

G1G170-AB31-51

## EC centrifugal fan

backward curved, single inlet

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



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### Nominal data

|                           |                   |       |
|---------------------------|-------------------|-------|
| Type                      | G1G170-AB31-51    |       |
| Motor                     | M1G074-CF         |       |
| Phase                     |                   | 1~    |
| Nominal voltage           | VAC               | 230   |
| Frequency                 | Hz                | 50/60 |
| Type of data definition   |                   | ml    |
| Speed                     | min <sup>-1</sup> | 6530  |
| Power input               | W                 | 410   |
| Current draw              | A                 | 1.8   |
| Min. back pressure        | Pa                | 2000  |
| Min. ambient temperature  | °C                | - 25  |
| Max. ambient temperature  | °C                | +55   |
| Min. temp. of flow medium | °C                | -25   |
| Max. temp. of flow medium | °C                | +80   |

ml = max. load · me = max. efficiency · rfa = running at free air · cs = customer specs · cu = customer unit  
Subject to alterations



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## Technical features

|                                                         |                                                                                                                                                                                                |
|---------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mass                                                    | 4.7 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                                                                                                                                                                                     |
| Motor bearing                                           | Ball bearing                                                                                                                                                                                   |
| Technical features                                      | <ul style="list-style-type: none"> <li>- Tach output</li> <li>- Motor current limit</li> <li>- PFC, active</li> <li>- PWM control input</li> <li>- Over-temperature protected motor</li> </ul> |
| EMC interference immunity                               | Acc. to EN 61000-6-2                                                                                                                                                                           |
| EMC interference emission                               | Acc. to EN 61000-6-4 (industrial environment)                                                                                                                                                  |
| EMC harmonics                                           | Acc. to EN 61000-3-2/3                                                                                                                                                                         |
| Leakage current                                         | <= 3.5 mA                                                                                                                                                                                      |
| Electrical leads                                        | With plug                                                                                                                                                                                      |
| Motor protection                                        | Thermal overload protector (TOP) wired internally                                                                                                                                              |
| Product conforming to standard                          | CE                                                                                                                                                                                             |
| Approval                                                | CSA C22.2 Nr.113; UL 507                                                                                                                                                                       |

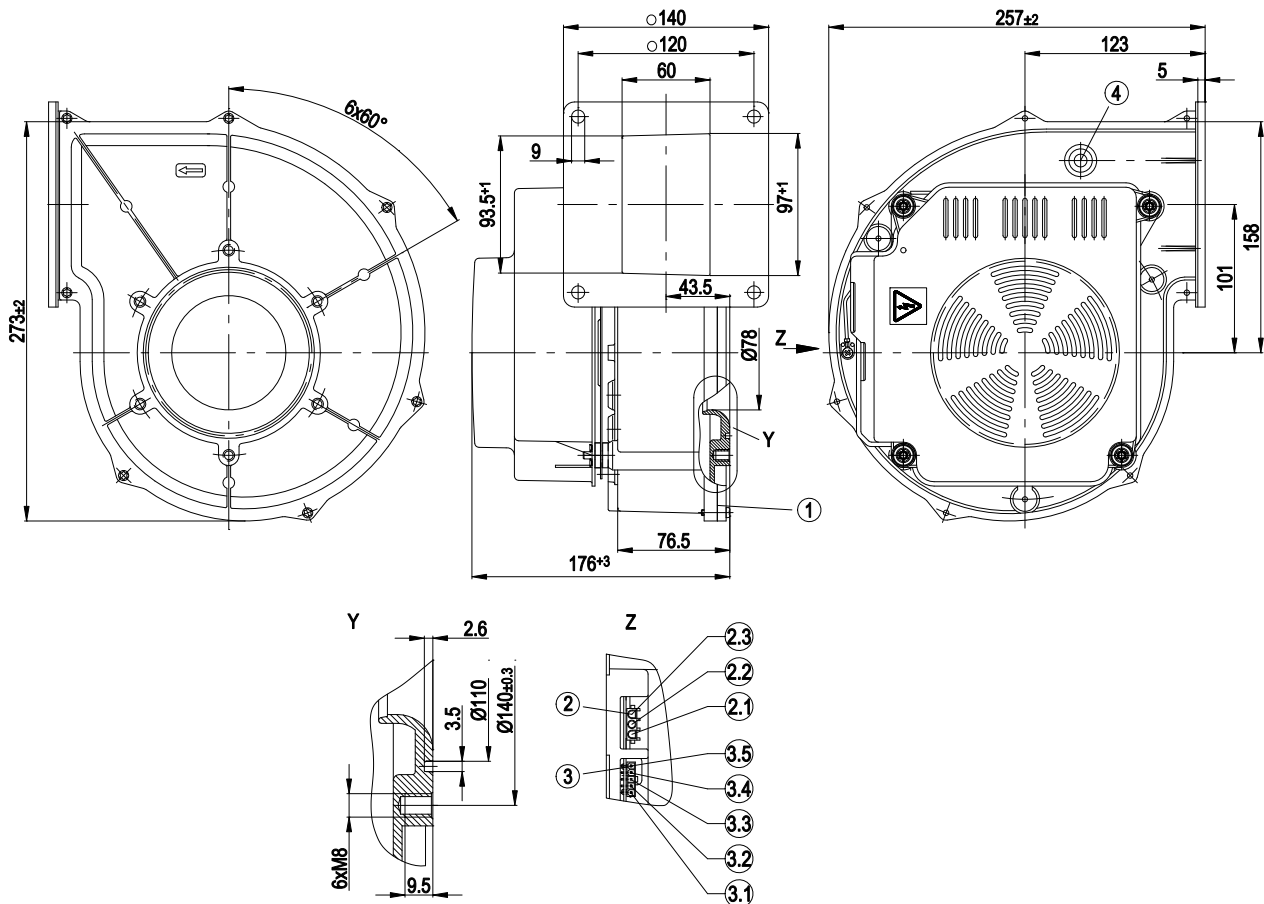


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## Product drawing



|     |                                                                                                                       |
|-----|-----------------------------------------------------------------------------------------------------------------------|
| 1   | Housing side parts sealed with NBR round cord (pentane-resistant)                                                     |
| 2   | 3-pole strip; mating connector (not included in delivery): tyco No. 350 766-1; female connector: No. 926 884-1        |
| 2.1 | L                                                                                                                     |
| 2.2 | N                                                                                                                     |
| 2.3 | PE                                                                                                                    |
| 3   | 5-pole strip; mating connector (not included in 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                                                                       |
| Z   | View Z                                                                                                                |

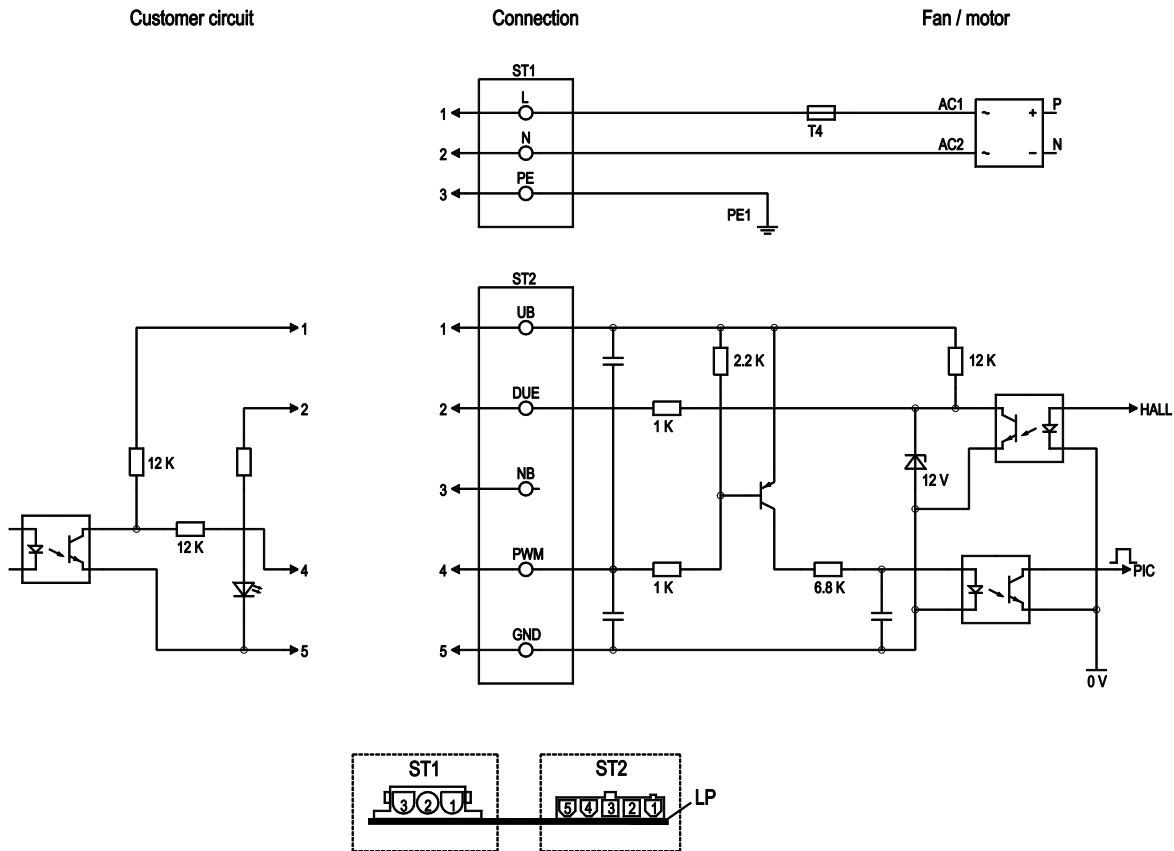


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## Connection screen



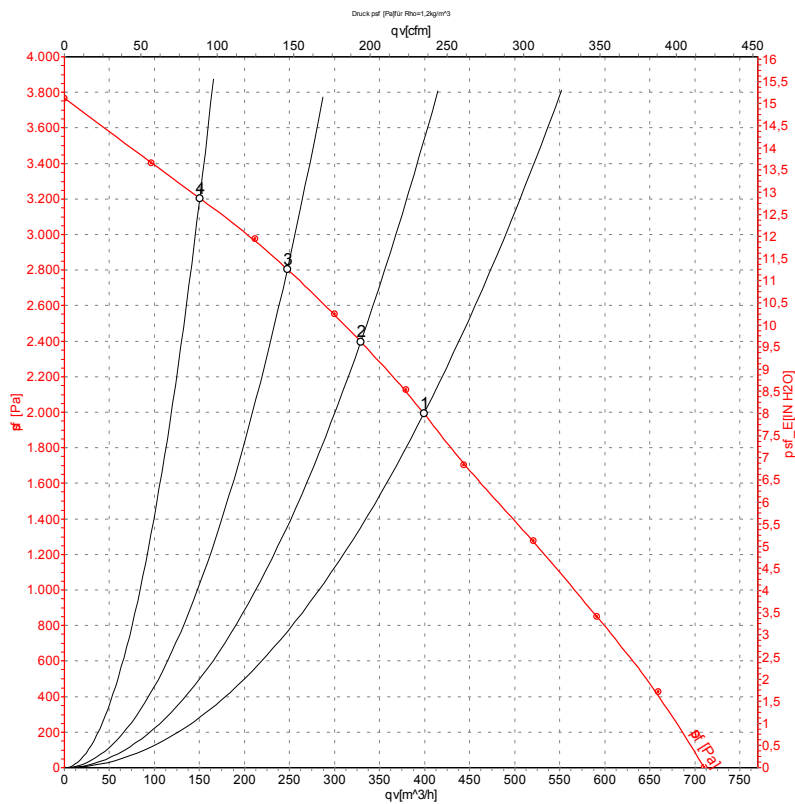
| No. | Pin     | Signal   | Function / assignment                                                                                       |
|-----|---------|----------|-------------------------------------------------------------------------------------------------------------|
| ST1 | 1, 2, 3 | L, N, PE | Power supply 230 VAC, 50-60 Hz, neutral conductor, protective earth                                         |
| ST2 | 1       | UB       | External voltage 24-45 VDC                                                                                  |
| ST2 | 2       | DUE      | Speed monitoring output connection, monitoring circuit output, 3 pulses per revolution, current source 1 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-56469

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: L<sub>WA</sub> measured as per ISO 13347 /  
L<sub>pA</sub> 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 <sub>e</sub> | I    | qv   | p <sub>st</sub> |
|---|-----|----|-------------------|----------------|------|------|-----------------|
|   | V   | Hz | min <sup>-1</sup> | W              | A    | m³/h | Pa              |
| 1 | 230 | 50 | 6530              | 410            | 1.80 | 380  | 2000            |
| 2 | 230 | 50 | 6665              | 400            | 1.75 | 330  | 2400            |
| 3 | 230 | 50 | 6915              | 370            | 1.62 | 250  | 2800            |
| 4 | 230 | 50 | 7250              | 326            | 1.44 | 150  | 3200            |

