

Product data sheet

Specifications



Motor circuit breaker, TeSys Deca, 3P, 70-80 A, thermal magnetic, EverLink terminals

GV3P80

Main

Range of product	TeSys GV3
Range	TeSys TeSys Deca
Device short name	GV3P
Product name	TeSys GV3 TeSys Deca
Product or component type	Circuit breaker
Device application	Motor
Trip unit technology	Thermal-magnetic

Complementary

Poles description	3P
Network type	AC
Utilisation category	AC-3 conforming to IEC 60947-4-1 Category A conforming to IEC 60947-2
Network frequency	50/60 Hz
Fixing mode	35 mm symmetrical DIN rail: clipped Panel: screwed (with 3 x M4 screws)
Operating position	Any position, no direct mounting with contactor, use cable length > 10 cm Any position, do not use with accessory GV3S
Motor power kW	45 kW at 400/415 V AC 50/60 Hz maximum peak current 750 A 45 kW at 500 V AC 50/60 Hz maximum peak current 750 A 55 kW at 690 V AC 50/60 Hz maximum peak current 750 A
Breaking capacity	50 kA Icu at 400/415 V AC 50/60 Hz 50 kA Icu at 440 V AC 50/60 Hz 12 kA Icu at 500 V AC 50/60 Hz 6 kA Icu at 690 V AC 50/60 Hz 65 kA Icu at 230/240 V AC 50/60 Hz
[Ics] rated service short-circuit breaking capacity	100 % at 230/240 V AC 50/60 Hz 60 % at 400/415 V AC 50/60 Hz 60 % at 440 V AC 50/60 Hz 50 % at 500 V AC 50/60 Hz 50 % at 690 V AC 50/60 Hz
Control type	Rotary knob
[In] rated current	80 A
Thermal protection adjustment range	70...80 A
Magnetic tripping current	1120 A

[Ue] rated operational voltage	690 V AC 50/60 Hz
[Ui] rated insulation voltage	690 V AC 50/60 Hz conforming to IEC 60947-2
[Uimp] rated impulse withstand voltage	6 kV conforming to IEC 60947-2
Power dissipation per pole	8 W
Mechanical durability	50000 cycles
Electrical durability	20000 cycles for AC-3 at 415 V In
Maximum operating rate	25 cyc/h
Rated duty	Continuous conforming to IEC 60947-4-1
Tightening torque	5 N.m on EverLink BTR screw connectors for cable 25 mm ² 8 N.m on EverLink BTR screw connectors for cable 35 mm ²
Mechanical robustness	Shocks: 30 Gn for 11 ms opened conforming to IEC 60068-2-27 Vibrations: 4 Gn, 5...300 Hz conforming to IEC 60068-2-6 Shocks: 5 Gn for 11 ms closed conforming to IEC 60068-2-27
Suitability for isolation	Yes conforming to IEC 60947-1
Phase failure sensitivity	Yes conforming to IEC 60947-4-1
Height	132 mm
Width	55 mm
Depth	136 mm
Net weight	0.96 kg
Colour	Dark grey Green (SE GREEN 2)

Environment

Standards	EN/IEC 60947-2 EN/IEC 60947-4-1
Product certifications	IECEE CB Scheme CCC EAC ATEX BV LROS (Lloyds register of shipping) DNV-GL ABS UKCA
Protective treatment	TC
IP degree of protection	IP20 conforming to IEC 60529
IK degree of protection	IK09
Ambient air temperature for operation	-20...60 °C
Ambient air temperature for storage	-40...80 °C
Fire resistance	960 °C conforming to IEC 60695-2-1
Operating altitude	0...3000 m

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Weight	1.026 kg
Package 1 Height	6.5 cm
Package 1 width	14.5 cm
Package 1 Length	16 cm

Unit Type of Package 2	CAR
Number of Units in Package 2	1
Package 2 Weight	1.031 kg
Package 2 Height	15.8 cm
Package 2 width	6.5 cm
Package 2 Length	14.6 cm
Unit Type of Package 3	S06
Number of Units in Package 3	120
Package 3 Weight	136.72 kg
Package 3 Height	73.5 cm
Package 3 width	60 cm
Package 3 Length	80 cm

Offer Sustainability

Sustainable offer status	Green Premium product
REACH Regulation	
EU RoHS Directive	
Mercury free	Yes
RoHS exemption information	
China RoHS Regulation	
Environmental Disclosure	
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

Contractual warranty

Warranty	18 months
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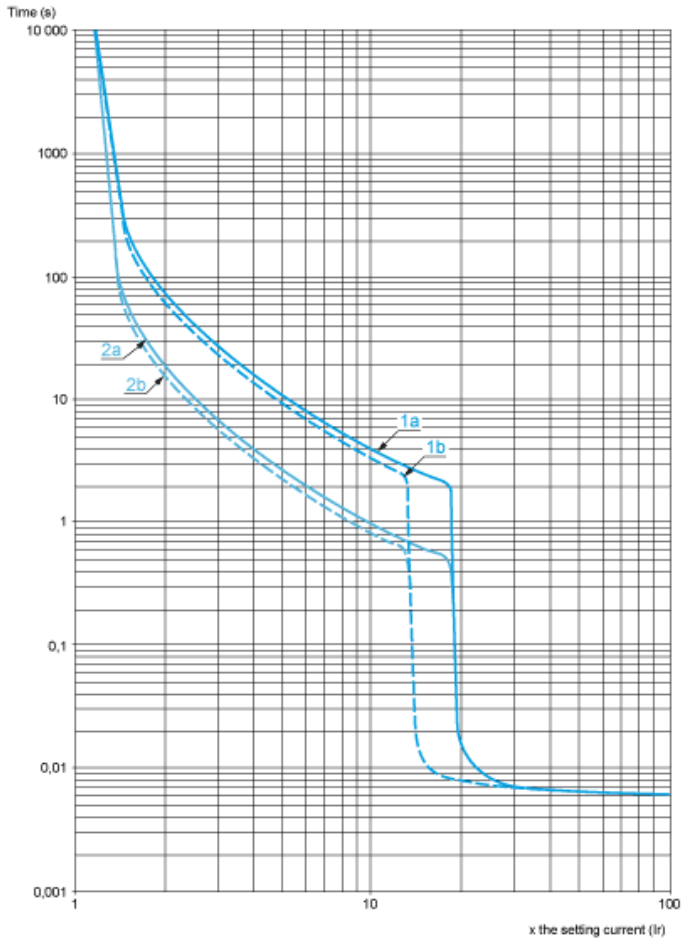
Product data sheet

Performance Curves

GV3P80

Thermal-Magnetic Tripping Curves

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

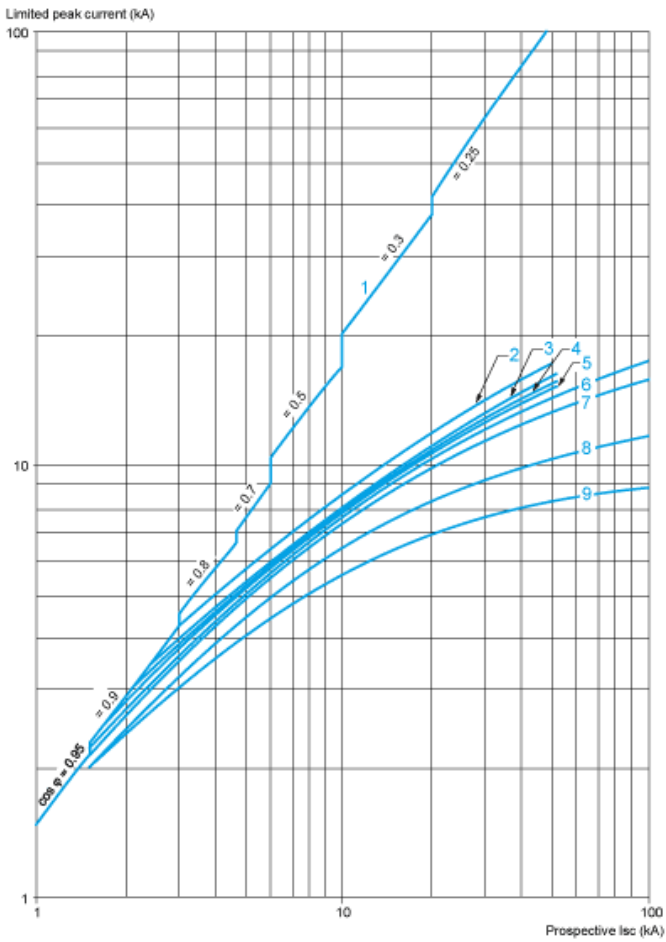


- 1a** 3 poles from cold state (Ir minimum): GV3P
- 1b** 3 poles from cold state (Ir maximum): GV3P
- 2a** 3 poles from hot state (Ir minimum): GV3P
- 2b** 3 poles from hot state (Ir maximum): GV3P

Current Limitation on Short-Circuit (3-Phase 400/415 V)

Dynamic Stress

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

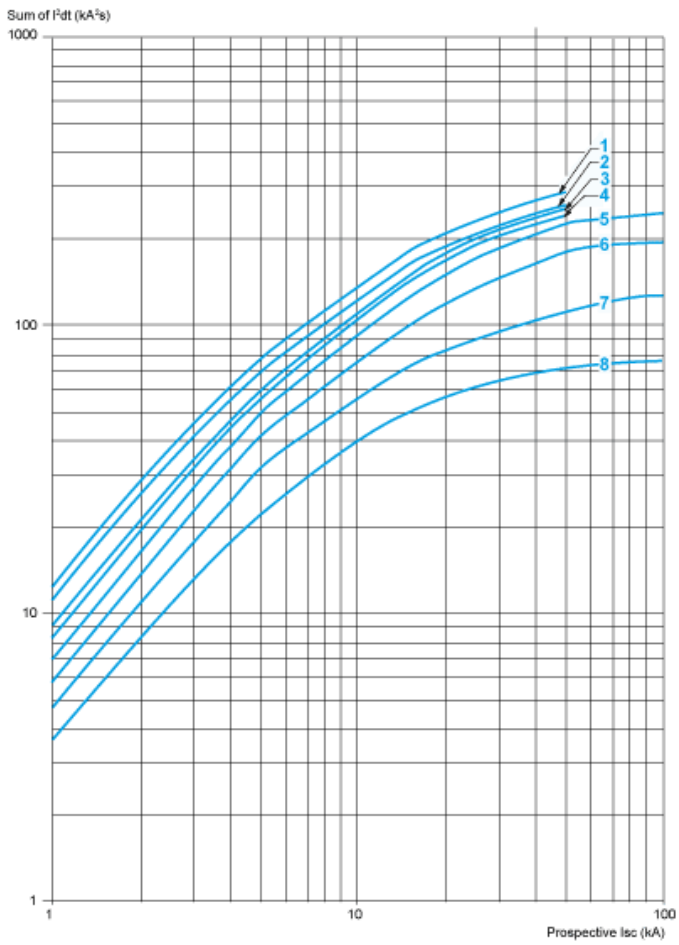


- 1 Maximum peak current
- 2 70-80 A (GV3P80), 62-73 A (GV3P73)
- 3 48-65 A (GV3P65)
- 4 37-50 A (GV3P50)
- 5 30-40 A (GV3P40)
- 6 23-32 A (GV3P32)
- 7 17-25 A (GV3P25)
- 8 12-18 A (GV3P18)
- 9 9-13 A (GV3P13)

Maximum Thermal Limit on Short-Circuit

Thermal Limit in kA²s in the Magnetic Operating Zone

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



- 1 70-80 (GV3P80) - 62-73 (GV3P73)
- 2 48-65 A (GV3P65)
- 3 37-50 A (GV3P50)
- 4 30-40 A (GV3P40)
- 5 23-32 A (GV3P32)
- 6 17-25 A (GV3P25)
- 7 12-18 A (GV3P18)
- 8 9-13 A (GV3P13)

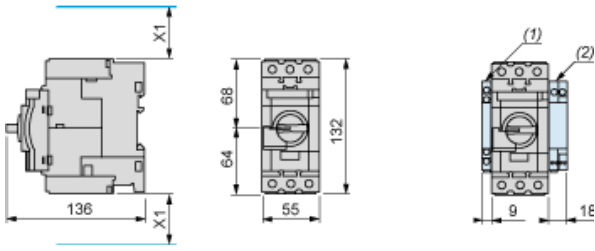
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Dimensions Drawings

GV3P80

GVI3L, GV3P

Dimensions

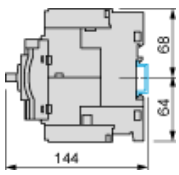


- (1) Blocks GVAN.., GVAD.. and GVAM11.
- (2) Blocks GV3AU.. and GV3AS..

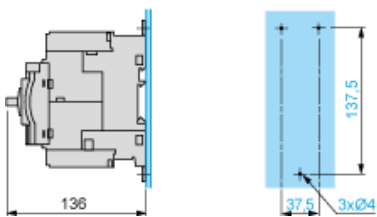
X1 = Electrical clearance (ISC max) 40 mm for $U_e \leq 500$ V, 50 mm for $U_e \leq 690$ V

NOTE: Leave a space of 9 mm between 2 circuit breakers: either an empty space or side-mounting add-on contact blocks. Side by side mounting is possible up to 40 °C.

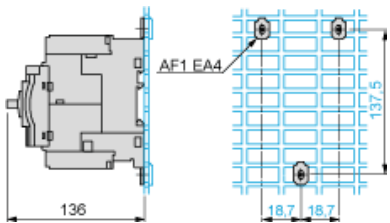
Mounting on Rail AM1 DE200 or AM1 ED201



Panel Mounting, using M4 Screws



Mounting on Pre-Slotted Plate AM1 PA



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Connections and Schema

GV3P80

GV3P••

