

# Product datasheet

Specifications



## Motor circuit breaker, TeSys GV4, 3P, 50A, Icu 25kA, thermal magnetic multifunction, Everlink terminals

GV4PEM50B

⚠ To be discontinued on: 31 Dec 2023

⚠ To be discontinued

### Main

Range Of Product	TeSys GV4
Range	TeSys Deca TeSys Deca
Device Short Name	GV4PEM
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	11 kW at 400...415 V AC 50/60 Hz 15 kW at 500 V AC 50/60 Hz 18.5 kW at 660...690 V AC 50/60 Hz 15 kW at 400...415 V AC 50/60 Hz 18.5 kW at 400...415 V AC 50/60 Hz 22 kW at 400...415 V AC 50/60 Hz 18.5 kW at 500 V AC 50/60 Hz 22 kW at 500 V AC 50/60 Hz 30 kW at 500 V AC 50/60 Hz 22 kW at 660...690 V AC 50/60 Hz 30 kW at 660...690 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
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	50 A
Magnetic Tripping Current	850 A
[Ue] Rated Operational Voltage	690 V AC 50/60 Hz conforming to IEC 60947-2

<b>[Ui] Rated Insulation Voltage</b>	800 V AC 50/60 Hz conforming to IEC 60947-2
<b>[Ith] Conventional Free Air Thermal Current</b>	115 A conforming to IEC 60947-4-1
<b>[Uimp] Rated Impulse Withstand Voltage</b>	8 kV conforming to IEC 60947-2
<b>Power Dissipation Per Pole</b>	4.6 W
<b>Mechanical Durability</b>	40000 cycles
<b>Electrical Durability</b>	20000 cycles for AC-3 at 440 V In/2 10000 cycles for AC-3 at 440 V In
<b>Maximum Operating Rate</b>	25 cyc/h
<b>Rated Duty</b>	Continuous conforming to IEC 60947-4-1
<b>Connections - Terminals</b>	EverLink BTR screw connectors (top) 1 cable(s) 1.5...70 mm <sup>2</sup> - solid EverLink BTR screw connectors (top) 1 cable(s) 1.5...50 mm <sup>2</sup> - flexible EverLink BTR screw connectors (bottom) 1 cable(s) 2.5...95 mm <sup>2</sup> - solid EverLink BTR screw connectors (bottom) 1 cable(s) 2.5...70 mm <sup>2</sup> - flexible
<b>Tightening Torque</b>	9 N.m for cable 16...95 mm <sup>2</sup> 5 N.m for cable 1.5...10 mm <sup>2</sup>
<b>Mechanical Robustness</b>	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
<b>Phase Failure Sensitivity</b>	Yes conforming to IEC 60947-4-1
<b>Height</b>	155 mm
<b>Width</b>	81 mm
<b>Depth</b>	116 mm
<b>Net Weight</b>	1.45 kg
<b>Colour</b>	Grey (RAL 7016)
<b>Suitability For Isolation</b>	Yes conforming to IEC 60947-1

## Environment

<b>Standards</b>	CSA C22.2 No 60947-4-1 UL 60947-4-1 EN/IEC 60947-4-1 EN/IEC 60947-2
<b>Product Certifications</b>	IEC UL CSA CCC EAC ATEX EU-RO MR
<b>Climatic Withstand</b>	conforming to IACS E10
<b>IK Degree Of Protection</b>	IK07 conforming to IEC 62262
<b>Pollution Degree</b>	3
<b>Ip Degree Of Protection</b>	IP40 conforming to IEC 60529
<b>Ambient Air Temperature For Storage</b>	-50...85 °C
<b>Fire Resistance</b>	960 °C conforming to IEC 60695-2-11
<b>Operating Altitude</b>	5000 m
<b>Ambient Air Temperature For Operation</b>	-25...70 °C

## Packing Units

<b>Unit Type Of Package 1</b>	PCE
<b>Number Of Units In Package 1</b>	1
<b>Package 1 Height</b>	17.5 cm
<b>Package 1 Width</b>	11.0 cm
<b>Package 1 Length</b>	22.0 cm
<b>Package 1 Weight</b>	1.662 kg

## **Contractual warranty**

<b>Warranty</b>	18 months
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## 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.

[Learn more >](#)

## Well-being performance

✓ Mercury Free

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✓ Rohs Exemption Information [Yes](#)

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✓ Pvc Free

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✓ Halogen Free Plastic Parts Product

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**Reach Regulation** [REACH Declaration](#)

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**Eu Rohs Directive** Compliant  
[EU RoHS Declaration](#)

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**China Rohs Regulation** [China RoHS declaration](#)  
Product out of China RoHS scope. Substance declaration for your information

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**Weee** The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

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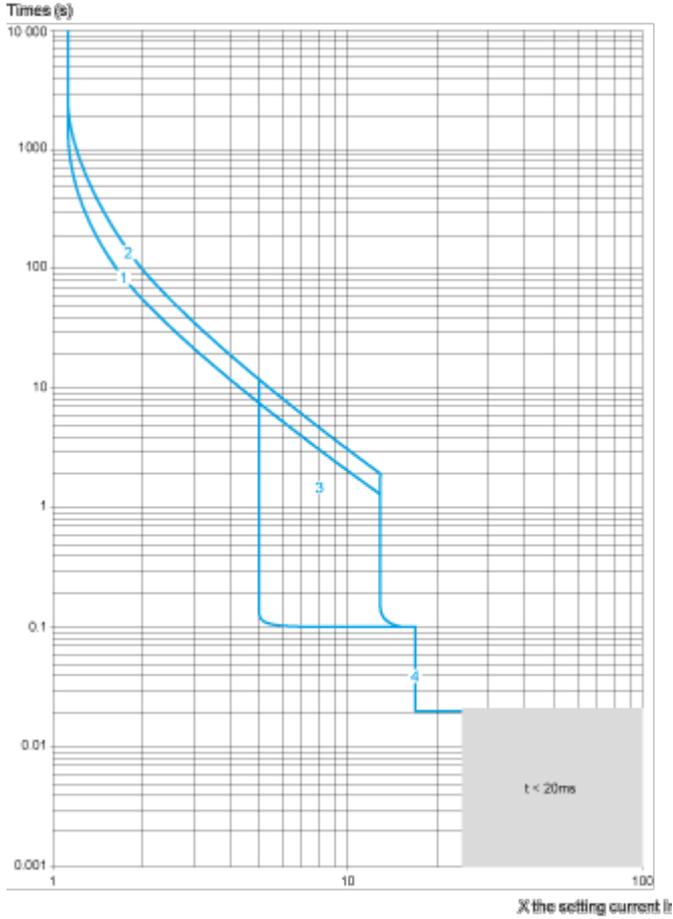
# Product datasheet      GV4PEM50B

## Performance Curves

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

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

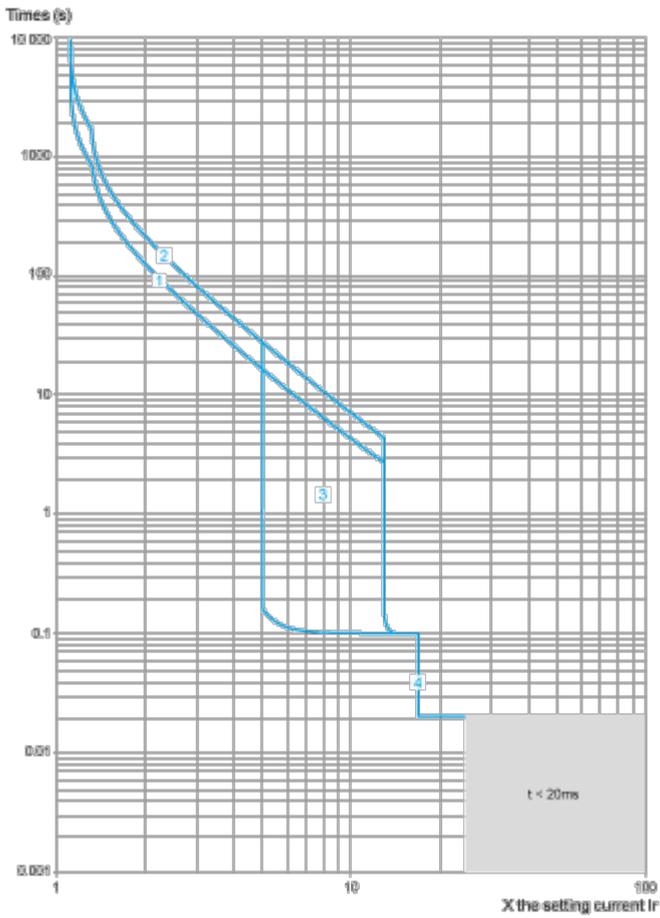
Hot state



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

Cold state

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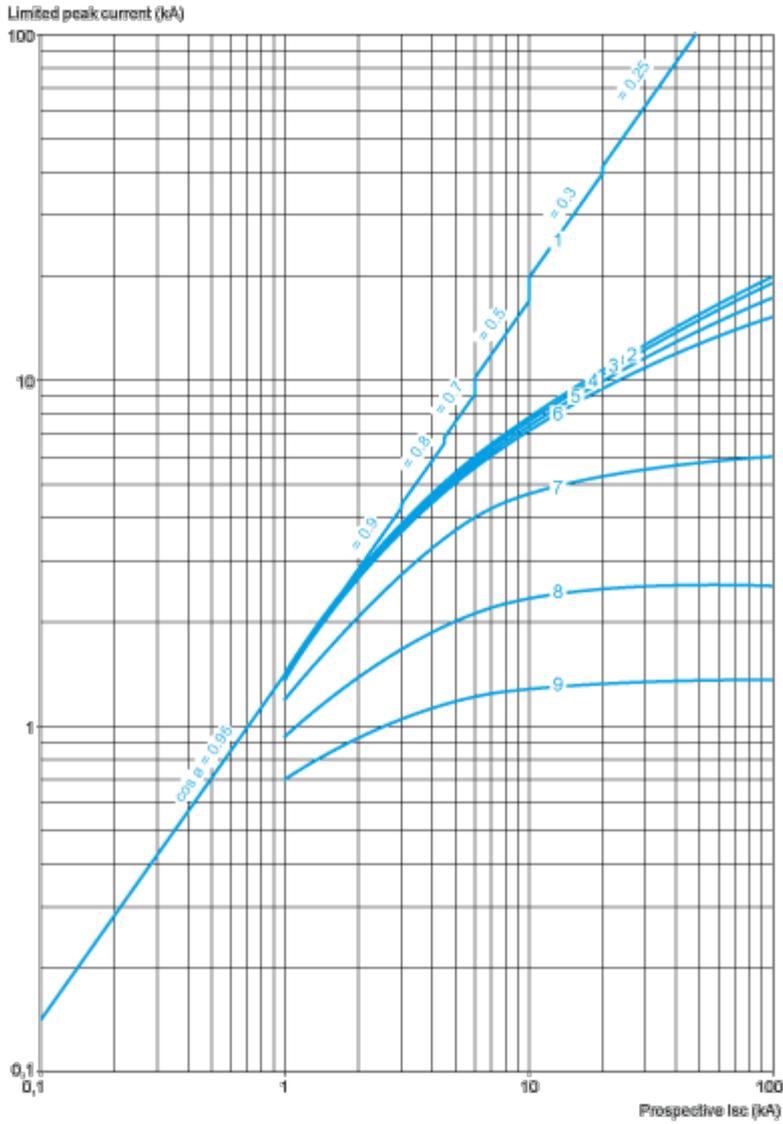


- 1 Class 10
- 2 Class 20
- 3  $I_{sd} = 5 \dots 13 \times I_r$
- 4  $I_i = 17 I_n$

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

### Dynamic Stress

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

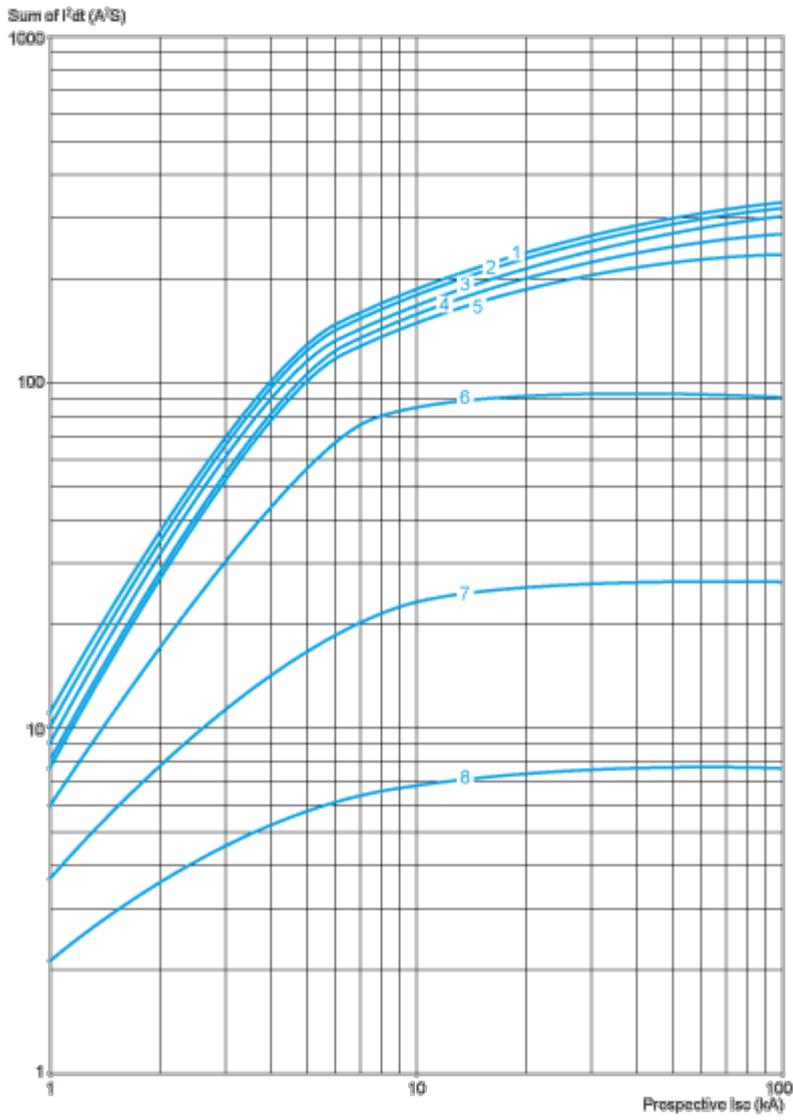


- 1 Maximum peak current
- 2 GV4P115
- 3 GV4P80
- 4 GV4P50
- 5 GV4P25
- 6 GV4P12
- 7 GV4P07
- 8 GV4P03
- 9 GV4P02

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

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

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



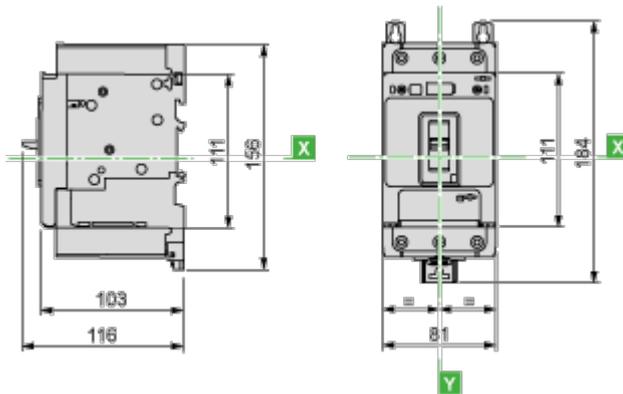
- 1 GV4P115
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- 8 GV4P02

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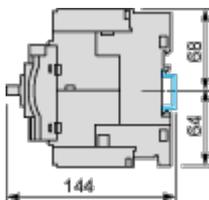
## Dimensions Drawings

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

With EverLink® Connector

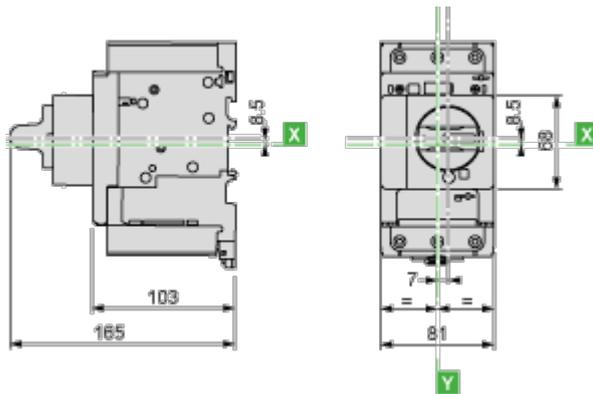


### With Crimp Lug Connector



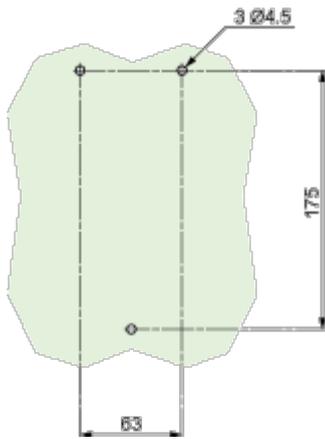
### GV4 with Rotary Handle: GV4L, GV4P, or GV4LE, GV4PE, GV4PEM with GV4ADN01, GV4ADN02 Direct Mounting Rotary Handle

Dimensions

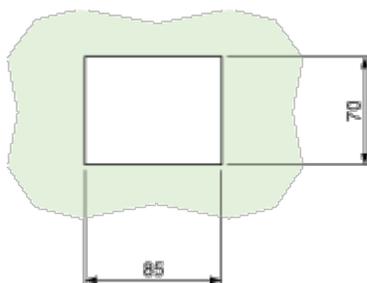


### GV4L, GV4P, GV4LE, GV4PE, GV4PEM

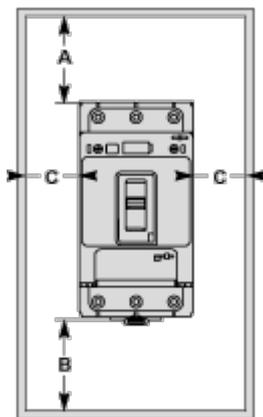
Panel Mounting with M4 Screws



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

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## Connections and Schema

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### Magnetic Motor Circuit Breakers

GV4P, GV4PE, GV4PEM

