

GV3P80

TeSys GV3P thermal-magn motor circuit breaker

70-80A EverLink



Main

Range	TeSys
Product name	TeSys GV3
Device short name	GV3P
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
Connections - terminals	EverLink BTR screw connectors 2 cable(s) 1...25 mm ² solid EverLink BTR screw connectors 2 cable(s) 1...25 mm ² flexible with cable end EverLink BTR screw connectors 1 cable(s) 1...35 mm ² solid EverLink BTR screw connectors 1 cable(s) 1...35 mm ² flexible with cable end EverLink BTR screw connectors 2 cable(s) 1...25 mm ² flexible EverLink BTR screw connectors 1 cable(s) 1...35 mm ² flexible
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	Grey (SE GREY 6) Green (SE GREEN 2)

Environment

Standards	EN/IEC 60947-2 EN/IEC 60947-1 EN/IEC 60947-4-1
Product certifications	EAC ATEX
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

Offer Sustainability

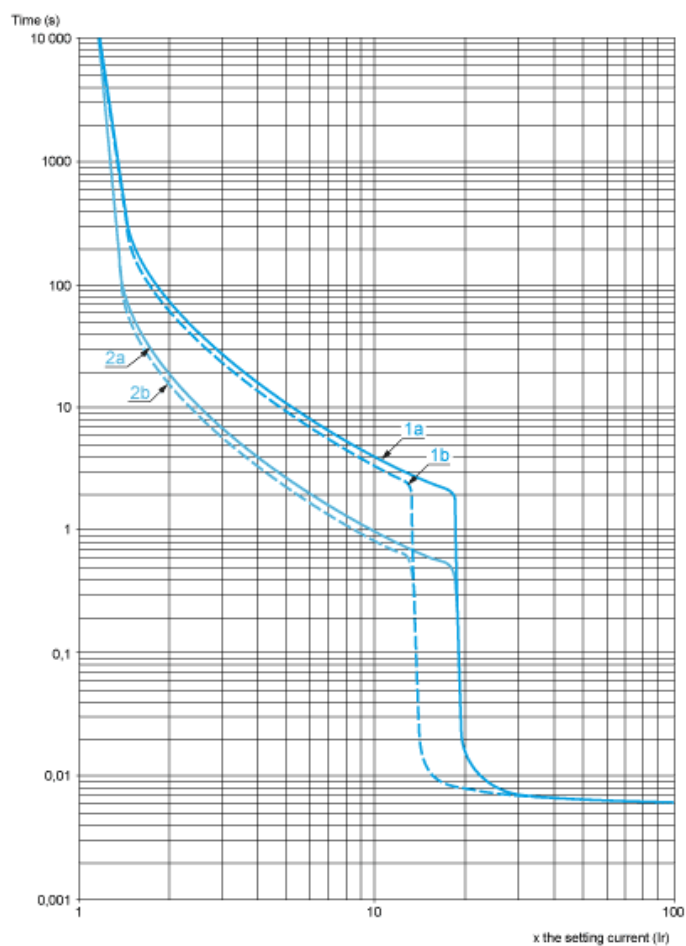
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)  EU RoHS Declaration
Environmental Disclosure	 Product Environmental Profile

Contractual warranty

Warranty	18 months
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Thermal-Magnetic Tripping Curves

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

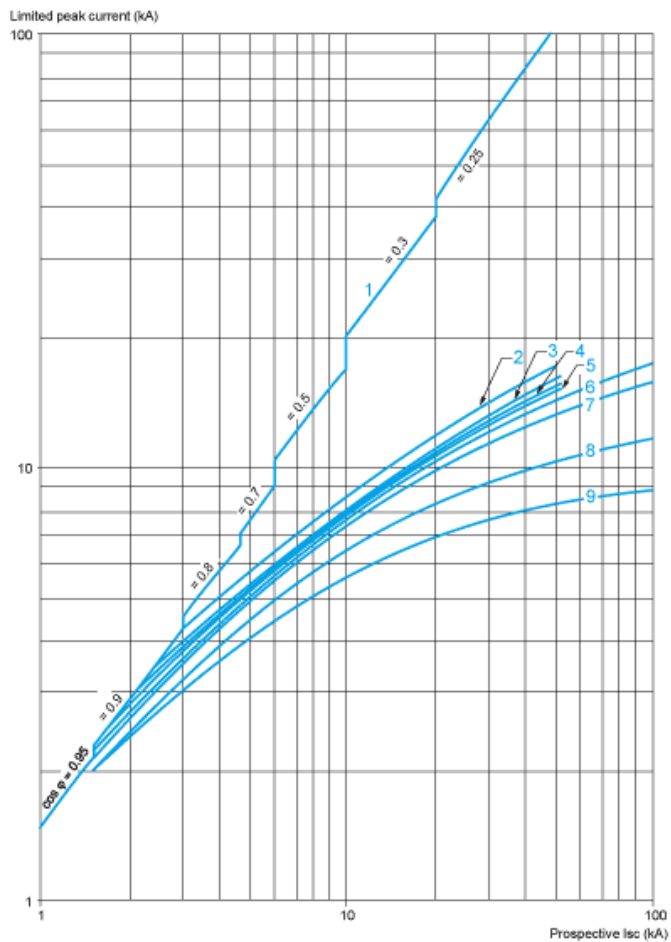


- 1a 3 poles from cold state (Ir minimum): GV3P
- 1b 3 poles from cold state (Ir maximum): GV3P
- 2a 3 poles from hot state (Ir minimum): GV3P
- 2b 3 poles from hot state (Ir maximum): GV3P

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

Dynamic Stress

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

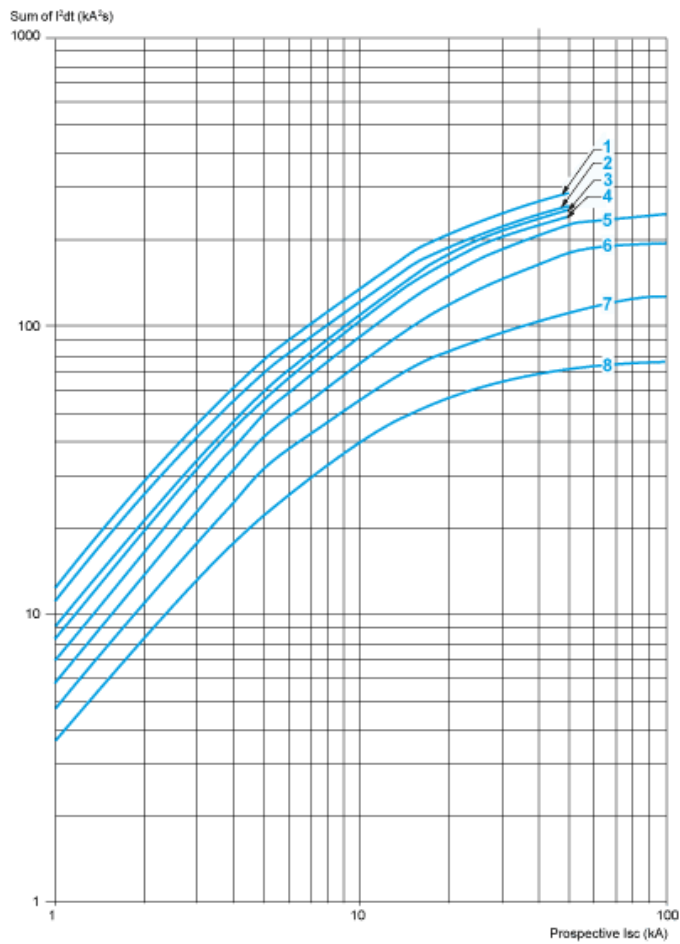


- 1 Maximum peak current
- 2 70-80 A (GV3P80), 62-73 A (GV3P73)
- 3 48-65 A (GV3P65)
- 4 37-50 A (GV3P50)
- 5 30-40 A (GV3P40)
- 6 23-32 A (GV3P32)
- 7 17-25 A (GV3P25)
- 8 12-18 A (GV3P18)
- 9 9-13 A (GV3P13)

Maximum Thermal Limit on Short-Circuit

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

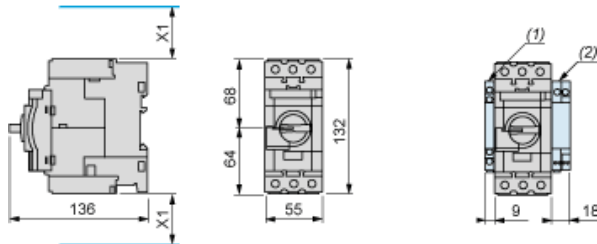
Sum of $I^2dt = f$ (prospective Isc) at $1.05 U_e = 435 \text{ V}$



- 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)

GV13L, GV3P

Dimensions



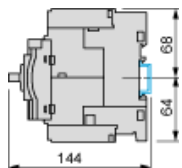
(1) Blocks GVAN..., GVAD... and GVAM11.

(2) Blocks GV3AU... and GV3AS....

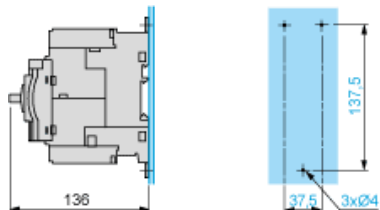
X1 = Electrical clearance (ISC max) 40 mm for $U_e \leq 500$ V, 50 mm for $U_e \leq 690$ V

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.

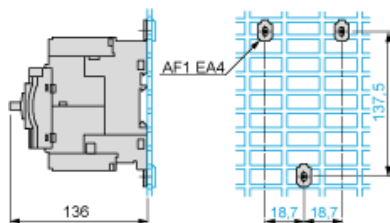
Mounting on Rail AM1 DE200 or AM1 ED201



Panel Mounting, using M4 Screws



Mounting on Pre-Slotted Plate AM1 PA



GV3P••

