**G1G170-AB31-03**

# EC centrifugal fan

backward curved, single inlet

with housing (flange), Gas blower for gas-condensing heating

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ErP2015 EXCEEDS THE NORM

## Nominal data

| | | |
|---|---|---|
| **Type** | **G1G170-AB31-03** | |
| **Motor** | **M1G074-CF** | |
| Phase | | 1~ |
| Nominal voltage | VAC | 230 |
| Frequency | Hz | 50 |
| Type of data definition | | fa |
| Speed (rpm) | $min^{-1}$ | 5650 |
| Power input | W | 315 |
| Current draw | A | 2.15 |
| Min. ambient temperature | °C | -25 |
| Max. ambient temperature | °C | 55 |

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

## Data according to ErP directive

| | | Actual | Request 2015 |
|---|---|---|---|
| 01 Overall efficiency $\eta_{es}$ | % | 61.3 | 44.9 |
| 02 Measurement category | | A | |
| 03 Efficiency category | | Static | |
| 04 Efficiency grade N | | 77.4 | 61 |
| 05 Variable speed drive | | Yes | |

| | | |
|---|---|---|
| 09 Power input $P_{ed}$ | kW | 0.29 |
| 09 Air flow $q_v$ | $m^3/h$ | 370 |
| 09 Pressure increase $p_{fs}$ | Pa | 1601 |
| 10 Speed (rpm) n | $min^{-1}$ | 5960 |
| 11 Specific ratio* | | 1.02 |

Data definition with optimum efficiency.
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

* Specific ratio = 1 + $p_{fs}$ / 100 000 Pa

LU-48240

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## Technical features

| | |
|---|---|
| **Mass** | 4.5 kg |
| **Size** | 170 mm |
| **Surface of rotor** | Coated in black |
| **Material of protective cover** | Polyflam RPP 374-ND CS1 (UL 97-V0) |
| **Material of impeller** | Aluminium sheet |
| **Housing material** | Die-cast aluminium |
| **Direction of rotation** | Clockwise, seen on rotor |
| **Type of protection** | IP 20 |
| **Insulation class** | "B" |
| **Max. permissible ambient motor temp. (transp./ storage)** | + 80 °C |
| **Min. permissible ambient motor temp. (transp./storage)** | - 40 °C |
| **Mounting position** | Any |
| **Cooling bore / aperture** | Rotor-side |
| **Premix** | If gas is premixed in the blower, a special blower must be used. |
| **Motor bearing** | Ball bearing |
| **Technical features** | - Tach output<br>- Motor current limit<br>- Emergency operation<br>- PWM control input<br>- Control interface with SELV potential safely disconnected from the mains<br>- Over-temperature protected motor |
| **Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)** | <= 3.5 mA |
| **Electrical leads** | With plug |
| **Motor protection** | Thermal overload protector (TOP) wired internally |
| **Product conforming to standard** | CE |
| **Approval** | CCC; CSA C22.2 No.113; UL 507; VDE |



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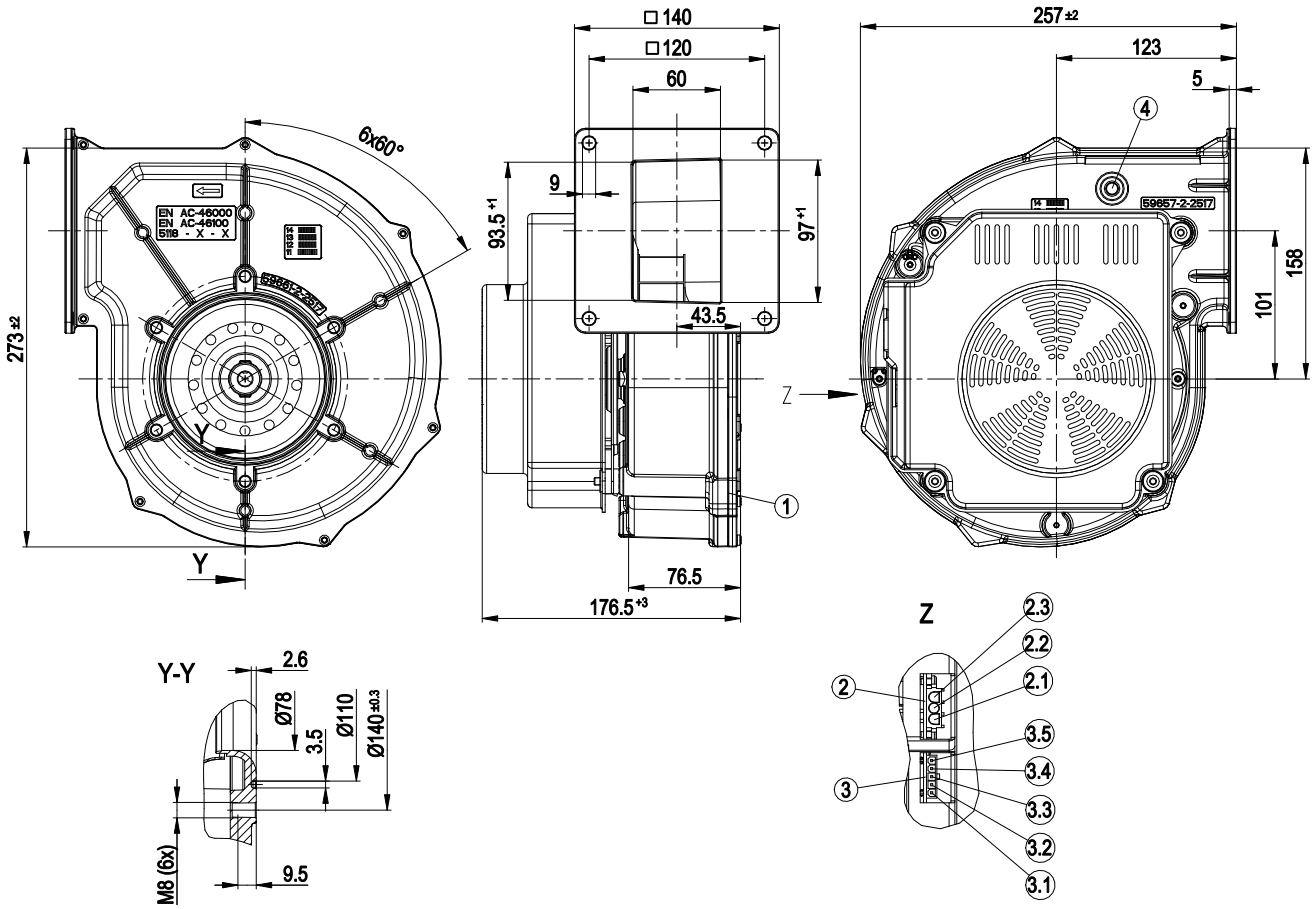
## Product drawing




| | |
|---|---|
| 1 | Housing side parts sealed with NBR round cord (pentane-resistant) |
| 2 | 3-pole strip, mating connector (not included in standard scope of delivery): tyco No. 350 766-1; female terminal: tyco No. 926 884-1 |
| 2.1 | L |
| 2.2 | N |
| 2.3 | PE |
| 3 | 5-pole strip; mating connector (not included in standard scope of delivery) Molex No. 39-01-4050, female connector Molex No. 39-00-0059 |
| 3.1 | (+) |
| 3.2 | Speed monitoring |
| 3.3 | Not assigned |
| 3.4 | PWM input |
| 3.5 | ( - ) |
| 4 | Bleeder connection for pressure relief possible |



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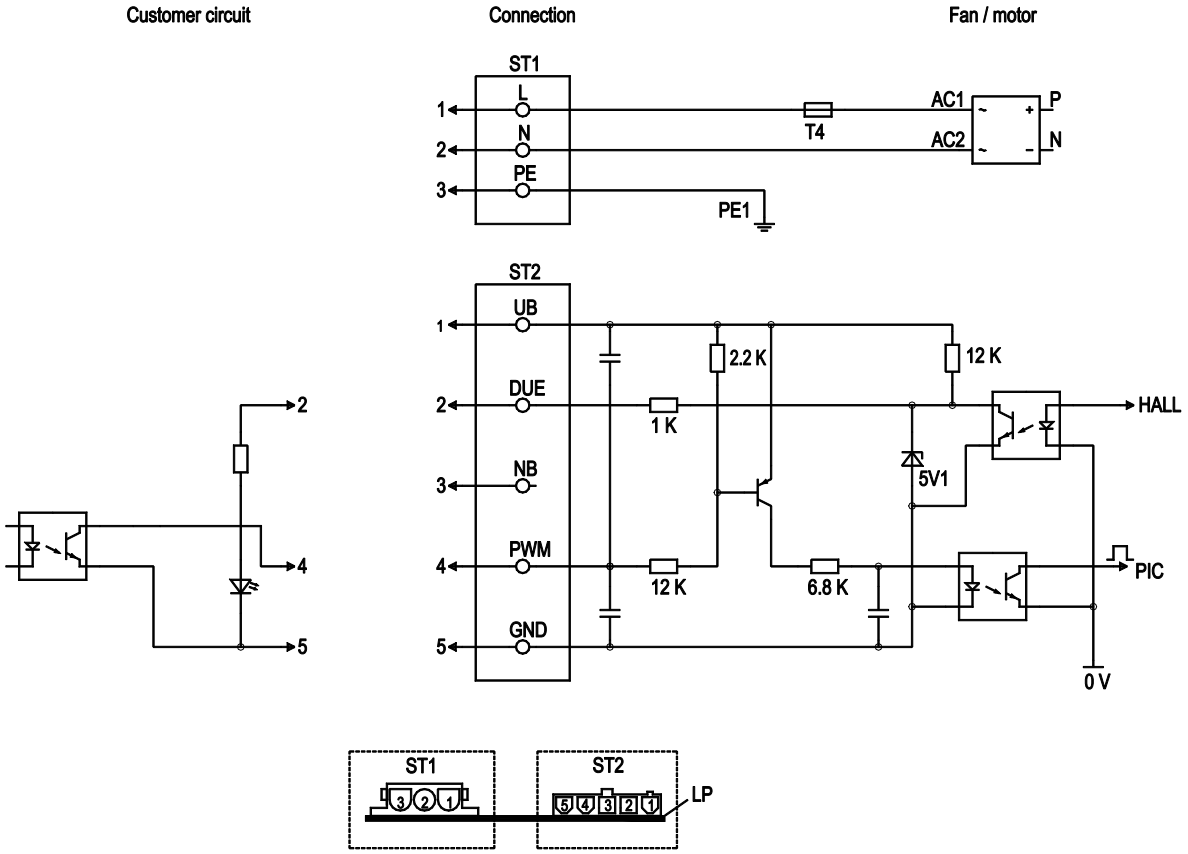
## Connection screen




| No. | Conn. | Designation | Function / assignment |
|---|---|---|---|
| ST1 | 1, 2, 3 | L, N, PE | Power supply 230 VAC, 50-60Hz, voltage range see rating plate, neutral, protective earth |
| ST2 | 1 | UB | External voltage 18 - 43 VDC |
| ST2 | 2 | Tach | Speed monitoring output connection, monitoring circuit output, 3 pulses per revolution, current source 2 mA |
| ST2 | 3 | N.C. | Not assigned |
| ST2 | 4 | PWM | PWM - 2 - 6 kHz control input, PWM on n = 100%, PWM low n = 0% |
| ST2 | 5 | GND | GND - Connection for control interface |



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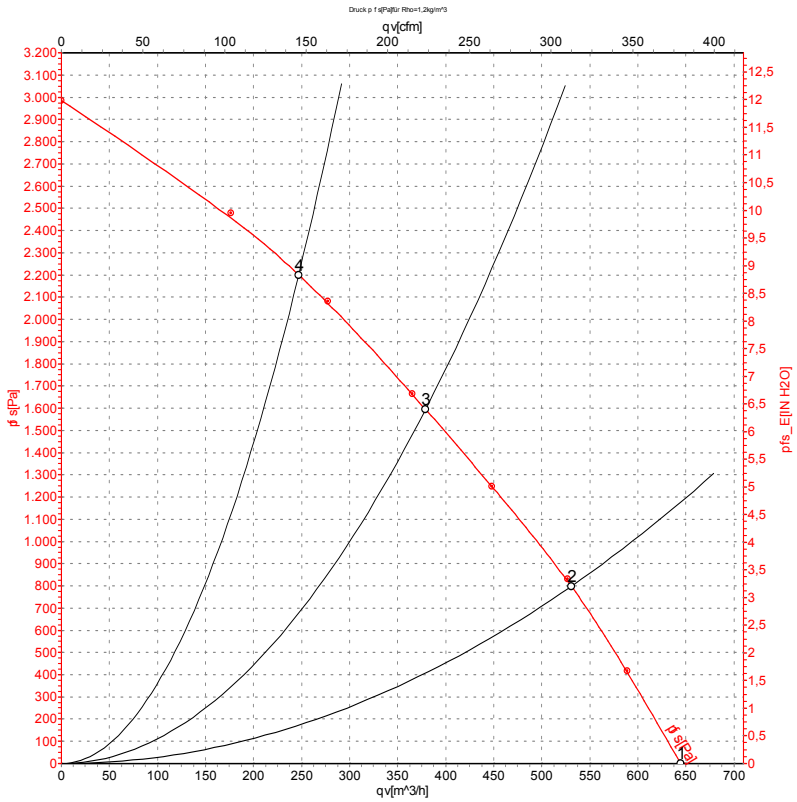
## Charts: Air flow 50 Hz




Measurement: LU-48240-1

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

## Measured values

| | U | f | n | $P_{ed}$ | I | qv | $p_{fs}$ | qv | $p_{fs}$ |
|---|---|---|---|---|---|---|---|---|---|
| | V | Hz | $min^{-1}$ | W | A | $m^3/h$ | Pa | CFM | inH2O |
| 1 | 230 | 50 | 5650 | 315 | 2.15 | 645 | 0 | 380 | 0.00 |
| 2 | 230 | 50 | 5740 | 315 | 2.15 | 530 | 800 | 315 | 3.21 |
| 3 | 230 | 50 | 5940 | 300 | 2.08 | 380 | 1600 | 225 | 6.42 |
| 4 | 230 | 50 | 6215 | 273 | 1.88 | 245 | 2200 | 145 | 8.83 |

U = Supply voltage · f = Frequency · n = Speed (rpm) · $P_{ed}$ = Power input · I = Current draw · qv = Air flow · $p_{fs}$ = Pressure increase



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