sub> 120 kA at 220...240 V AC 50/60 Hz conforming to IEC 60947-2<br>I <sub>cu</sub> 100 kA at 380...415 V AC 50/60 Hz conforming to IEC 60947-2<br>I <sub>cu</sub> 70 kA at 440 V AC 50/60 Hz conforming to IEC 60947-2<br>I <sub>cu</sub> 30 kA at 500 V AC 50/60 Hz conforming to IEC 60947-2<br>I <sub>cu</sub> 18 kA at 525 V AC 50/60 Hz conforming to IEC 60947-2<br>100 KA at 208Y/120 V AC 50/60 Hz conforming to UL 60947<br>100 KA at 240 V AC 50/60 Hz conforming to UL 60947<br>65 KA at 480Y/277 V AC 50/60 Hz conforming to UL 60947<br>I <sub>cu</sub> 10 kA at 660...690 V AC 50/60 Hz conforming to IEC 60947-2<br>25 kA at 600Y/347 V AC 50/60 Hz conforming to UL 60947 |
| [I <sub>cs</sub> ] rated service breaking capacity     | 120 KA at 220...240 V AC 50/60 Hz conforming to IEC 60947-2<br>100 KA at 380...415 V AC 50/60 Hz conforming to IEC 60947-2<br>70 KA at 440 V AC 50/60 Hz conforming to IEC 60947-2<br>30 KA at 500 V AC 50/60 Hz conforming to IEC 60947-2<br>18 KA at 525 V AC 50/60 Hz conforming to IEC 60947-2<br>2.5 kA at 660...690 V AC 50/60 Hz conforming to IEC 60947-2   |
| [U <sub>imp</sub> ] rated impulse withstand voltage    | IEC 60947-2 8 kV  |

|                               |   |
|-------------------------------|---|
| [Ui] rated insulation voltage | 800 V conforming to IEC 60947-2   |
| Mechanical durability         | 40000 cycles  |
| Electrical durability         | 10000 Cycles for AC-3 at 440 V In/2<br>5000 cycles for AC-3 at 440 V In |

## Complementary

|                             |   |
|-----------------------------|---|
| Motor power kW              | 37 kW at 400...415 V AC 50/60 Hz<br>45 kW at 400...415 V AC 50/60 Hz<br>55 kW at 400...415 V AC 50/60 Hz<br>45 kW at 500 V AC 50/60 Hz<br>55 kW at 500 V AC 50/60 Hz<br>75 kW at 500 V AC 50/60 Hz<br>75 kW at 660...690 V AC 50/60 Hz<br>90 kW at 660...690 V AC 50/60 Hz<br>110 kW at 660...690 V AC 50/60 Hz |
| Control type                | Toggle  |
| Handle padlocking           | With a lock accessory   |
| Number of slots             | 1 slot(s) for alarm switch for fault signalling contact, plug-in<br>1 slot(s) for voltage release for electrical remote tripping, plug-in<br>1 slot(s) for auxiliary switch for open/close contact, plug-in   |
| Local signalling            | Flashing LED (green) for ready<br>LED (red) for alarm (T° >95%)<br>Green indicator for presence of auxiliary contacts   |
| Communication port protocol | NFC   |
| Standards                   | CSA C22.2 No 60947-4-1<br>UL 60947-4-1<br>EN/IEC 60947-2<br>EN/IEC 60947-4-1  |
| Product certifications      | IEC<br>UL<br>CSA<br>CCC<br>EAC<br>ATEX<br>EU-RO MR  |
| Quality labels              | CE  |
| Mounting mode               | By clips<br>By screws   |
| Mounting support            | 75 mm symmetrical DIN rail<br>Plate<br>35 mm symmetrical DIN rail   |
| Connections - terminals     | Lugs-ring terminals   |
| Connection pitch            | 27 mm   |
| Tightening torque           | 9 N.M for 16...95 mm <sup>2</sup><br>5 N.m for 1.5...10 mm <sup>2</sup>   |
| Width                       | 81 mm   |
| Height                      | 155 mm  |
| Depth                       | 116 mm  |
| Net weight                  | 1.45 kg   |
| Colour                      | Grey (RAL 7016)   |

## Environment

|                                       |  |
|---------------------------------------|--|
| Ambient air temperature for storage   | -50...85 °C  |
| Ambient air temperature for operation | -25...70 °C  |
| Operating altitude                    | 0...2000 m without derating<br>2000...5000 m with derating   |
| 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  |
| Tropicalisation                       | 2 conforming to IEC 68-2   |
| 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 |

## Packing Units

|                  |           |
|------------------|-----------|
| Package 1 Weight | 1.430 kg  |
| Package 1 Height | 16.500 cm |
| Package 1 width  | 11.000 cm |
| Package 1 Length | 22.000 cm |

## Offer Sustainability

|                             |   |
|-----------------------------|---|
| Sustainable offer status    | Green Premium product   |
| REACH Regulation            | <a href="#">REACH Declaration</a>   |
| EU RoHS Directive           | Compliant <a href="#">EU RoHS Declaration</a>   |
| Mercury free                | Yes   |
| RoHS exemption information  | <a href="#">Yes</a>   |
| China RoHS Regulation       | <a href="#">China RoHS Declaration</a>  |
| Environmental Disclosure    | <a href="#">Product Environmental Profile</a>   |
| Circularity Profile         | <a href="#">End Of Life Information</a>   |
| 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  |

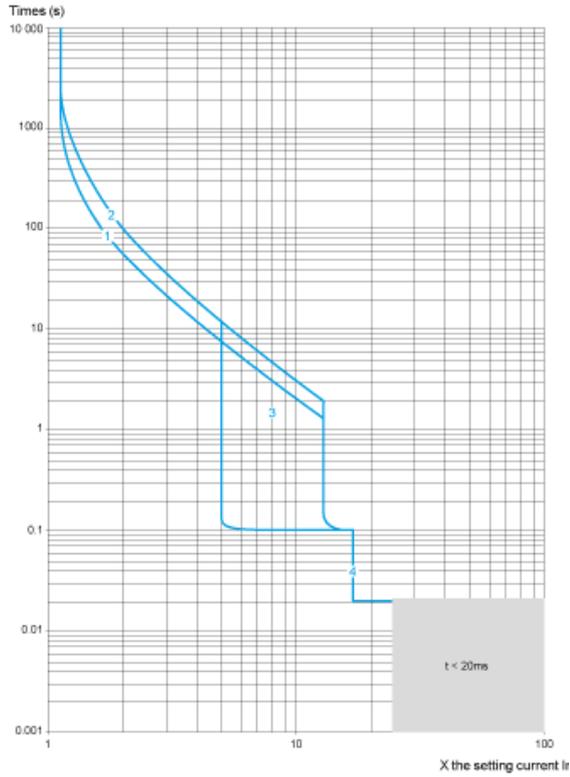
## Contractual warranty

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

Thermal-Magnetic Tripping Curves for GV4P, GV4PE, GV4PEM

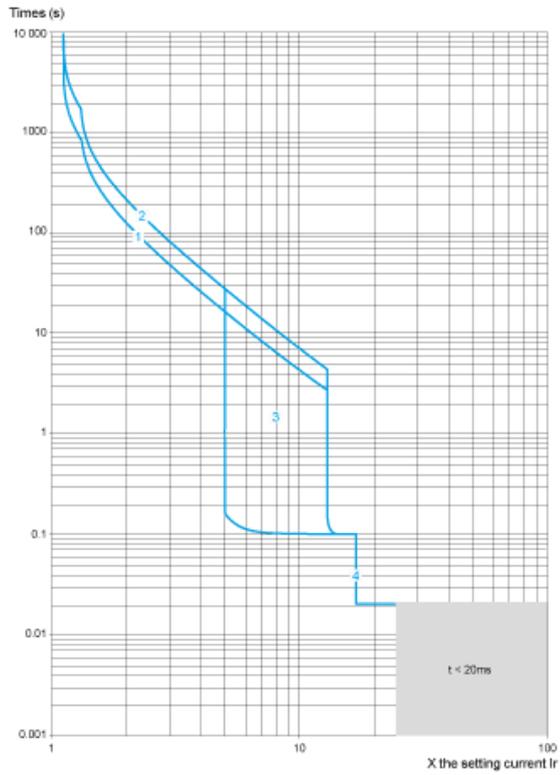
Average Operating Times at 20 °C Related to Multiples of the Setting Current

Hot state



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

## Cold state

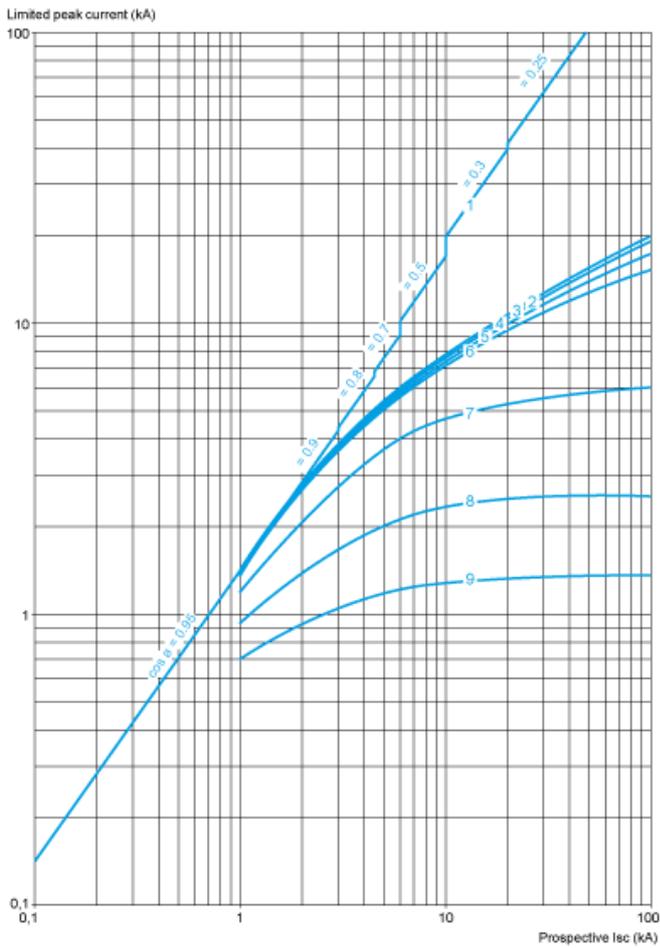


- 1 Class 10
- 2 Class 20
- 3  $I_{sd} = 5 \dots 13 \times I_r$
- 4  $I_i = 17 I_n$

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

Dynamic Stress

$I_{\text{peak}} = f(\text{prospective } I_{sc}) \text{ at } 1.05 U_e = 435 \text{ V}$

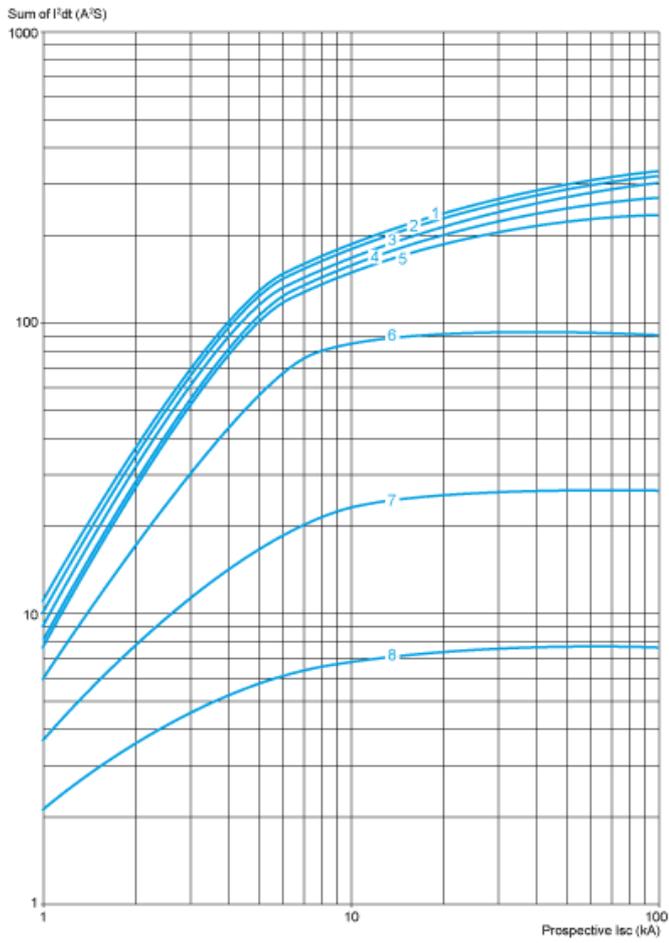


- 1 Maximum peak current
- 2 GV4P115
- 3 GV4P80
- 4 GV4P50
- 5 GV4P25
- 6 GV4P12
- 7 GV4P07
- 8 GV4P03
- 9 GV4P02

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

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

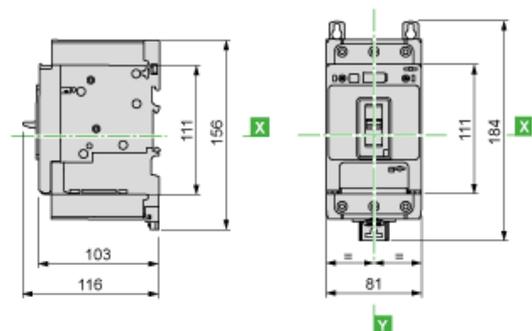
Sum of  $I^2dt = f$  (prospective Isc) at  $1.05 U_e = 435 V$



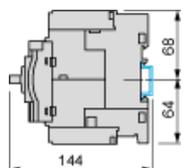
- 1 GV4P115
- 2 GV4P80
- 3 GV4P50
- 4 GV4P25
- 5 GV4P12
- 6 GV4P07
- 7 GV4P03
- 8 GV4P02

GV4 with Toggle: GV4LE, GV4PE, GV4PEM

With EverLink® Connector

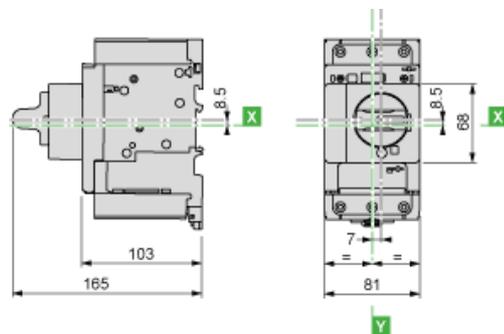


With Crimp Lug Connector



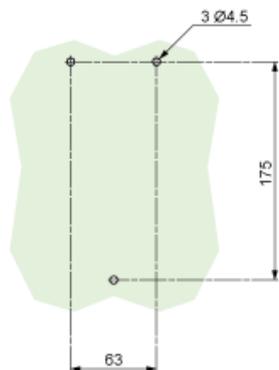
GV4 with Rotary Handle: GV4L, GV4P, or GV4LE, GV4PE, GV4PEM with GV4ADN01, GV4ADN02 Direct Mounting Rotary Handle

Dimensions

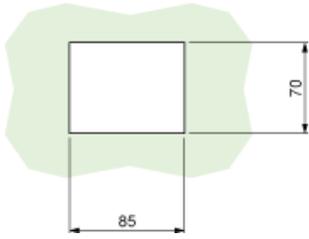


GV4L, GV4P, GV4LE, GV4PE, GV4PEM

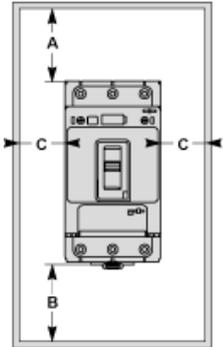
Panel Mounting with M4 Screws



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

