

# GV2ME21

Motor circuit breaker, TeSys GV2, 3P, 17-23 A, thermal magnetic, screw clamp terminals



## Main

Range	TeSys
Product name	TeSys GV2
Product or component type	Circuit breaker
Device short name	GV2ME
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 conforming to IEC 60947-4-1
Fixing mode	35 mm symmetrical DIN rail: clipped Panel: screwed (with adaptor plate)
Operating position	Any position
Motor power kW	9 kW at 400/415 V AC 50/60 Hz 11 kW at 500 V AC 50/60 Hz 18.5 kW at 690 V AC 50/60 Hz
Breaking capacity	3 kA I <sub>cu</sub> at 690 V AC 50/60 Hz conforming to IEC 60947-2 15 kA I <sub>cu</sub> at 400/415 V AC 50/60 Hz conforming to IEC 60947-2 50 kA I <sub>cu</sub> at 230/240 V AC 50/60 Hz conforming to IEC 60947-2 6 kA I <sub>cu</sub> at 440 V AC 50/60 Hz conforming to IEC 60947-2 4 kA I <sub>cu</sub> at 500 V AC 50/60 Hz conforming to IEC 60947-2
[Ics] rated service short-circuit breaking capacity	100 % at 230/240 V AC 50/60 Hz conforming to IEC 60947-2 75 % at 690 V AC 50/60 Hz conforming to IEC 60947-2 75 % at 500 V AC 50/60 Hz conforming to IEC 60947-2 50 % at 440 V AC 50/60 Hz conforming to IEC 60947-2 40 % at 400/415 V AC 50/60 Hz conforming to IEC 60947-2
Control type	Push-button

[In] rated current	23 A
Thermal protection adjustment range	17...23 A
Magnetic tripping current	327 A
[Ue] rated operational voltage	690 V AC 50/60 Hz conforming to IEC 60947-2
[Ui] rated insulation voltage	690 V AC 50/60 Hz conforming to IEC 60947-2
[Ith] conventional free air thermal current	23 A conforming to IEC 60947-4-1
[Uimp] rated impulse withstand voltage	IEC 60947-2 6 kV
Power dissipation per pole	2.5 W
Mechanical durability	100000 cycles
Electrical durability	100000 cycles for AC-3 at 440 V
Maximum operating rate	25 cyc/h
Rated duty	Continuous conforming to IEC 60947-4-1
Tightening torque	1.7 N.m on screw clamp terminals
Suitability for isolation	Yes conforming to IEC 60947-1
Phase failure sensitivity	Yes conforming to IEC 60947-4-1
Height	89 mm
Width	45 mm
Depth	78.5 mm
Net weight	0.26 kg

## Environment

Standards	EN/IEC 60947-2 EN/IEC 60947-4-1 CSA C22.2 No 60947-4-1 UL 60947-4-1
Product certifications	IECEE CB Scheme UL CSA CCC EAC ATEX BV LROS (Lloyds register of shipping) DNV-GL RINA
Protective treatment	TH
IP degree of protection	IP20 conforming to IEC 60529
IK degree of protection	IK04
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	2000 m

## Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Weight	287 g
Package 1 Height	4.8 cm
Package 1 width	8.5 cm
Package 1 Length	9.3 cm
Unit Type of Package 2	S02
Number of Units in Package 2	24
Package 2 Weight	7.415 kg
Package 2 Height	15 cm
Package 2 width	30 cm

Package 2 Length	40 cm
Unit Type of Package 3	P06
Number of Units in Package 3	384
Package 3 Weight	125.988 kg
Package 3 Height	80 cm
Package 3 width	80 cm
Package 3 Length	60 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> Product out of China RoHS scope. Substance declaration for your information
Environmental Disclosure	<a href="#">Product Environmental Profile</a>
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
California proposition 65	WARNING: This product can expose you to chemicals including: Antimony oxide & Antimony trioxide, which is known to the State of California to cause cancer. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>

### Contractual warranty

Warranty	18 months
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Thermal-Magnetic Tripping Curves for GV2ME and GV2P

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



- 1 3 poles from cold state
- 2 2 poles from cold state
- 3 3 poles from hot state

Current Limitation on Short-Circuit for GV2ME and GV2P (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 24-32 A
- 3 20-25 A
- 4 17-23 A
- 5 13-18 A
- 6 9-14 A
- 7 6-10 A
- 8 4-6.3 A
- 9 2.5-4 A
- 10 1.6-2.5 A
- 11 1-1.6 A
- 12 Limit of rated ultimate breaking capacity on short-circuit of GV2ME (14, 18, 23, and 25 A ratings).

**Thermal Limit on Short-Circuit for GV2ME**

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

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



- |    |           |
|----|-----------|
| 1  | 24-32 A   |
| 2  | 20-25 A   |
| 3  | 17-23 A   |
| 4  | 13-18 A   |
| 5  | 9-14 A    |
| 6  | 6-10 A    |
| 7  | 4-6.3 A   |
| 8  | 2.5-4 A   |
| 9  | 1.6-2.5 A |
| 10 | 1-1.6 A   |

Dimension

GV2ME



- (1) Maximum  
X1 Electrical clearance = 40 mm for  $U_e \leq 690$  V

	b
GV2ME..	89
GV2ME..3	101

Mounting

GV2ME

On 35 mm rail



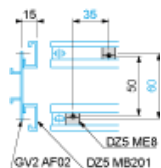
- $c = 78.5$  on AM1 DP200 (35 x 7.5)  
 $c = 86$  on AM1 DE200, ED200 (35 x 15)  
On panel with adapter plate GV2AF02



On pre-slotted plate AM1 PA



On rails DZ5 MB201



GV2AF01

Combination GV2ME + TeSys k contactor



GV2AF3

Combination GV2ME + TeSys d contactor



GV2ME +	LC1D09...D18	LC1D25 and D32
b	176.4	186.8
c1	94.1	100.4
c	99.6	105.9

GV2AF4 + LAD311

Combination GV2ME + TeSys d contactor



GV2ME +	LC1D09...D18	LC1D25 and D32
b	176.4	186.8
c1	103.1	136.4
c	135.6	141.9
d1	107	107
d	112.5	112.5

GV2ME + GV1L3 (Current Limiter)





X1 = 10 mm for  $U_e = 230\text{ V}$  or 30 mm for  $230\text{ V} < U_e \leq 690\text{ V}$

GV2ME•• and GV2RT



Connection of Undervoltage Trip for Dangerous Machines (Conforming to INRS) on GV2ME Only

