**D3G146-LT13-43**

# EC centrifugal fan

forward curved, dual inlet

with housing (flange)

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## Nominal data

| | |
|---|---|
| **Type** | **D3G146-LT13-43** |
| **Motor** | **M3G055-BI** |

| | | |
|---|---|---|
| Phase | | 1~ |
| Nominal voltage | VAC | 230 |
| Nominal voltage range | VAC | 200 .. 240 |
| Frequency | Hz | 50/60 |
| Type of data definition | | ml |
| Speed (rpm) | $min^{-1}$ | 715 |
| Power input | W | 17 |
| Current draw | A | 0.16 |
| Min. back pressure | Pa | 0 |
| Min. ambient temperature | °C | -25 |
| Max. ambient temperature | °C | 50 |

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

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## Technical features

| | |
|---|---|
| **Mass** | 2.2 kg |
| **Size** | 146 mm |
| **Surface of rotor** | Galvanised |
| **Material of electronics housing** | PP plastic |
| **Material of impeller** | PA plastic |
| **Housing material** | PP plastic |
| **Motor suspension** | Motor mounted anti-vibration on both sides |
| **Direction of rotation** | Counter-clockwise, seen on rotor |
| **Type of protection** | Motor IP34, electronics IP20 |
| **Insulation class** | "F" |
| **Max. permissible ambient motor temp. (transp./ storage)** | + 80 °C |
| **Min. permissible ambient motor temp. (transp./storage)** | - 40 °C |
| **Mounting position** | Any |
| **Condensate discharge holes** | None, open rotor |
| **Operation mode** | S1 |
| **Motor bearing** | Ball bearing |
| **Technical features** | - Output 10 VDC, max. 1.1 mA<br>- Fault output (open collector)<br>- Motor current limit<br>- Soft start<br>- Control input 0-10 VDC / PWM<br>- Control interface with SELV potential safely disconnected from the mains<br>- Over-temperature protected motor |
| **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 |
| **Cable exit** | Variable |
| **Protection class** | I (if protective earth is connected by customer) |
| **Product conforming to standard** | EN 60335-1; CE |



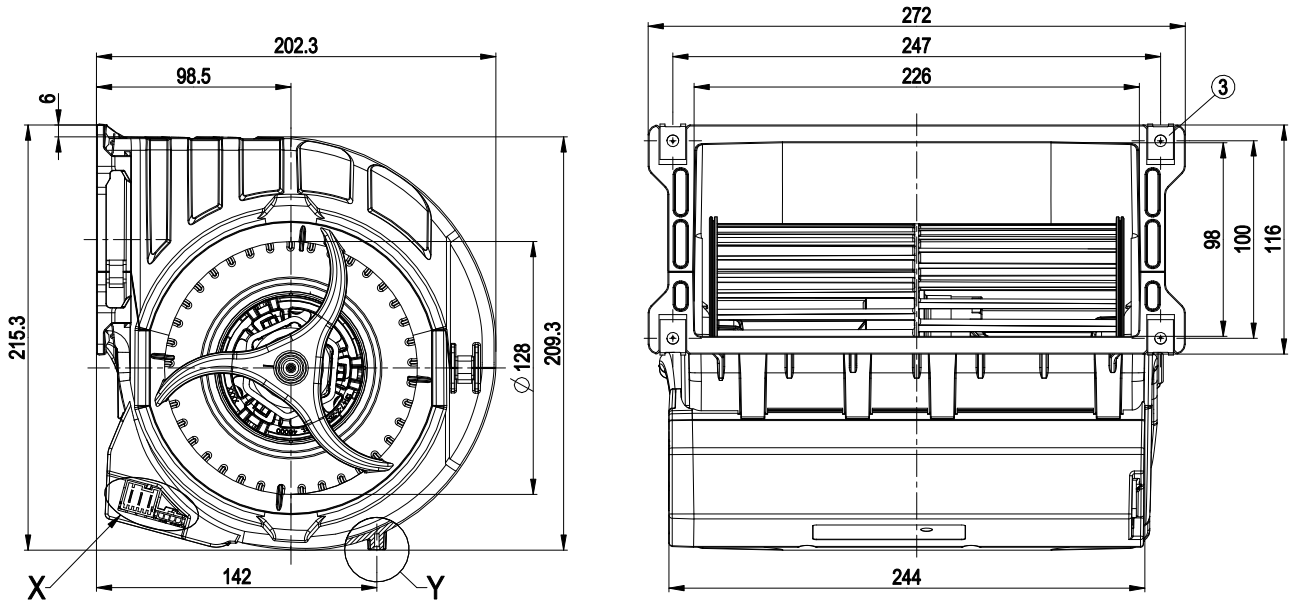
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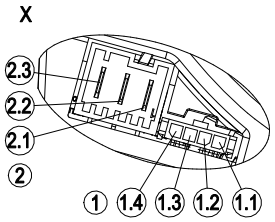
# EC centrifugal fan

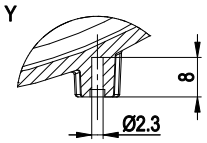
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## Product drawing




| | |
|---|---|
| 1 | Strip Molex Micro Fit 3.0 043650 0400 (pluggable with 043645 0400) |
| 1.1 | 10 V |
| 1.2 | Fan good / fan bad |
| 1.3 | 0-10 V lin. / PWM |
| 1.4 | GND |
| 2 | Connector Lumberg 3642 03 K01 (pluggable with 3626 03 K01) |
| 2.1 | PE |
| 2.2 | L |
| 2.3 | N |
| 3 | 4x sheet metal nut for thread EN ISO 1478-ST4.8 (min. screw length 14.5 mm plus thickness of mounting material) |



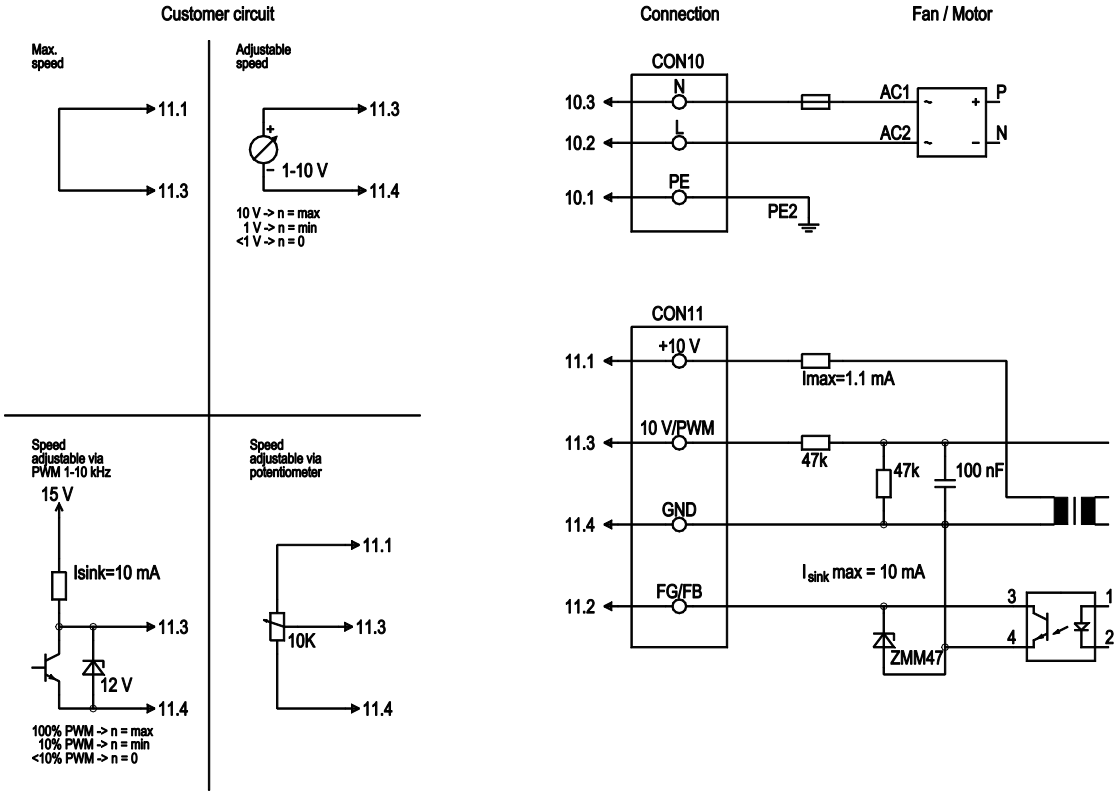
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## Connection screen




| No. | Conn. | Designation | Colour | Function / assignment |
|---|---|---|---|---|
| CON10 | 10.1 | PE | green/yellow | Protective earth |
| CON10 | 10.2 | L | black | Power supply 230 VAC, 50-60 Hz, see type plate for voltage range |
| CON10 | 10.3 | N | blue | Neutral conductor |
| CON11 | 11.1 | 10 V/max. 1.1 mA | red | Voltage output 10 V, 1.1 mA, electrically isolated, not short-circuit-proof |
| CON11 | 11.2 | FG/FB | white | Fan good / fan bad: Open collector, fan good = high, electrically isolated, Isink max=10 mA |
| CON11 | 11.3 | 0-10 V PWM | yellow | Control input 0-10 V or PWM, electrically isolated |
| CON11 | 11.4 | GND | blue | GND connection for control interface |



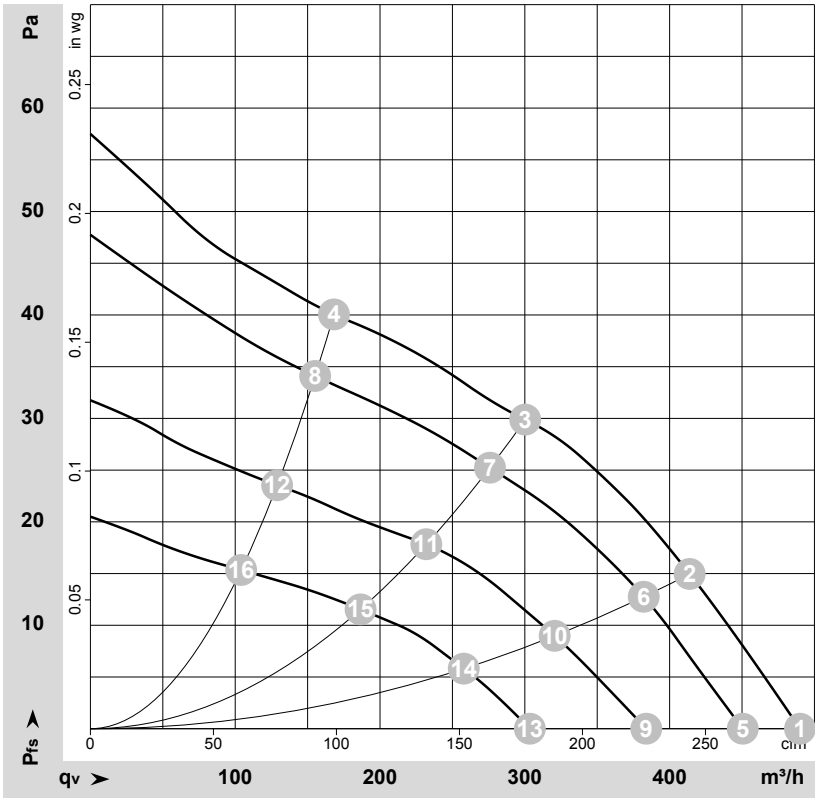
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## Charts: Air flow 50 Hz




ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-137480-1
Measurement: LU-137481-1
Measurement: LU-137483-1
Measurement: LU-137484-1

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: 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 | $q_V$ | $p_{fs}$ | $q_V$ | $p_{fs}$ |
|---|---|---|---|---|---|---|---|---|---|
| | V | Hz | $min^{-1}$ | W | A | $m^3/h$ | Pa | cfm | inH2O |
| 1 | 230 | 50 | 715 | 17 | 0.16 | 490 | 0 | 290 | 0.00 |
| 2 | 230 | 50 | 760 | 15 | 0.14 | 415 | 15 | 245 | 0.06 |
| 3 | 230 | 50 | 825 | 12 | 0.12 | 300 | 30 | 175 | 0.12 |
| 4 | 230 | 50 | 885 | 9.0 | 0.10 | 170 | 40 | 100 | 0.16 |
| 5 | 230 | 50 | 665 | 14 | 0.13 | 450 | 0 | 265 | 0.00 |
| 6 | 230 | 50 | 705 | 12 | 0.12 | 380 | 13 | 225 | 0.05 |
| 7 | 230 | 50 | 755 | 11 | 0.11 | 275 | 25 | 160 | 0.10 |
| 8 | 230 | 50 | 825 | 8.0 | 0.09 | 155 | 34 | 90 | 0.14 |
| 9 | 230 | 50 | 565 | 9.0 | 0.09 | 385 | 0 | 225 | 0.00 |
| 10 | 230 | 50 | 595 | 8.0 | 0.09 | 320 | 9 | 190 | 0.04 |
| 11 | 230 | 50 | 640 | 7.0 | 0.08 | 230 | 18 | 135 | 0.07 |
| 12 | 230 | 50 | 685 | 6.0 | 0.07 | 130 | 24 | 75 | 0.10 |
| 13 | 230 | 50 | 465 | 6.0 | 0.07 | 305 | 0 | 180 | 0.00 |
| 14 | 230 | 50 | 490 | 6.0 | 0.07 | 260 | 6 | 150 | 0.02 |
| 15 | 230 | 50 | 525 | 5.0 | 0.06 | 185 | 12 | 110 | 0.05 |
| 16 | 230 | 50 | 560 | 4.0 | 0.06 | 105 | 15 | 60 | 0.06 |

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



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