

Product data sheet

Specifications



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

GV4PE50N6

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	Thermal-magnetic Electronic

Complementary

Poles description	3P
Utilisation category	Category A IEC 60947-2 AC-3 IEC 60947-4-1
Operating position	Any position
Motor power kW	11 kW 400...415 V AC 50/60 Hz 15 kW 500 V AC 50/60 Hz 18.5 kW 660...690 V AC 50/60 Hz 15 kW 400...415 V AC 50/60 Hz 18.5 kW 400...415 V AC 50/60 Hz 22 kW 400...415 V AC 50/60 Hz 18.5 kW 500 V AC 50/60 Hz 22 kW 500 V AC 50/60 Hz 30 kW 500 V AC 50/60 Hz 22 kW 660...690 V AC 50/60 Hz 30 kW 660...690 V AC 50/60 Hz 37 kW 660...690 V AC 50/60 Hz 45 kW 660...690 V AC 50/60 Hz
Breaking capacity	100 kA Icu 220...240 V AC 50/60 Hz IEC 60947-2 50 kA Icu 380...415 V AC 50/60 Hz IEC 60947-2 50 kA Icu 440 V AC 50/60 Hz IEC 60947-2 15 kA Icu 525 V AC 50/60 Hz IEC 60947-2 65 kA 208Y/120 V AC 50/60 Hz UL 60947 65 kA 240 V AC 50/60 Hz UL 60947 35 kA 480Y/277 V AC 50/60 Hz UL 60947 8 kA Icu 660...690 V AC 50/60 Hz IEC 60947-2 25 kA Icu 500 V AC 50/60 Hz IEC 60947-2 18 kA 600Y/347 V AC 50/60 Hz 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 IEC 60947-2
[Ui] rated insulation voltage	800 V AC 50/60 Hz IEC 60947-2
[Ith] conventional free air thermal current	115 A 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 IEC 60947-2
Power dissipation per pole	4.6 W
Mechanical durability	40000 cycles
Electrical durability	5000 cycles AC-3 415 V opening 5000 cycles AC-3 415 V closing
maximum operating rate	25 cyc/h
Rated duty	Continuous IEC 60947-4-1
Connection pitch	1.06 in (27 mm) without spreaders 1.4 in (35 mm) with spreaders
Connections - terminals	Lugs-ring terminals
Tightening torque	79.7 lbf.in (9 N.m) 0.02...0.1 in² (16...95 mm²) 44.3 lbf.in (5 N.m) 0.002...0.02 in² (1.5...10 mm²)
Mechanical robustness	Vibrations +/- 1 mm 2...13.2 Hz IEC 60068-2-6 Vibrations 0.7 gn 13.2...100 Hz IEC 60068-2-6 Shocks 15 gn 11 ms IEC 60068-2-27
Phase failure sensitivity	Yes IEC 60947-4-1
Height	6.1 in (155 mm)
Width	3.2 in (81 mm)
Depth	4.6 in (116 mm)
Product weight	3.20 lb(US) (1.45 kg)
Colour	Grey RAL 7016)
Suitability for isolation	Yes IEC 60947-1

Environment

Standards	CSA C22.2 No 60947-4-1 UL 60947-4-1 EN/IEC 60947-4-1 EN/IEC 60947-2
Product certifications	IEC UL CSA CCC EAC ATEX EU-RO MR
Climatic withstand	IACS E10
IK degree of protection	IK07 IEC 62262
Pollution degree	3
IP degree of protection	IP40 IEC 60529
Ambient air temperature for storage	-58...185 °F (-50...85 °C)
Fire resistance	1760 °F (960 °C) IEC 60695-2-11
Operating altitude	5000 m
Ambient air temperature for operation	-13...158 °F (-25...70 °C)

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	4.331 in (11.000 cm)

Package 1 Width	8.740 in (22.200 cm)
Package 1 Length	6.575 in (16.700 cm)
Package 1 Weight	3.042 lb(US) (1.380 kg)
Unit Type of Package 2	S03
Number of Units in Package 2	5
Package 2 Height	11.811 in (30.000 cm)
Package 2 Width	11.811 in (30.000 cm)
Package 2 Length	15.748 in (40.000 cm)
Package 2 Weight	20.944 lb(US) (9.500 kg)

Contractual warranty

Warranty (in months)	18
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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 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	11 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	0.5 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0.4 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]	4 kg CO2 eq.
Environmental Disclosure	Product Environmental Profile

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	Compliant By Exemption
REACH Regulation	Reference contains Substances of Very High Concern above the threshold
Halogen content performance	Halogen free plastic parts product
PVC free	Yes

Use Longer

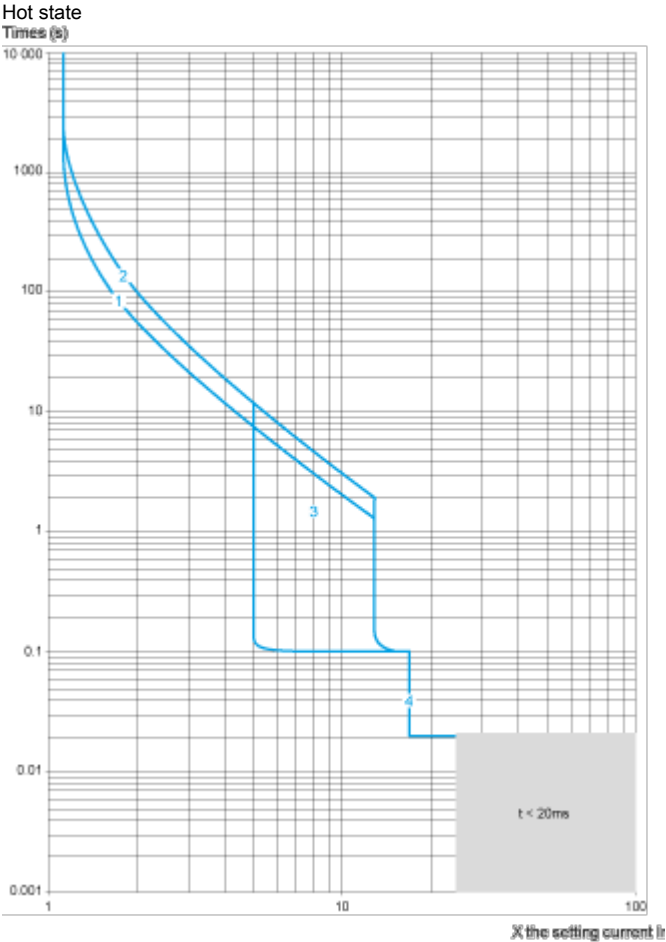
 Lifetime extension	
Repair	No

Use Again

 Repack and remanufacture	
Recyclability potential, in %	49
Circularity Profile	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

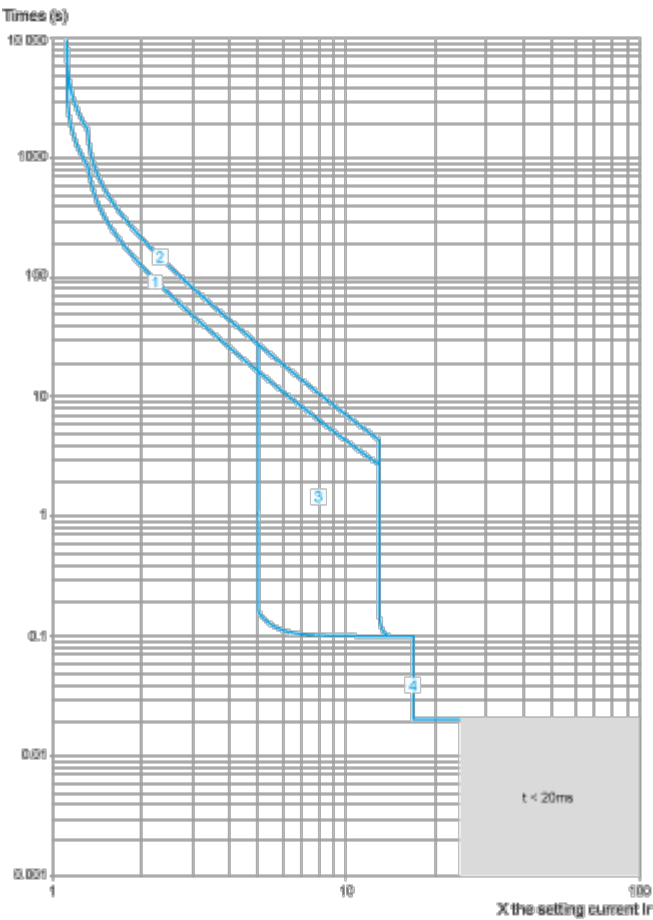
Performance Curves

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



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

Cold state

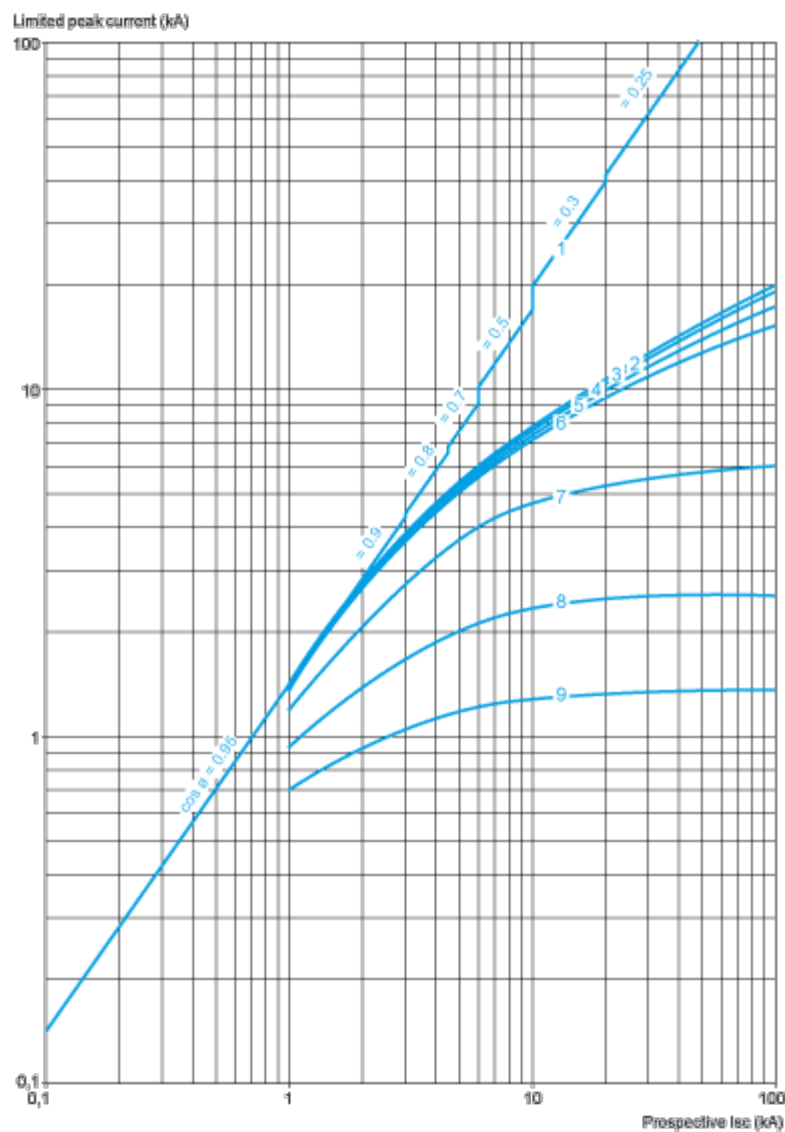


- 1 Class 10
- 2 Class 20
- 3 $I_{sd} = 5 \dots 13 \times I_r$
- 4 $I_i = 17 I_n$

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

Dynamic Stress

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

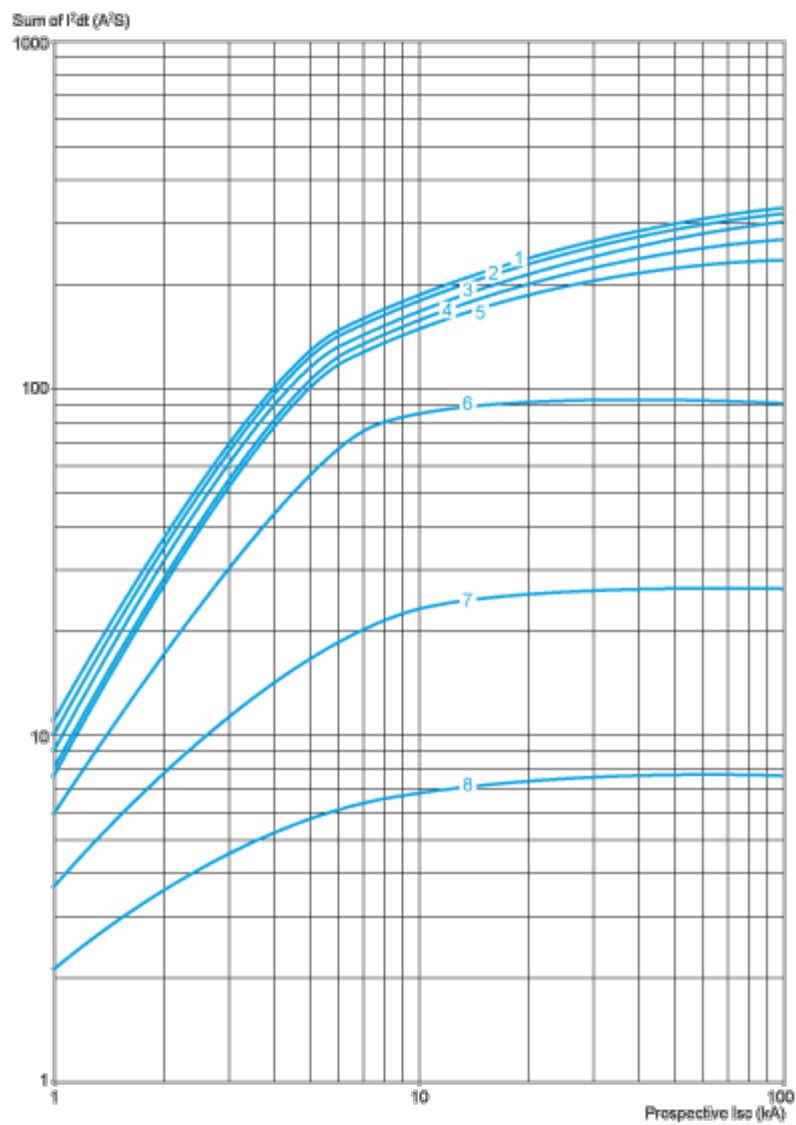


- 1 Maximum peak current
- 2 GV4P115
- 3 GV4P80
- 4 GV4P50
- 5 GV4P25
- 6 GV4P12
- 7 GV4P07
- 8 GV4P03
- 9 GV4P02

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

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

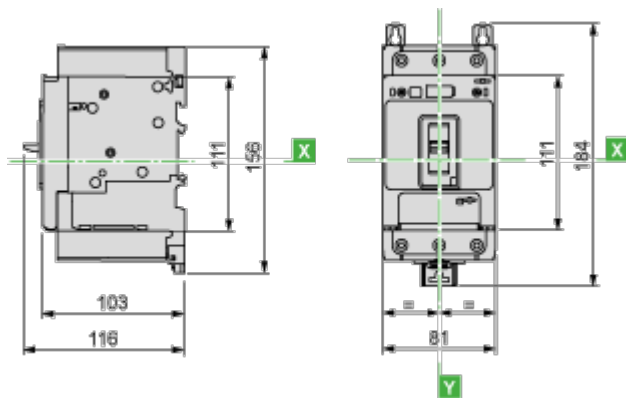
Sum of $I^2dt = f$ (prospective Isc) at $1.05 U_e = 435 \text{ V}$



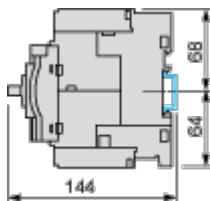
- 1 GV4P115
- 2 GV4P80
- 3 GV4P50
- 4 GV4P25
- 5 GV4P12
- 6 GV4P07
- 7 GV4P03
- 8 GV4P02

Dimensions Drawings

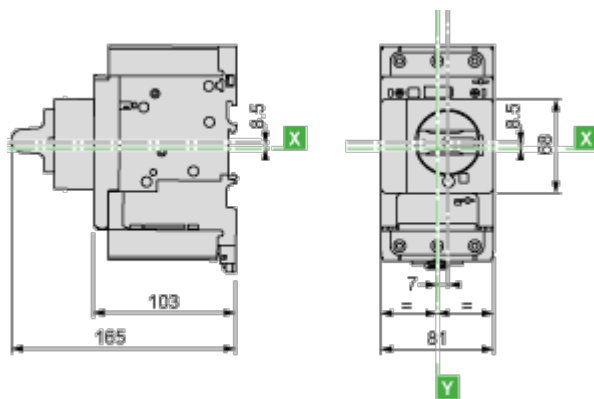
GV4 with Toggle: GV4LE, GV4PE, GV4PEM
With EverLink® Connector



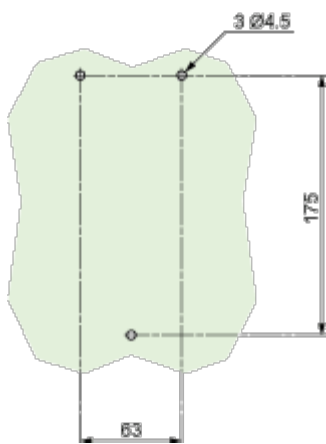
With Crimp Lug Connector



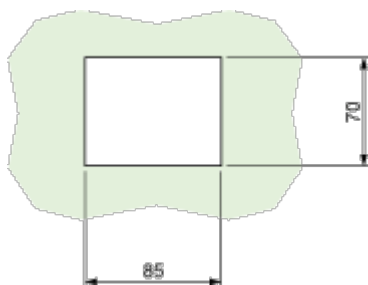
GV4 with Rotary Handle: GV4L, GV4P, or GV4LE, GV4PE, GV4PEM with GV4ADN01, GV4ADN02 Direct Mounting Rotary Handle
Dimensions



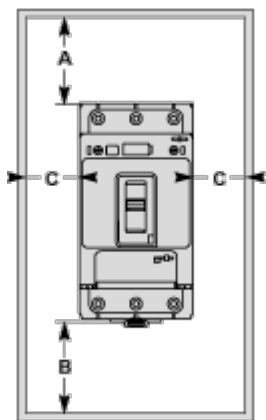
GV4L, GV4P, GV4LE, GV4PE, GV4PEM
Panel Mounting with M4 Screws



Door Cut-Out for Rotary Handle



Minimum Safety Clearance

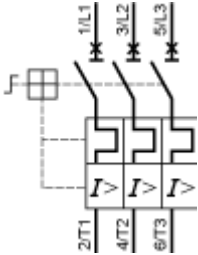


Toggle-type, rotary handle-type: identical clearance values.

	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



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



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
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.