**W3G300-EQ30-50**

# EC axial fan

with brushless DC motor

for rail applications



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## Nominal data

| | | |
|---|---|---|
| **Type** | **W3G300-EQ30-50** | |
| **Motor** | **M3G074-CF** | |
| Nominal voltage | VDC | 26 |
| Nominal voltage range | VDC | 16 .. 32 |
| Method of obtaining data | | fa |
| Speed (rpm) | $min^{-1}$ | 2840 |
| Power consumption | W | 180 |
| Current draw | A | 7.0 |
| Min. ambient temperature | °C | -40 |
| Max. ambient temperature | °C | 85 |

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** | 2.6 kg |
| **Size** | 300 mm |
| **Motor size** | 74 |
| **Rotor surface** | Painted black |
| **Impeller material** | PBT plastic UL94 HB (black) |
| **Fan housing material** | PP plastic |
| **Number of blades** | 5 |
| **Airflow direction** | V |
| **Direction of rotation** | Clockwise, viewed toward rotor |
| **Degree of protection** | Motor IP24 KM, electronics IP6K9K |
| **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 |
| **Condensation drainage holes** | None, open rotor |
| **Cooling hole/opening** | On rotor side |
| **Mode** | S1 |
| **Motor bearing** | Ball bearing; (sealed) |
| **Life expectancy** | 25,000 h (typical) |
| **Technical features** | - Lowering input<br>- Tach output<br>- Fault output (high-side switch max. 30 mA)<br>- INVLIN (inverse linear control input)<br>- Load dump (58 V)<br>- Motor current limitation<br>- Soft start<br>- Control input 0-10 VDC/PWM<br>- Standstill in the case of open circuit<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 |
| **Motor protection** | Reverse polarity and locked-rotor protection |
| **With cable** | Lateral |
| **Approval** | E1; EAC |
| **Comment** | Type approval number – 036433 |



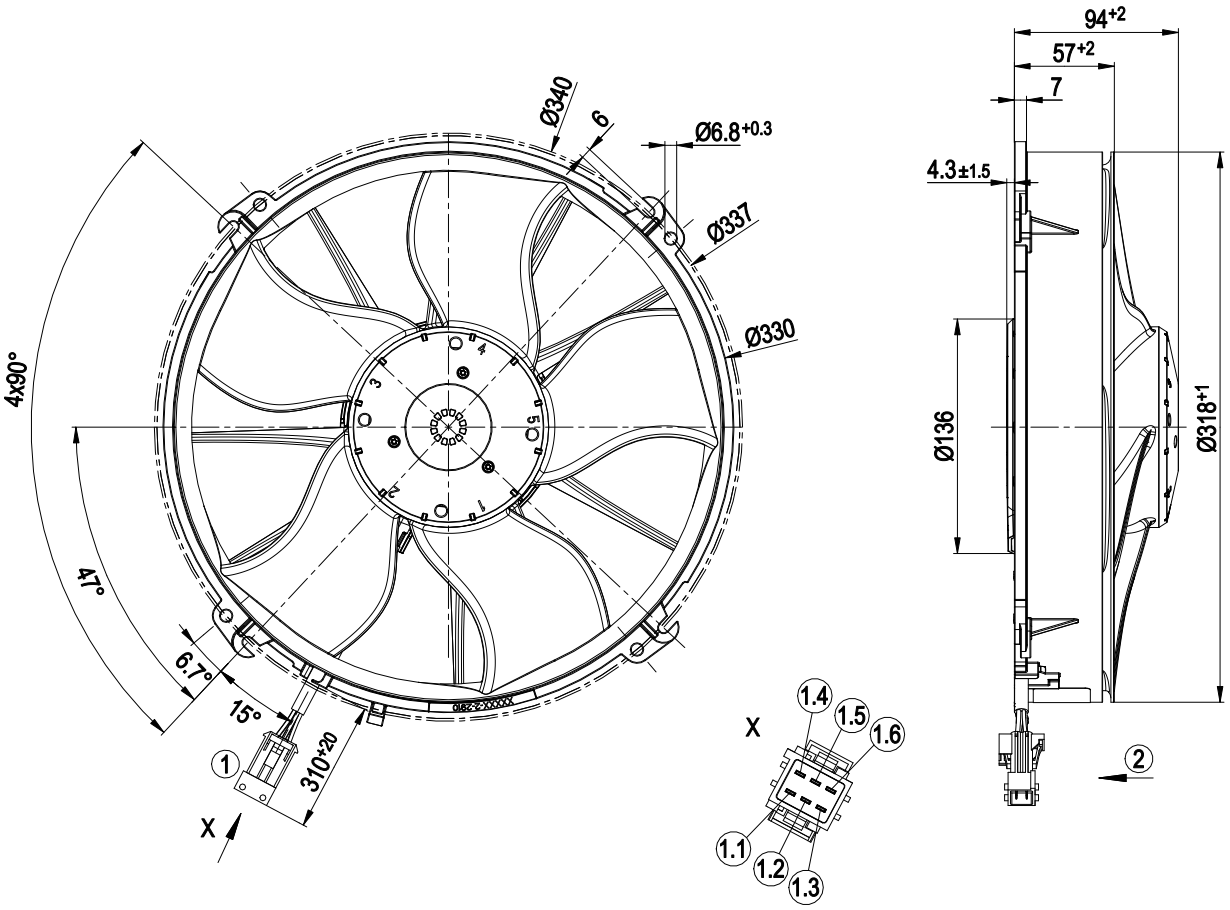
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## Product drawing




| | |
|---|---|
| 1 | Cable FLRY-Y 2x 2.35 mm², FLRY-Y 4x 1.55 mm² |
| | 6-pole connector housing TE 1-962349-1, 2x flat plug TE 2-962916-1, 4x flat plug TE 1-962915-1<br>1x seal TE 963205-1, 2x seal TE 828905-1, 4x seal TE 828904-1 |
| | Cable with mating connector, part no. 02002-4-1021 not included in scope of delivery |
| 1.1 | + UB |
| 1.2 | GND |
| 1.3 | PWM/LIN |
| 1.4 | INVLIN |
| 1.5 | ABSENK |
| 1.6 | Diagnostic output |
| 2 | Airflow direction "V" |



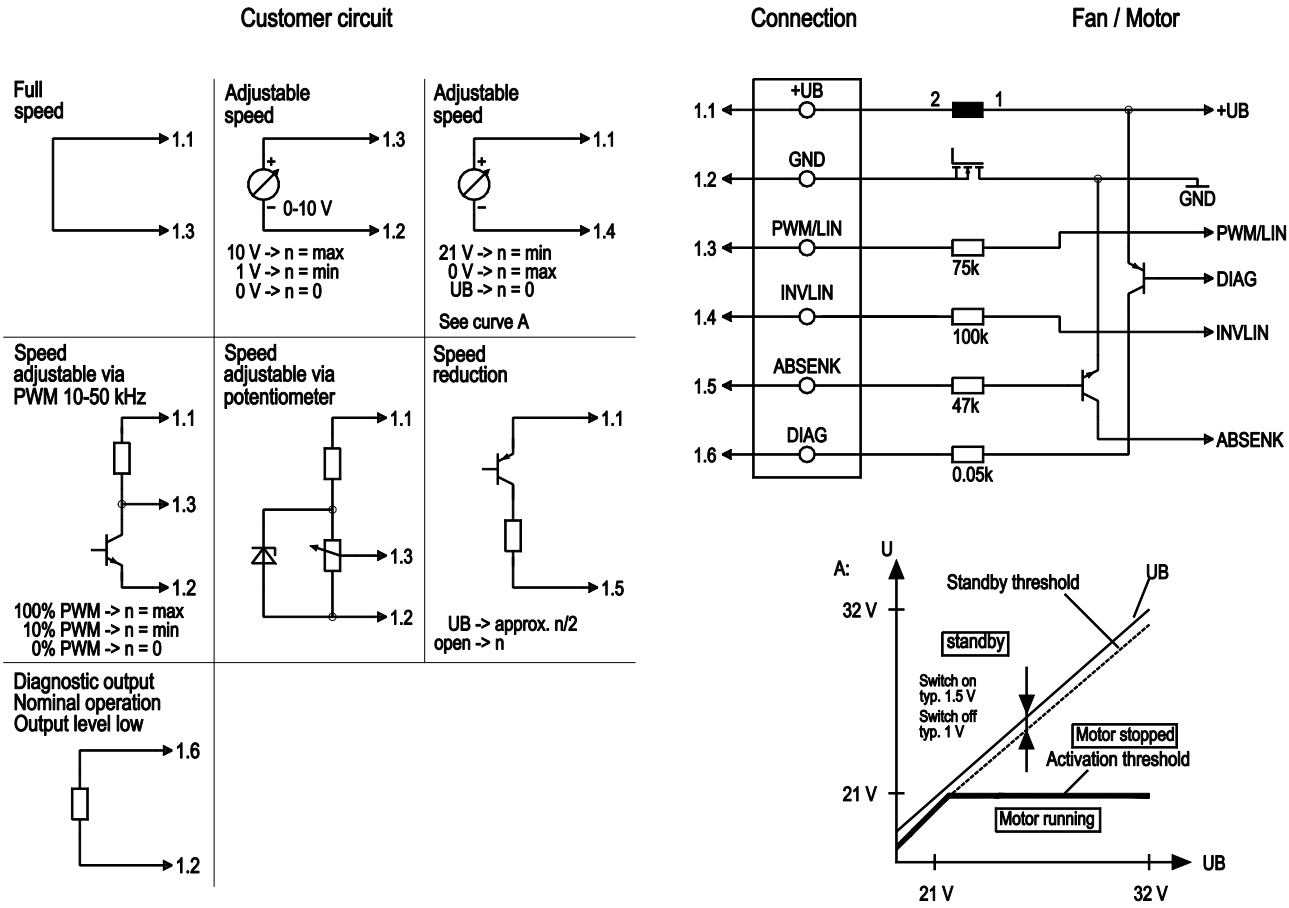
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## Connection diagram




| No. | Conn. | Designation | Function/assignment |
|---|---|---|---|
| | 1.1 | +UB | Power supply |
| | 1.2 | GND | Power supply GND, reference ground |
| | 1.3 | PWM/LIN | Analog voltage control input 0-10 V or PWM |
| | 1.4 | INVLIN | Control input, inverse linear |
| | 1.5 | ABSENK | Lowering input |
| | 1.6 | DIAG | Diagnostic output |



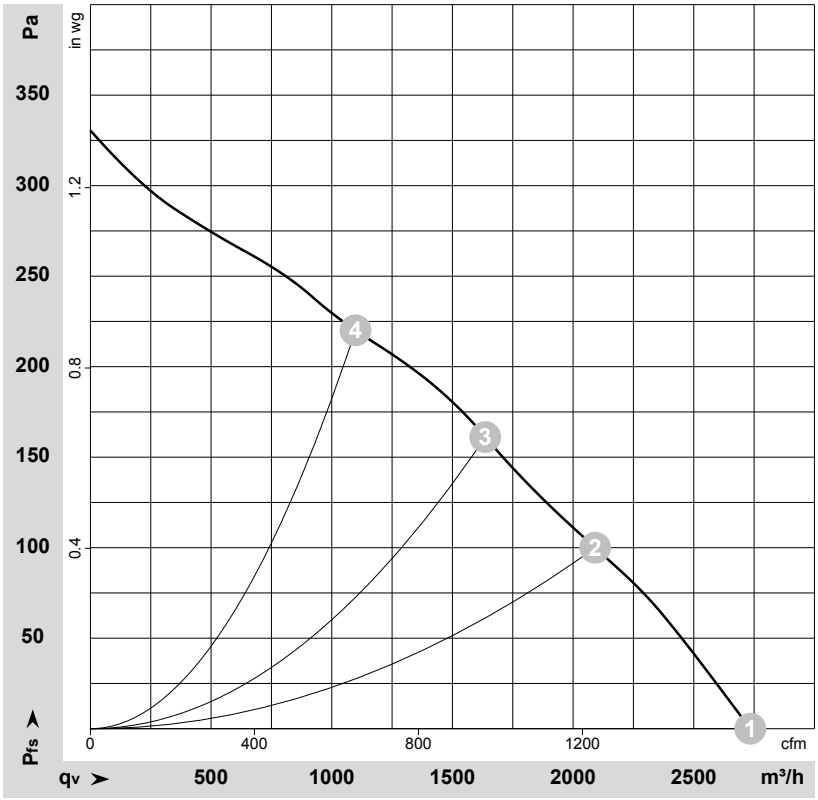
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## Curves: Air performance




ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-66741-1

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 | 26 | 2840 | 180 | 7.00 | 2735 | 0 | 1610 | 0.00 |
| 2 | 26 | 2805 | 188 | 7.24 | 2090 | 100 | 1230 | 0.40 |
| 3 | 26 | 2790 | 190 | 7.30 | 1635 | 160 | 965 | 0.64 |
| 4 | 26 | 2695 | 208 | 8.02 | 1100 | 220 | 645 | 0.88 |

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



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