

# GV2ME22TQ

Motor circuit breaker, TeSys GV2, 3P, 20-25 A, thermal magnetic, screw clamp terminals, TQ 24 units



## Main

|                      |                  |
|----------------------|------------------|
| Range                | TeSys            |
| Product name         | TeSys GV2        |
| 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<br>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<br>Panel: screwed (with adaptor plate)  |
| Operating position                                  | Any position  |
| Motor power kW                                      | 11 kW at 400/415 V AC 50/60 Hz<br>15 kW at 500 V AC 50/60 Hz  |
| Breaking capacity                                   | 3 kA Icu at 690 V AC 50/60 Hz conforming to IEC 60947-2<br>15 kA Icu at 400/415 V AC 50/60 Hz conforming to IEC 60947-2<br>50 kA Icu at 230/240 V AC 50/60 Hz conforming to IEC 60947-2<br>6 kA Icu at 440 V AC 50/60 Hz conforming to IEC 60947-2<br>4 kA Icu 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<br>75 % at 690 V AC 50/60 Hz conforming to IEC 60947-2<br>75 % at 500 V AC 50/60 Hz conforming to IEC 60947-2<br>50 % at 440 V AC 50/60 Hz conforming to IEC 60947-2<br>40 % at 400/415 V AC 50/60 Hz conforming to IEC 60947-2                      |
| Control type  | Push-button   |
| [In] rated current                                  | 25 A  |

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

|   |   |
|---|---|
| Thermal protection adjustment range         | 20...25 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 | 25 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  |
| Connections - terminals                     | Screw clamp terminals 2 cable(s) 1...6 mm <sup>2</sup> solid<br>Screw clamp terminals 2 cable(s) 1.5...6 mm <sup>2</sup> flexible without cable end<br>Screw clamp terminals 2 cable(s) 1...4 mm <sup>2</sup> flexible with cable end |
| 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   |
| Quantity per set                            | Set of 24   |
| Height                                      | 89 mm   |
| Width                                       | 45 mm   |
| Depth                                       | 78.5 mm   |
| Net weight                                  | 0.26 kg   |

## Environment

|                                       |  |
|---------------------------------------|--|
| Standards                             | EN/IEC 60947-2<br>EN/IEC 60947-4-1<br>CSA C22.2 No 60947-4-1<br>UL 60947-4-1                                     |
| Product certifications                | IECEE CB Scheme<br>UL<br>CSA<br>CCC<br>EAC<br>ATEX<br>BV<br>LROS (Lloyds register of shipping)<br>DNV-GL<br>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   |

## Offer Sustainability

|                            |   |
|----------------------------|---|
| Sustainable offer status   | Green Premium product   |
| REACH Regulation           | <a href="#">REACH Declaration</a>   |
| EU RoHS Directive          | Compliant<br><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><br>Product out of China RoHS scope. Substance declaration for your information |
| Environmental Disclosure   | <a href="#">Product Environmental Profile</a>   |

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|                     |   |
|---------------------|---|
| Circularity Profile | No need of specific recycling operations  |
| 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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### Contractual warranty

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|          |           |
|----------|-----------|
| 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



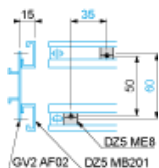
- $c = 78.5$  on AM1 DP200 (35 x 7.5)  
 $c = 86$  on AM1 DE200, ED200 (35 x 15)  
 On panel with adapter plate GV2AF02



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

