

G1G170-AB53-03

EC centrifugal fan

backward curved, single inlet

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



G1G170-AB53-03 ebmpapst Datasheet FansCo

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Nominal data

| | | |
|---------------------------|-------------------|-------|
| Type | G1G170-AB53-03 | |
| Motor | M1G074-CF | |
| Phase | | 1~ |
| Nominal voltage | VAC | 230 |
| Frequency | Hz | 50/60 |
| Type of data definition | | fa |
| Speed | min ⁻¹ | 5830 |
| Power input | W | 360 |
| Current draw | A | 1.6 |
| 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 · fa = running at free air · cs = customer specs · cu = customer unit
Subject to alterations

Data according to ErP directive

| | |
|-----------------------|--------|
| Installation category | A |
| Efficiency category | Static |
| Variable speed drive | Yes |
| Specific ratio* | 1.02 |

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

| | Actual | Request 2013 | Request 2015 |
|--------------------------------|-------------------|--------------|--------------|
| Overall efficiency η_{es} | 58.8 | 42 | 45 |
| Efficiency grade N | 74.8 | 58 | 61 |
| Power input P_{ed} | kW | 0.3 | |
| Air flow q_v | m ³ /h | 285 | |
| Pressure increase p_{fs} | Pa | 2000 | |
| Speed n | min ⁻¹ | 6220 | |

Data established at point of optimum efficiency



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Technical features

| | |
|---|--|
| Mass | 4.47 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 | Aluminum 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 |
| Operation mode | S1 |
| Motor bearing | Ball bearing |
| Technical features | <ul style="list-style-type: none"> - PFC, active - PWM control input - Motor current limit - Tach output - Over-temperature protected motor |
| EMC interference immunity | Acc. to EN 61000-6-2 (industrial environment) |
| EMC harmonics | Acc. to EN 61000-3-2/3 |
| EMC interference emission | Acc. to EN 61000-6-3 (household environment) |
| 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 |
| Approval | UL 507; CSA C22.2 Nr.113 |

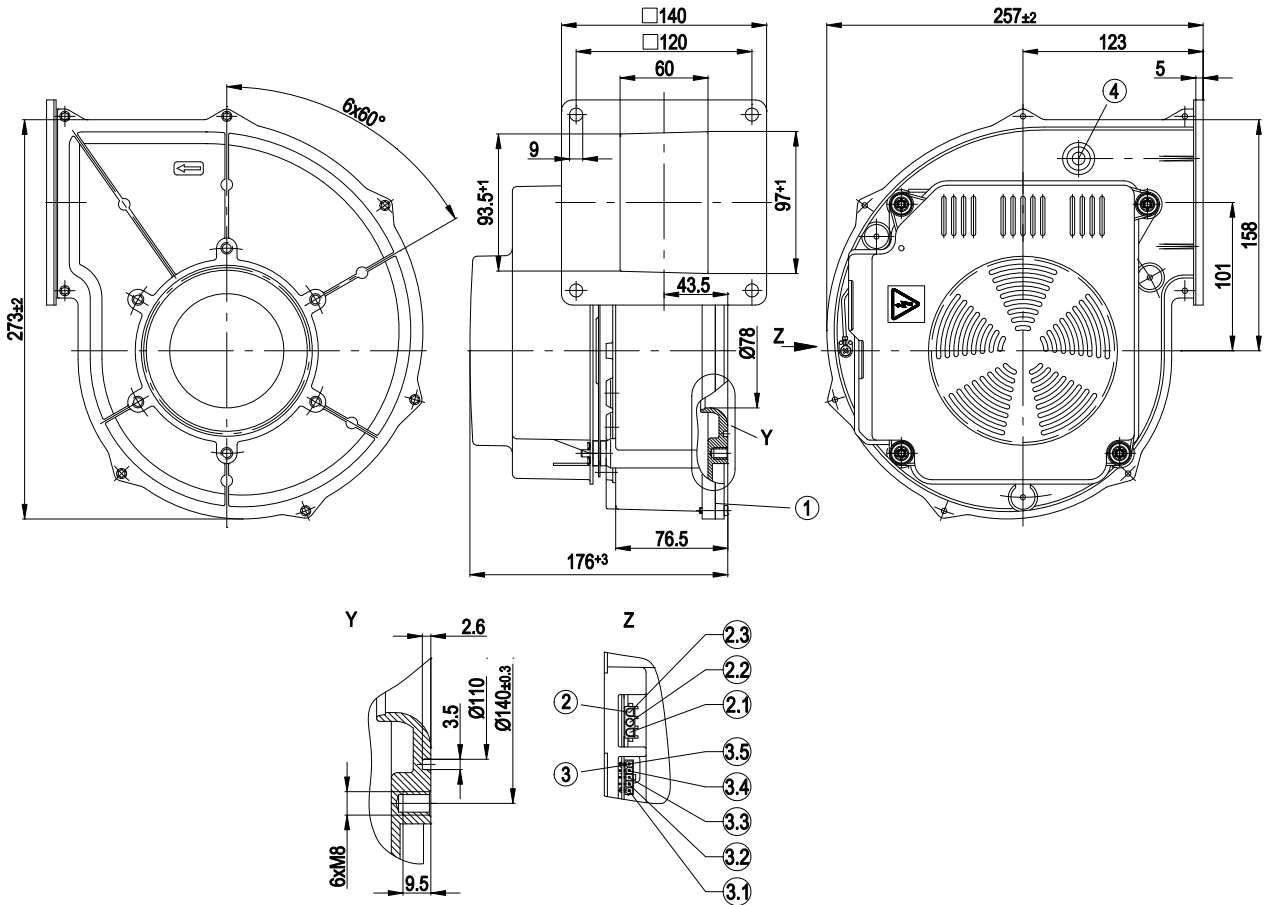


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Product drawing



| | |
|-----|---|
| 1 | Housing side parts sealed with NBR round cord (pentane-resistant) |
| Z | View Z |
| 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 |

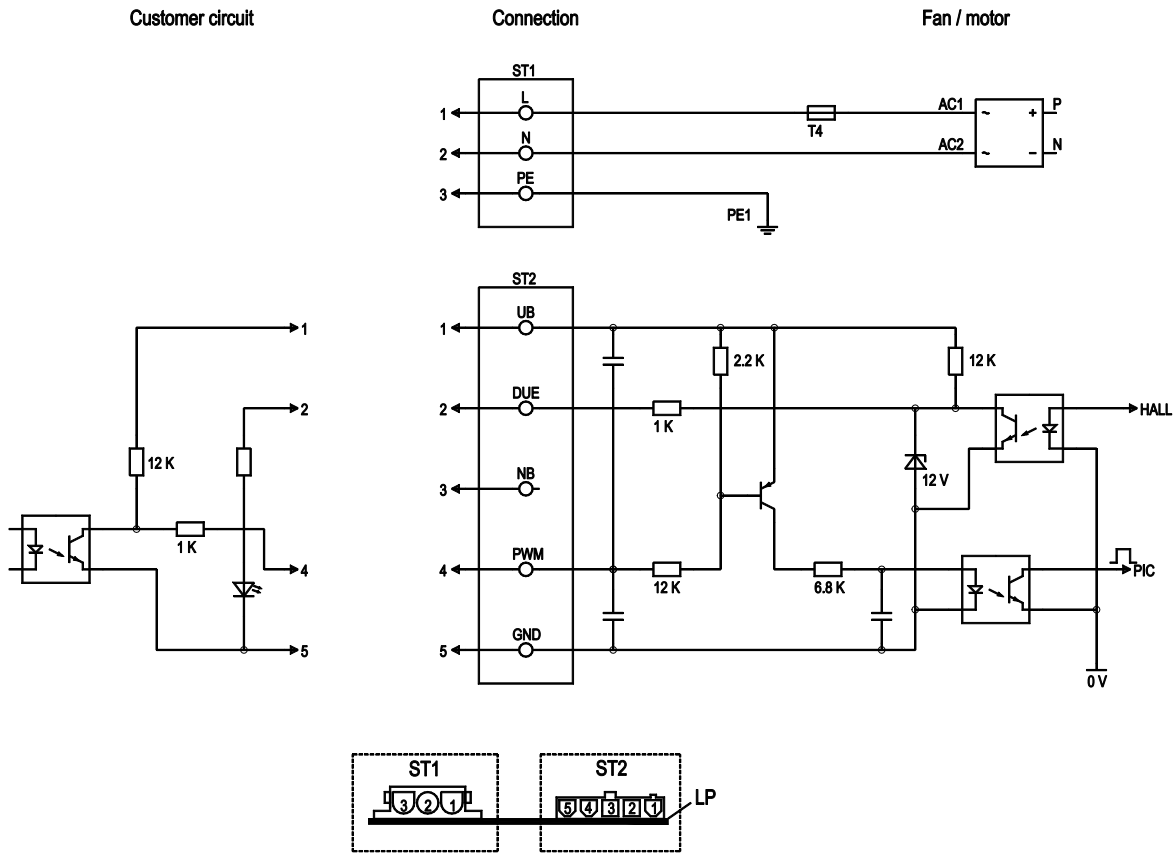


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Connection screen



| 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 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 |

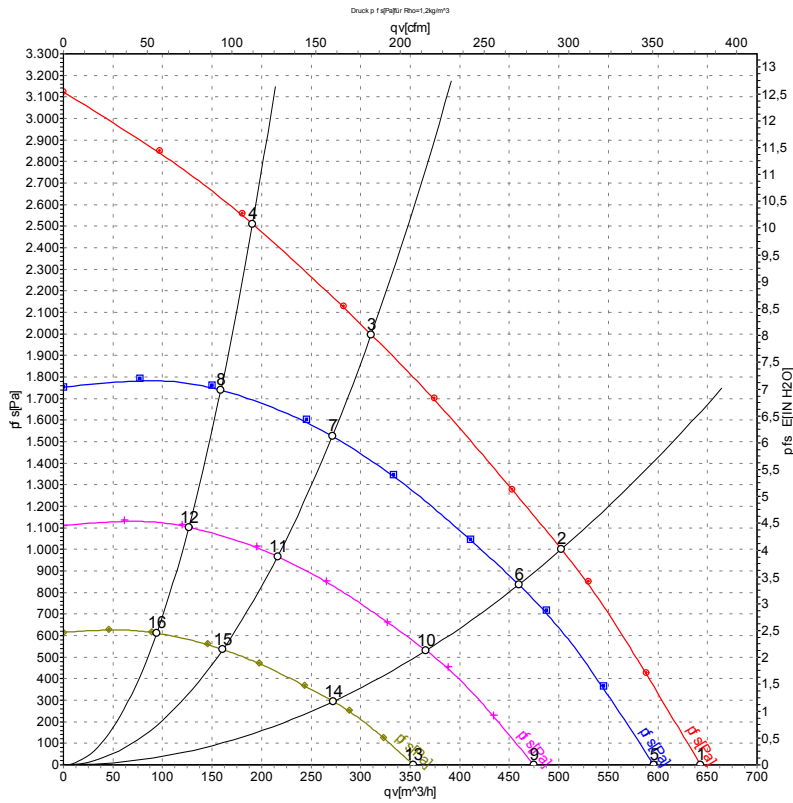


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Charts: Air flow 50 Hz



Measurement: LU-57509

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebmpapst. 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} |
|----|-----|----|-------------------|-----------------|------|-------------------|-----------------|
| | V | Hz | min ⁻¹ | W | A | m ³ /h | Pa |
| 1 | 230 | 50 | 5830 | 360 | 1.60 | 645 | 0 |
| 2 | 230 | 50 | 5905 | 346 | 1.52 | 505 | 1000 |
| 3 | 230 | 50 | 6175 | 308 | 1.35 | 310 | 2000 |
| 4 | 230 | 50 | 6480 | 268 | 1.18 | 190 | 2500 |
| 5 | 230 | 50 | 5400 | 287 | 1.26 | 595 | 0 |
| 6 | 230 | 50 | 5400 | 265 | 1.16 | 460 | 838 |
| 7 | 230 | 50 | 5400 | 206 | 0.91 | 270 | 1527 |
| 8 | 230 | 50 | 5400 | 156 | 0.68 | 160 | 1747 |
| 9 | 230 | 50 | 4300 | 145 | 0.63 | 475 | 0 |
| 10 | 230 | 50 | 4300 | 134 | 0.59 | 365 | 531 |
| 11 | 230 | 50 | 4300 | 104 | 0.46 | 215 | 968 |
| 12 | 230 | 50 | 4300 | 79 | 0.34 | 125 | 1108 |
| 13 | 230 | 50 | 3200 | 60 | 0.26 | 355 | 0 |
| 14 | 230 | 50 | 3200 | 55 | 0.24 | 270 | 294 |
| 15 | 230 | 50 | 3200 | 43 | 0.19 | 160 | 536 |
| 16 | 230 | 50 | 3200 | 32 | 0.14 | 95 | 614 |

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

