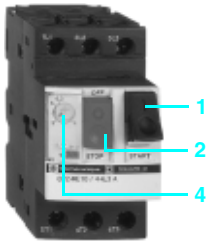
**ATEX**
**motor control device**
**Motor circuit breaker**

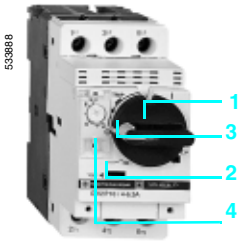
**CE 0080 Ex II (2) GD - Zones 1 - 2, 21 - 22**
**EC type examination certificate:**
**INERIS 06ATEX0035X**

# GV2 ME●●, GV2 P●●

## Description




*GV2 ME*
*with screw clamp terminals*




*GV2 P*

GV2 ME and GV2 P motor circuit-breakers are 3-pole thermal-magnetic circuit-breakers **specifically designed for the control and protection of motors**, conforming to standards IEC 60947-2 and IEC 60947-4-1.
GV2 ME and GV2 P circuit-breakers are designed for connection by screw clamp terminals.

## Operation

Control is manual and local when the motor circuit-breaker is used on its own.
Control is automatic and remote when it is associated with a contactor.

### GV2 ME

Pushbutton control.
Energisation is controlled manually by operating the Start button “I” 1.
De-energisation is controlled manually by operating the Stop button “O” 2, or automatically by the thermal-magnetic protection elements or by a voltage trip attachment.

### GV2 P

Control by rotary knob.
Energisation is controlled manually by moving the knob to position “I” 1.
De-energisation is controlled manually by moving the knob to position “O” 2.
De-energisation due to a fault automatically places the knob in the “Trip” position 3.
Re-energisation is possible only after having returned the knob to position “O”.

## Protection of motors and personnel

Motor protection is provided by the thermal-magnetic protection elements incorporated in the motor circuit-breaker.
The **magnetic** elements (short-circuit protection) have a non-adjustable tripping threshold, which is equal to 13 times the maximum setting current of the thermal trips.
The **thermal** elements (overload protection) include automatic compensation for ambient temperature variations.
The rated operational current of the motor is displayed by means of a graduated knob 4.
Personnel protection is also provided. All live parts are protected against direct finger contact from the front panel.
The addition of an undervoltage trip allows the circuit-breaker to be de-energised in the event of an undervoltage condition. The user is therefore protected against sudden starting of the machine when normal voltage is restored, since the Start button “I” has to be pressed to restart the motor.
With the addition of a shunt trip, de-energisation of the unit can be remotely controlled.
The operators on both open-mounted and enclosed motor circuit-breakers can be locked in the Stop position “O” by up to 4 padlocks.
Because they are suitable for isolation, these circuit-breakers, in the open position, provide an adequate isolation distance and indicate the actual position of the moving contacts by the position of the operators.

## Special features

These motor circuit-breakers are easily installed in any configuration thanks to their universal fixing arrangement: screw fixing or clip-on mounting on symmetrical, asymmetrical or combination rails.

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# GV2 ME●●, GV2 P●●

## Environment

| Circuit-breaker type | | | | GV2 ME | GV2 P |
|---|---|---|---|---|---|
| **Conforming to standards** | | | | IEC 60947-1, 60947-2, 60947-4-1, EN 60204, UL 508, CSA C 22.2 n° 14-05, NF C 63-650, 63-120, 79-130, VDE 0113, 0660 | |
| **Product certifications** | | | | UL, CSA, CCC, CEBEC, GOST, TSE, BV, GL, LROS , DNV, PTB, EZU, SETI, RINA, ATEX | UL, CSA, PTB, EZU, GOST, TSE, DNV, LROS, GL, BV, RINA, CCC, ATEX |
| **Protective treatment** | | | | "TH" | |
| **Degree of protection** | Conforming to IEC 60529 | Open mounted | | IP 20 | |
| | | In enclosure | | **GV2 M●01** : IP 41<br>**GV2 M●02** : IP 55 | – |
| **Shock resistance** | Conforming to IEC 60068-2-27 | | | 30 gn -11 ms | |
| **Vibration resistance** | Conforming to IEC 60068-2-6 | | | 5 gn (5…150 Hz) | |
| **Ambient air temperature** | Storage | | **°C** | - 40…+ 80 | - 40…+ 80 |
| | Operation | Open mounted | **°C** | - 20…+ 60 | - 20…+ 60 |
| | | In enclosure | **°C** | - 20…+ 40 | - 20…+ 40 |
| **Temperature compensation** | | Open mounted | **°C** | - 20…+ 60 | - 20…+ 60 |
| | | In enclosure | **°C** | - 20…+ 40 | - 20…+ 40 |
| **Flame resistance** | Conforming to IEC 60695-2-1 | | **°C** | 960 | |
| **Maximum operating altitude** | | | **m** | 2000 | |
| **Suitable for isolation** | Conforming to IEC 60947-1 § 7-1-6 | | | Yes | |
| **Resistance to mechanical impact** | | | **J** | 0,5 | 0,5 |
| | | | | In enclosure: IK 06 | |
| **Sensitivity to phase failure** | | | | Yes, conforming to IEC 60947-4-1 § 7-2-1-5-2 | |

## Technical characteristics

| Circuit-breaker type | | | GV2 ME and GV2 P |
|---|---|---|---|
| **Utilisation category** | Conforming to IEC 60947-2 | | A |
| | Conforming to IEC 60947-4-1 | | AC-3 |
| **Rated operational voltage** (Ue) | Conforming to IEC 60947-2 | **V** | 690 |
| **Rated insulation voltage** (Ui) | Conforming to IEC 60947-2 | **V** | 690 |
| | Conforming to CSA C22-2 n° 14, UL 508 | **V** | 600 |
| **Rated operational frequency** | Conforming to IEC 60947-2 | **Hz** | 50/60 |
| **Rated impulse withstand voltage** (U imp) | Conforming to IEC 60947-2 | **kV** | 6 |
| **Total power dissipated per pole** | | **W** | 2,5 |
| **Mechanical durability** (C.O.: Close, Open) | | **F.O.** | 100 000 |
| **Electrical durability** for AC-3 duty | 440 V In/2 | **F.O.** | 100 000 |
| | 440 V In | **F.O.** | – |
| **Duty class** (maximum operating rate) | | **F.O./h** | 25 |
| **Maximum conventional rated thermal current** (Ith) | Conforming to IEC 60947-4-1 | **A** | 0,16… 32 |
| **Rated duty** | Conforming to IEC 60947-4-1 | | Continuous duty |

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# GV2 ME●●, GV2 P●●

## Breaking capacity of GV2 ME and GV2 P

| Circuit-breaker type | | | | GV2 ME | | | | | | | | | GV2 P | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 01 to 06 | 07 | 08 | 10 | 14 | 16 | 20 | 21 & 22 | 32 | 01 to 06 | 07 | 08 | 10 | 14 | 16 | 20 | 21 & 22 | 32 |
| **Rating** | | | **A** | **0,1 to 1,6** | **2,5** | **4** | **6,3** | **10** | **14** | **18** | **23 & 25** | **32** | **0,1 to 1,6** | **2,5** | **4** | **6,3** | **10** | **14** | **18** | **23 & 25** | **32** |
| **Breaking capacity** conforming to IEC 60947-2 | 230/240 V | Icu | **kA** | ★ | ★ | ★ | ★ | ★ | ★ | ★ | 50 | 50 | ★ | ★ | ★ | ★ | ★ | ★ | ★ | ★ | ★ |
| | | Ics % *(1)* | | ★ | ★ | ★ | ★ | ★ | ★ | ★ | 100 | 100 | ★ | ★ | ★ | ★ | ★ | ★ | ★ | ★ | ★ |
| | 400/415 V | Icu | **kA** | ★ | ★ | ★ | ★ | ★ | 15 | 15 | 15 | 10 | ★ | ★ | ★ | ★ | ★ | ★ | 50 | 50 | 50 |
| | | Ics % *(1)* | | ★ | ★ | ★ | ★ | ★ | 50 | 50 | 40 | 50 | ★ | ★ | ★ | ★ | ★ | ★ | 50 | 50 | 50 |
| | 440 V | Icu | **kA** | ★ | ★ | ★ | 50 | 15 | 8 | 8 | 6 | 6 | ★ | ★ | ★ | ★ | ★ | 50 | 20 | 20 | 20 |
| | | Ics % *(1)* | | ★ | ★ | ★ | 100 | 100 | 50 | 50 | 50 | 50 | ★ | ★ | ★ | ★ | ★ | 75 | 75 | 75 | 75 |
| | 500 V | Icu | **kA** | ★ | ★ | ★ | 50 | 10 | 6 | 6 | 4 | 4 | ★ | ★ | ★ | ★ | 50 | 42 | 10 | 10 | 10 |
| | | Ics % *(1)* | | ★ | ★ | ★ | 100 | 100 | 75 | 75 | 75 | 75 | ★ | ★ | ★ | ★ | 100 | 75 | 75 | 75 | 75 |
| | 690 V | Icu | **kA** | ★ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | ★ | 8 | 8 | 6 | 6 | 6 | 4 | 4 | 4 |
| | | Ics % *(1)* | | ★ | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | ★ | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| **Associated fuses (if required) if Isc > breaking capacity Icu** conforming to IEC 60947-2 | 230/240 V | aM | **A** | ★ | ★ | ★ | ★ | ★ | ★ | ★ | 80 | 80 | ★ | ★ | ★ | ★ | ★ | ★ | ★ | ★ | ★ |
| | | gG | **A** | ★ | ★ | ★ | ★ | ★ | ★ | ★ | 100 | 100 | ★ | ★ | ★ | ★ | ★ | ★ | ★ | ★ | ★ |
| | 400/415 V | aM | **A** | ★ | ★ | ★ | ★ | ★ | 63 | 63 | 80 | 80 | ★ | ★ | ★ | ★ | ★ | ★ | 100 | 100 | 100 |
| | | gG | **A** | ★ | ★ | ★ | ★ | ★ | 80 | 80 | 100 | 100 | ★ | ★ | ★ | ★ | ★ | ★ | 125 | 125 | 125 |
| | 440 V | aM | **A** | ★ | ★ | ★ | 50 | 50 | 50 | 50 | 63 | 63 | ★ | ★ | ★ | ★ | ★ | 50 | 63 | 80 | 80 |
| | | gG | **A** | ★ | ★ | ★ | 63 | 63 | 63 | 63 | 80 | 80 | ★ | ★ | ★ | ★ | ★ | 63 | 80 | 100 | 100 |
| | 500 V | aM | **A** | ★ | ★ | ★ | 50 | 50 | 50 | 50 | 50 | 50 | ★ | ★ | ★ | ★ | 50 | 50 | 50 | 50 | 50 |
| | | gG | **A** | ★ | ★ | ★ | 63 | 63 | 63 | 63 | 63 | 63 | ★ | ★ | ★ | ★ | 63 | 63 | 63 | 63 | 63 |
| | 690 V | aM | **A** | ★ | 16 | 25 | 32 | 32 | 40 | 40 | 40 | 40 | ★ | 20 | 25 | 40 | 40 | 50 | 50 | 50 | 50 |
| | | gG | **A** | ★ | 20 | 32 | 40 | 40 | 50 | 50 | 50 | 50 | ★ | 25 | 32 | 50 | 50 | 63 | 63 | 63 | 63 |

*★ > 100 kA.*
*(1) As % of Icu.*