**K3G097-AS82-07**

# EC dual centrifugal fan

forward-curved, with brushless DC motor

with housing, Automotive



**ebm-papst Mulfingen GmbH & Co. KG**
Bachmühle 2 · D-74673 Mulfingen
Phone +49 7938 81-0
Fax +49 7938 81-110
info1@de.ebmpapst.com
www.ebmpapst.com

Limited partnership · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRB 590142

## Nominal data

| | |
|---|---|
| **Type** | **K3G097-AS82-07** |
| **Motor** | **M3G084-BF** |

| | | |
|---|---|---|
| Nominal voltage | VDC | 26 |
| Nominal voltage range | VDC | 16 .. 32 |
| Frequency | Hz | DC |
| Method of obtaining data | | ml |
| Speed (rpm) | $min^{-1}$ | 4680 |
| Power consumption | W | 740 |
| Current draw | A | 28 |
| Min. back pressure | Pa | 0 |
| Min. back pressure | in. wg | 0 |
| Min. ambient temperature | °C | -40 |
| Max. ambient temperature | °C | 70 |

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

## Data according to Commission Regulation (EU) 327/2011

| | | Actual | Req. 2015 |
|---|---|---|---|
| 01 Overall efficiency $\eta_{es}$ | % | 45.4 | 35.2 |
| 02 Measurement category | | A | |
| 03 Efficiency category | | Static | |
| 04 Efficiency grade N | | 54.2 | 44 |
| 05 Variable speed drive | | Yes | |

| | | |
|---|---|---|
| 09 Power consumption $P_e$ | kW | 0.4 |
| 09 Air flow $q_v$ | $m^3/h$ | 725 |
| 09 Pressure increase $p_{fs}$ | Pa | 817 |
| 10 Speed (rpm) n | $min^{-1}$ | 5510 |
| 11 Specific ratio* | | 1.01 |

Data obtained at optimum efficiency level.
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

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

LU-175168

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## Technical description

| | |
|---|---|
| **Weight** | 2 kg |
| **Fan size** | 97 mm |
| **Impeller material** | PA plastic |
| **Housing material** | PP plastic |
| **Balancing grade according to DIN ISO 1940-1** | G 2.5 |
| **Direction of rotation** | Clockwise, viewed toward rotor |
| **Degree of protection** | IP24 KM; (Motor); electronics IP 6K9K |
| **Insulation class** | "B" |
| **Moisture (F) / Environmental (H) protection class** | H4 |
| **Max. permitted ambient temp. for motor (transport/storage)** | +85 °C |
| **Min. permitted ambient temp. for motor (transport/storage)** | -40 °C |
| **Installation position** | Any |
| **Condensation drainage holes** | None, open rotor |
| **Mode** | S1 |
| **Motor bearing** | Ball bearing; (sealed) |
| **Life expectancy** | 40,000 h (typical) |
| **Technical features** | - Load dump (58 V)<br>- Motor current limitation<br>- Soft start<br>- Control input 0-10 VDC / PWM<br>- Temperature derating<br>- Thermal overload protection for electronics |
| **Electrical hookup** | With plug; Standby current less than 500 µA |
| **Motor protection** | Reverse polarity and locked-rotor protection |
| **Approval** | EAC |



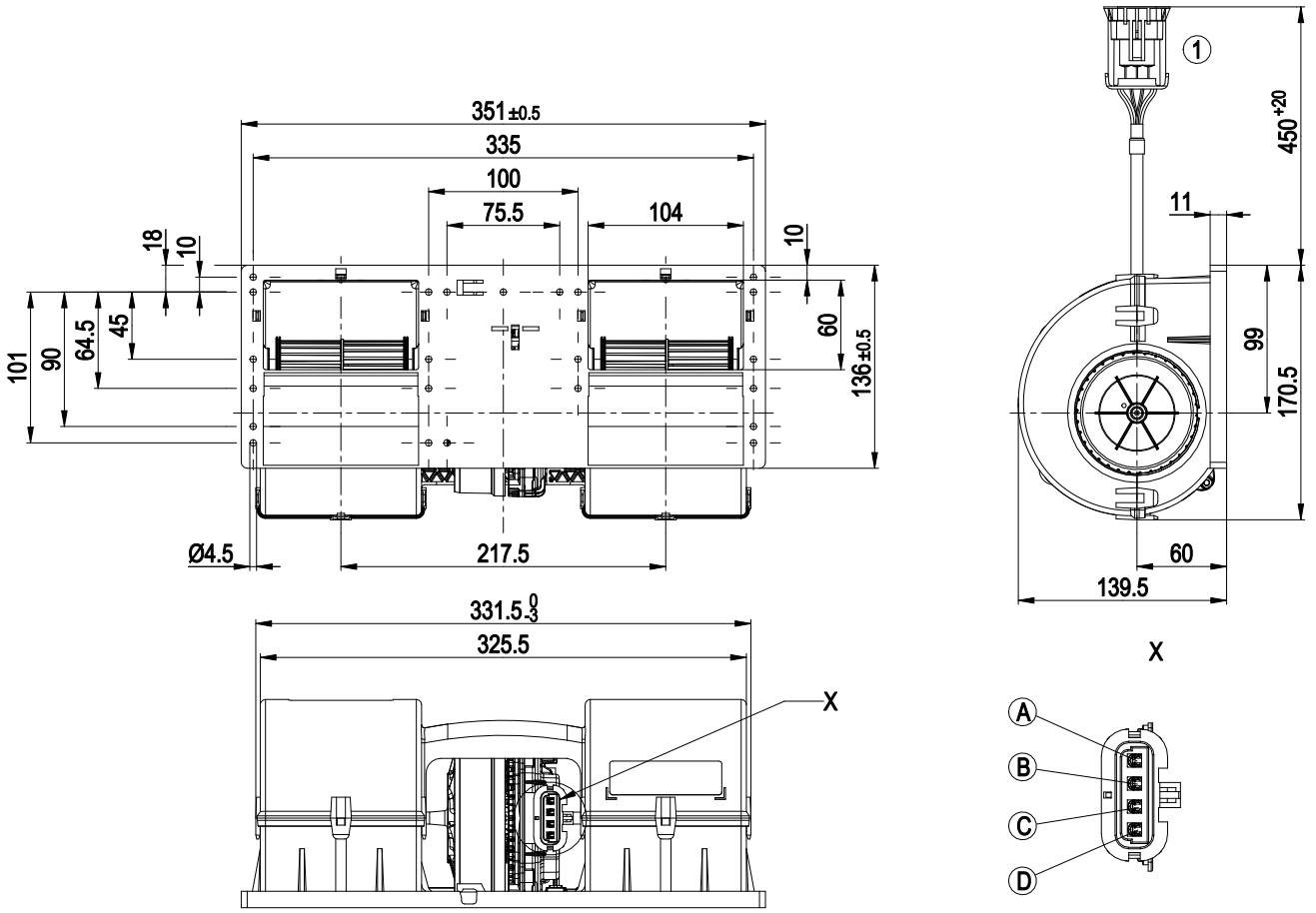
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## Product drawing




| | |
|---|---|
| 1 | Cable with 4-pole plug Packard Electric 12129600, coded |
| A | + UB |
| D | GND |
| B | PWM/LIN |
| C | Diagnostic output |



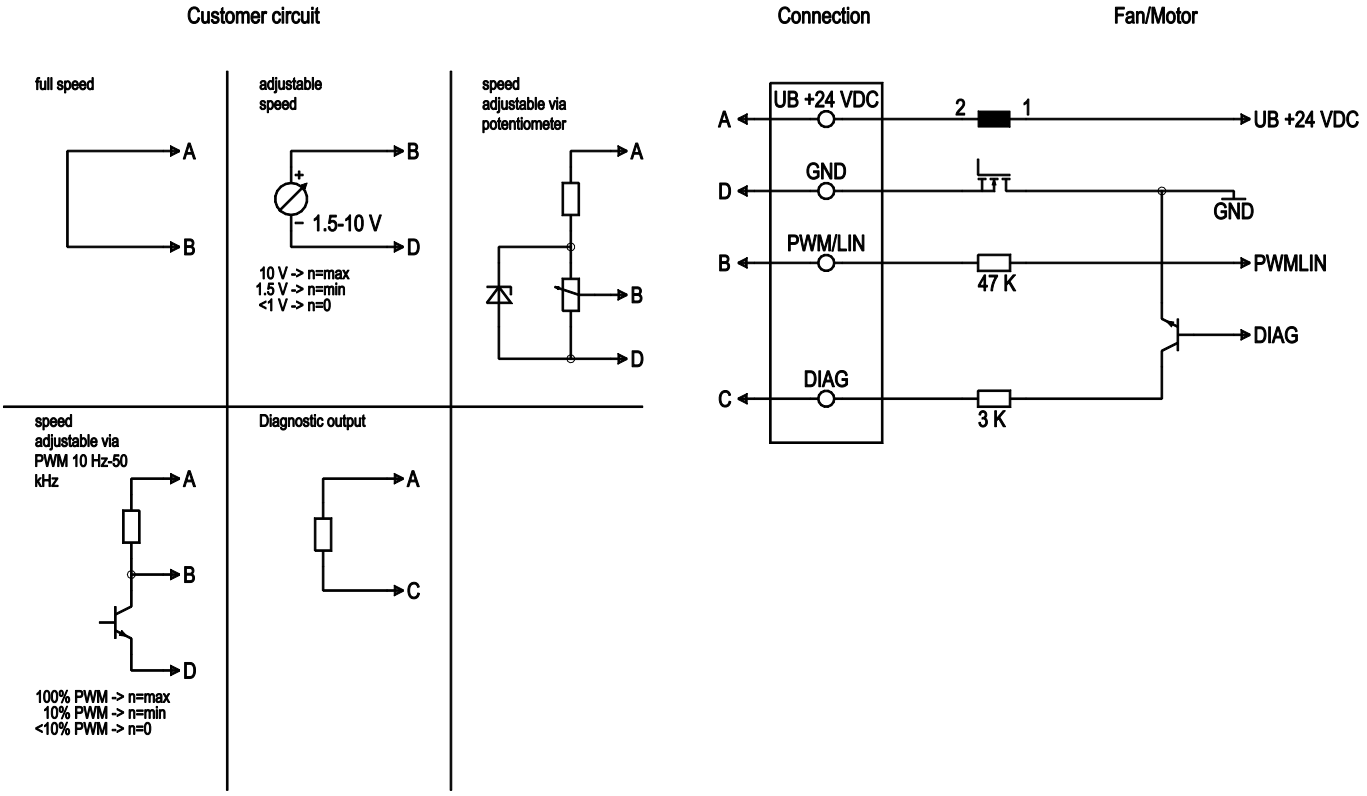
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## Connection diagram




| No. | Conn. | Designation | Function/assignment |
|---|---|---|---|
| | A | UB +24 VDC | Power supply 24 VDC |
| | D | GND | Power supply GND, reference ground |
| | B | PWM/LIN | Analog voltage control input 0-10 V or PWM |
| | C | DIAG | Fan OK: high, fan error: low, Isink max = 10 mA |



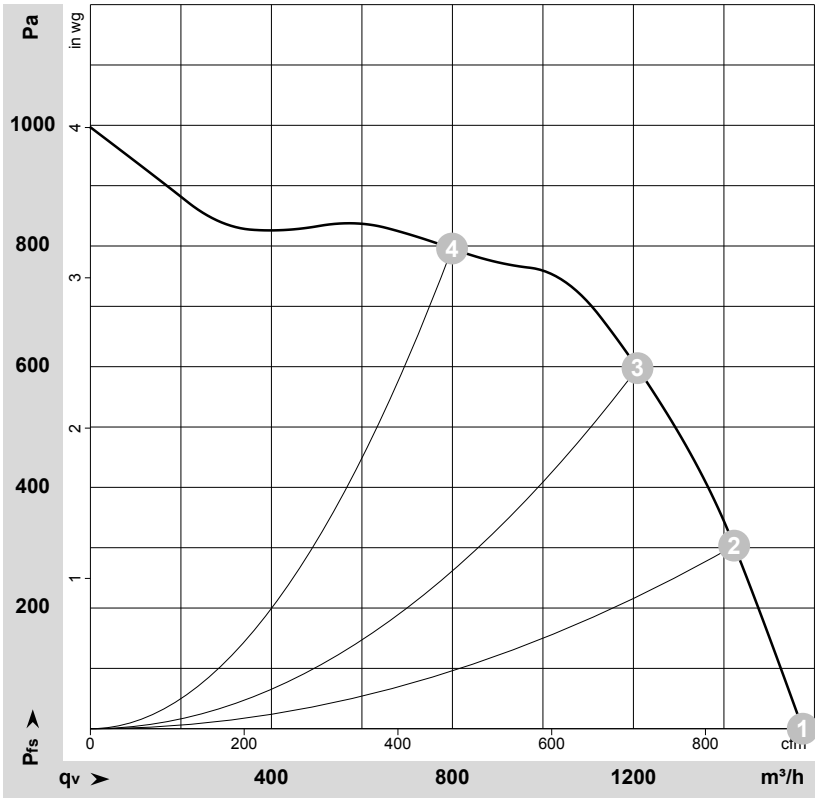
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## Curves: Air performance




ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-175168-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

## Measured values

| | U | n | $P_{ed}$ | I | $LpA_{in}$ | $LwA_{in}$ | $q_V$ | $p_{fs}$ | $q_V$ | $p_{fs}$ |
|---|---|---|---|---|---|---|---|---|---|---|
| | V | $min^{-1}$ | W | A | dB(A) | dB(A) | $m^3/h$ | Pa | cfm | in. wg |
| 1 | 26 | 4680 | 740 | 28.00 | 78 | 88 | 1575 | 0 | 925 | 0.00 |
| 2 | 26 | 5025 | 740 | 28.00 | 76 | 87 | 1425 | 300 | 840 | 1.20 |
| 3 | 26 | 5380 | 659 | 25.31 | 75 | 85 | 1210 | 600 | 710 | 2.41 |
| 4 | 26 | 5500 | 441 | 16.92 | 73 | 84 | 800 | 800 | 470 | 3.21 |

U = Power supply · n = Speed (rpm) · $P_{ed}$ = Power consumption · I = Current draw · $LpA_{in}$ = Sound pressure level intake side · $LwA_{in}$ = Sound power level intake side · $q_V$ = Air flow
$p_{fs}$ = Pressure increase



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