**W3G300-ER38-45**

# EC axial fan

with brushless DC motor

Automotive

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## Nominal data

| | |
|---|---|
| **Type** | **W3G300-ER38-45** |
| **Motor** | **M3G074-CF** |

| | | |
|---|---|---|
| Nominal voltage | VDC | 27.5 |
| Nominal voltage range | VDC | 15 .. 32 |
| Method of obtaining data | | fa/ce |
| Speed (rpm) | $min^{-1}$ | 3320 |
| Power consumption | W | 335 |
| Current draw | A | 12.2 |
| 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

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## Technical description

| | |
|---|---|
| **Weight** | 2.5 kg |
| **Size** | 300 mm |
| **Motor size** | 74 |
| **Impeller material** | PBT plastic |
| **Fan housing material** | PP plastic |
| **Number of blades** | 5 |
| **Airflow direction** | A |
| **Balancing grade according to DIN ISO 21940-11** | G 10 |
| **Direction of rotation** | Clockwise, viewed toward rotor |
| **Degree of protection** | Motor IP24 KM |
| **Insulation class** | "B" |
| **Moisture (F) / Environmental (H) protection class** | H2 |
| **Ambient temperature note** | Occasional start-up at temperatures between -40°C and -25°C is permitted. For continuous operation at ambient temperatures below -25°C (such as refrigeration applications), use must be made of a fan design with special low-temperature bearings. |
| **Max. permitted ambient temp. for motor (transport/storage)** | +70 °C |
| **Min. permitted ambient temp. for motor (transport/storage)** | -40 °C |
| **Installation position** | Any |
| **Cooling hole/opening** | On rotor side |
| **Mode** | S1 |
| **Motor bearing** | Ball bearing; (sealed) |
| **Life expectancy** | 25,000 h (depending on load profile and ambient conditions) |
| **Technical features** | - Start at 85 °C (2 min permitted)<br>- Load dump protection<br>- Motor current limitation<br>- Soft start<br>- Control input 0-5 VDC<br>- Standstill on cable break<br>- Overvoltage detection<br>- Thermal overload protection for electronics<br>- Undervoltage detection |
| **EMC regulations** | According to ECE R10 Rev. 3 |
| **Electrical hookup** | Connector with cable; Standby current less than 500 µA |
| **Motor protection** | Reverse polarity and locked-rotor protection |
| **With cable** | Lateral |
| **Protection class assignment** | III; Requires supply with safety extra-low voltage SELV.<br>This component for installation may have several local protection classes. This information relates to this component's basic design.<br>The final protection class is based on the component's intended installation and connection. |
| **Approval** | E1; EAC |
| **Comment** | Type approval number – 036433 |



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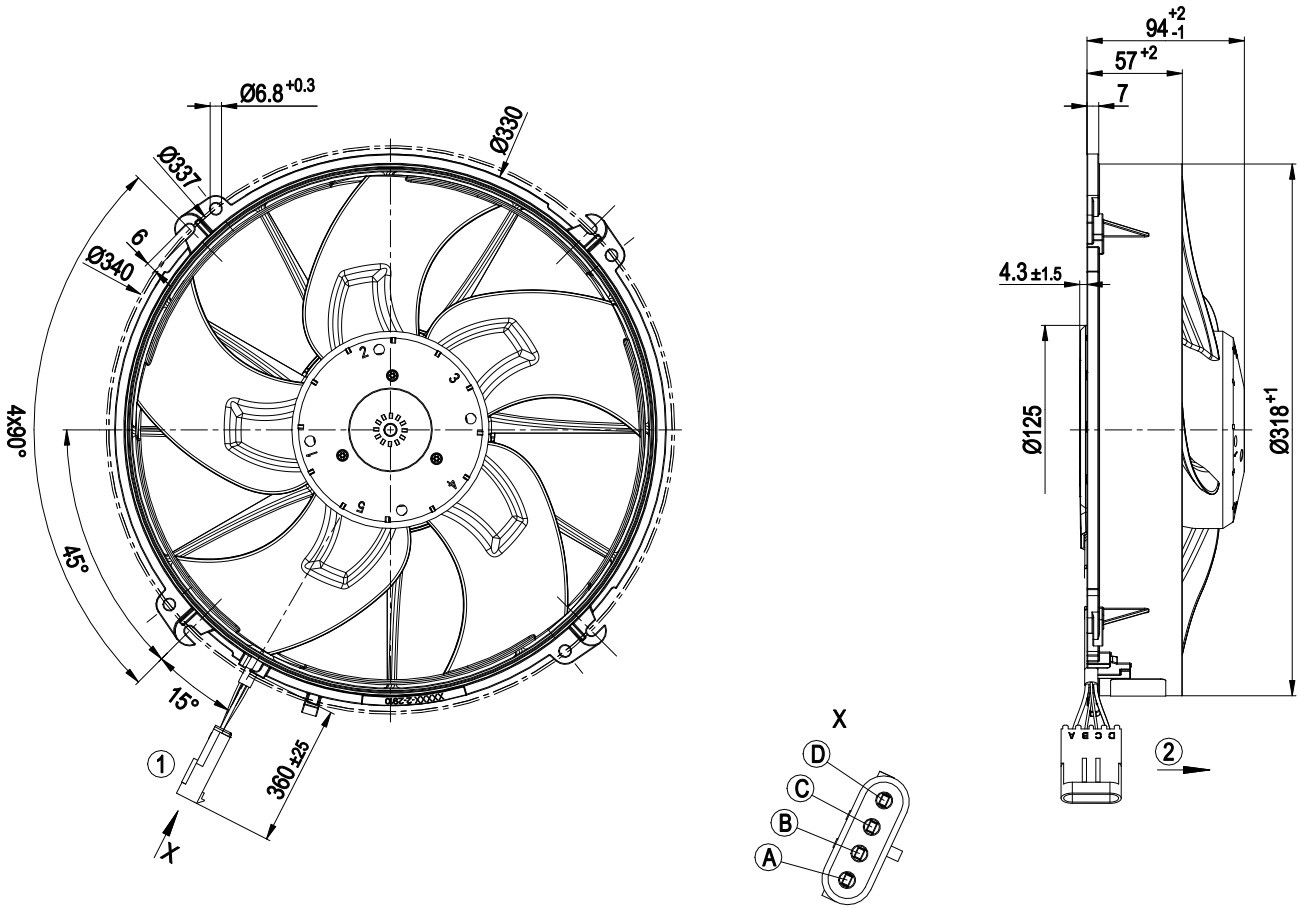
## Product drawing




| | |
|---|---|
| 1 | Cable with 4-pole coded plug Packard Electric 12010974 |
| 2 | Direction of air flow "A" |
| A | + UB (red) |
| B | PWM/LIN (blue) |
| C | CGND (white) |
| D | GND (black) |
| | Socket on customer circuit: |
| | Housing: Packard 12015797 |
| | Plug contacts: Packard 120 89188 and Packard 121 24580 |
| | Seal: Packard 153 24982 and Packard 153 24983 |



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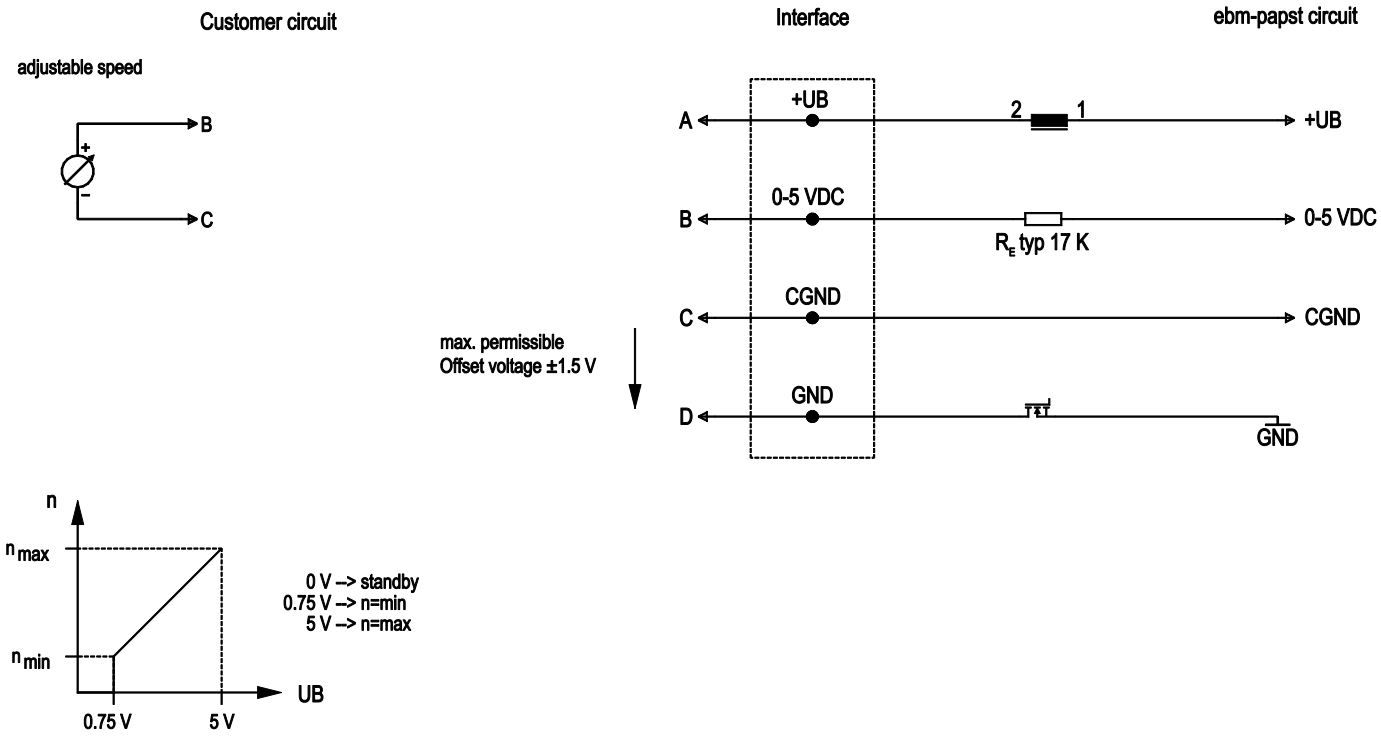
## Connection diagram




| No. | Conn. | Designation | Function/assignment |
|---|---|---|---|
| | A | +UB | Power supply |
| | B | 0-5 VDC | Analog voltage control input 0-5 V |
| | C | CGND | Control input reference ground, permissible offset ±1.5 V |
| | D | GND | Power supply GND, reference ground |



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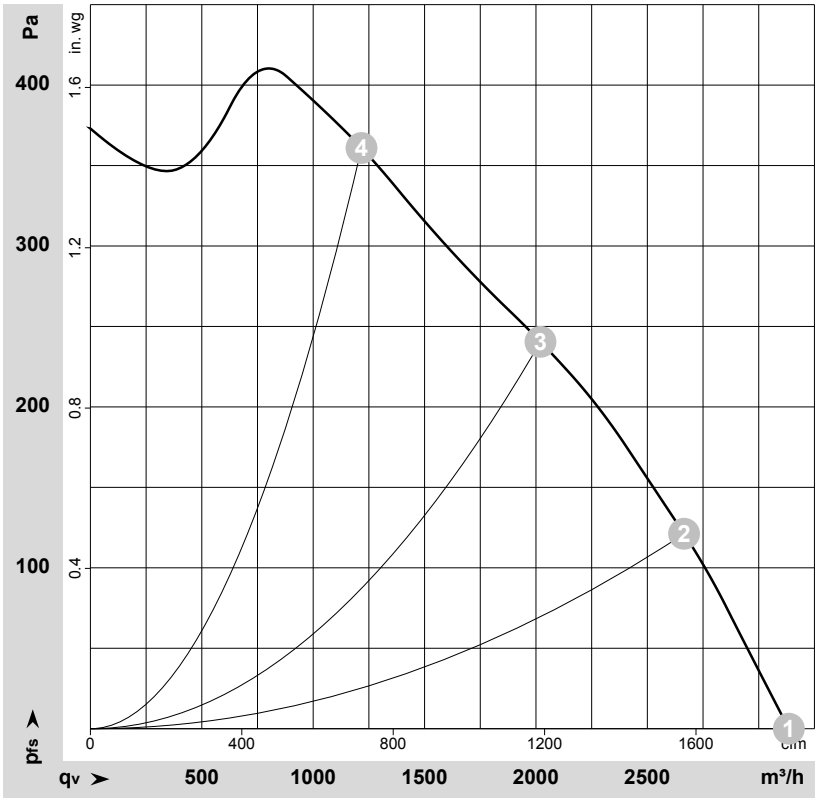
## Curves: Air performance




ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-67589-1

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 | $q_V$ | $p_{fs}$ | $q_V$ | $p_{fs}$ |
|---|---|---|---|---|---|---|---|---|
| | V | $min^{-1}$ | W | A | $m^3/h$ | Pa | cfm | in. wg |
| 1 | 27.5 | 3320 | 335 | 12.20 | 3135 | 0 | 1845 | 0.00 |
| 2 | 27.5 | 3290 | 356 | 12.91 | 2665 | 120 | 1570 | 0.48 |
| 3 | 27.5 | 3255 | 368 | 13.36 | 2020 | 240 | 1190 | 0.96 |
| 4 | 27.5 | 3150 | 421 | 15.27 | 1215 | 360 | 715 | 1.45 |

U = Voltage · n = Speed (rpm) · $P_{ed}$ = Power consumption · I = Current draw · $q_V$ = Air flow · $p_{fs}$ = Pressure increase



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