**D3G146-LT19-38**

# EC centrifugal fan

forward-curved, dual-intake

with housing (flange)

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## Nominal data

| | |
|---|---|
| **Type** | **D3G146-LT19-38** |
| **Motor** | **M3G055-BI** |

| | | |
|---|---|---|
| Phase | | 1~ |
| Nominal voltage | VAC | 115 |
| Nominal voltage range | VAC | 100 .. 130 |
| Frequency | Hz | 50/60 |
| Method of obtaining data | | fa |
| Speed (rpm) | $min^{-1}$ | 1050 |
| Power consumption | W | 55 |
| Current draw | A | 0.83 |
| Min. back pressure | Pa | 0 |
| Min. back pressure | in. wg | 0 |
| Min. ambient temperature | °C | -25 |
| Max. ambient temperature | °C | 60 |

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** | 2.2 kg |
| **Fan size** | 146 mm |
| **Rotor surface** | Galvanized |
| **Electronics housing material** | PP plastic |
| **Impeller material** | PP plastic |
| **Housing material** | PP plastic |
| **Motor suspension** | Motor vibration-damped on both sides |
| **Direction of rotation** | Counterclockwise, viewed toward rotor |
| **Degree of protection** | Motor IP00, electronics IP20; installation- and position-dependent |
| **Insulation class** | "F" |
| **Moisture (F) / Environmental (H) protection class** | H0 - dry environment |
| **Max. permitted ambient temp. for motor (transport/storage)** | + 80 °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 and stator sides |
| **Mode** | S1 |
| **Motor bearing** | Ball bearing |
| **Technical features** | - Output 10 VDC, max. 1.1 mA<br>- Tach output<br>- Motor current limitation<br>- Soft start<br>- Control input 0-10 VDC / PWM<br>- Control interface with SELV potential safely disconnected from the mains<br>- Thermal overload protection for motor |
| **EMC immunity to interference** | According to EN 61000-6-2 (industrial environment) |
| **EMC interference emission** | According to EN 61000-6-3 (household environment) |
| **Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)** | <= 3.5 mA |
| **Electrical hookup** | With plug |
| **Motor protection** | Thermal overload protector (TOP) internally connected |
| **With cable** | Variable |
| **Protection class** | I (with customer connection of protective earth) |
| **Conformity with standards** | EN 60335-1; CE |
| **Approval** | C22.2 No.77 + CAN/CSA-E60730-1; UL 1004-7 + 60730 |



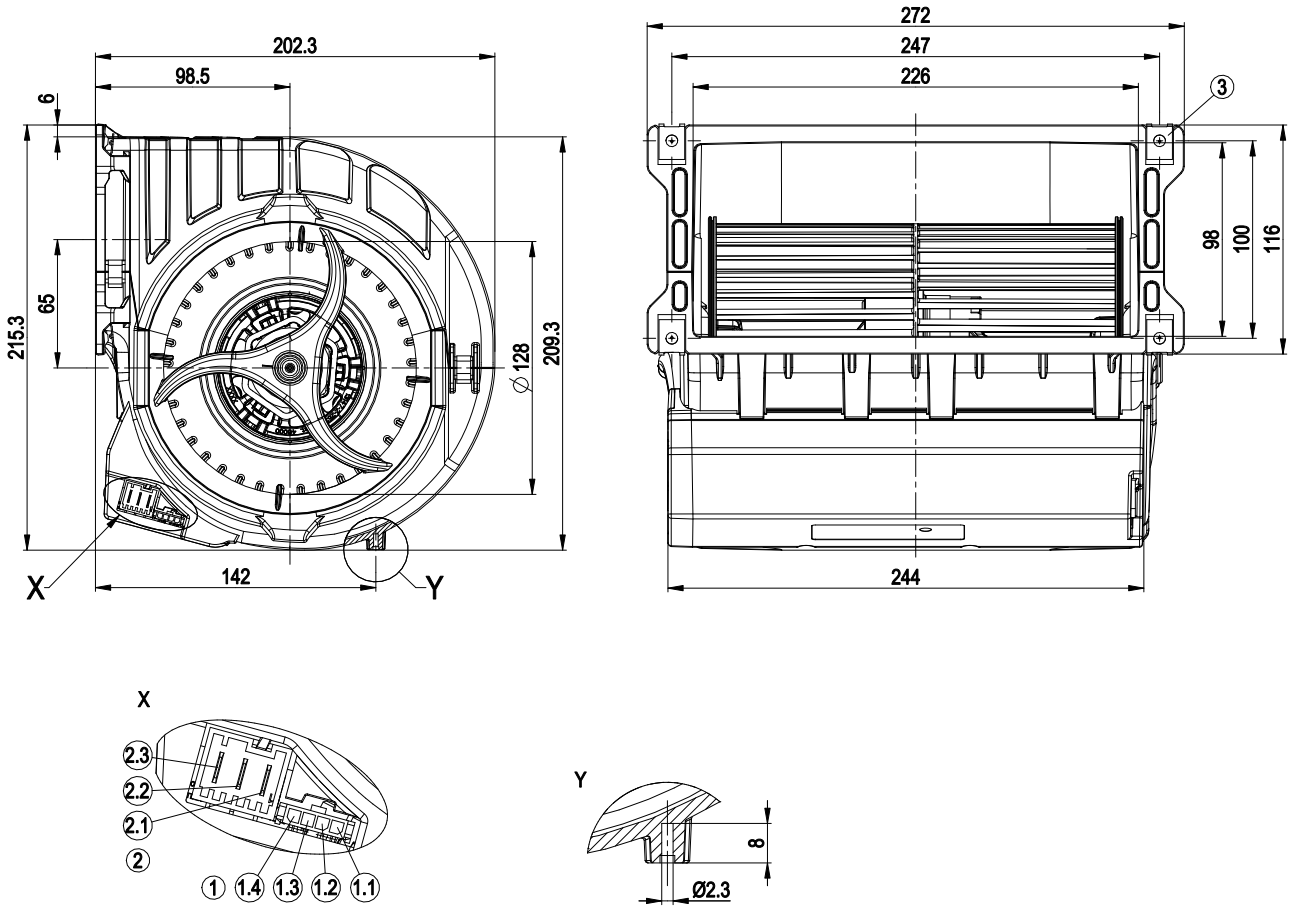
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## Product drawing




| | |
|---|---|
| 1 | Header Molex Micro Fit 3.0 043650 0400 (pluggable with 043645 0400) |
| 1.1 | 10 V |
| 1.2 | Tach |
| 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 material thickness of attachment) |



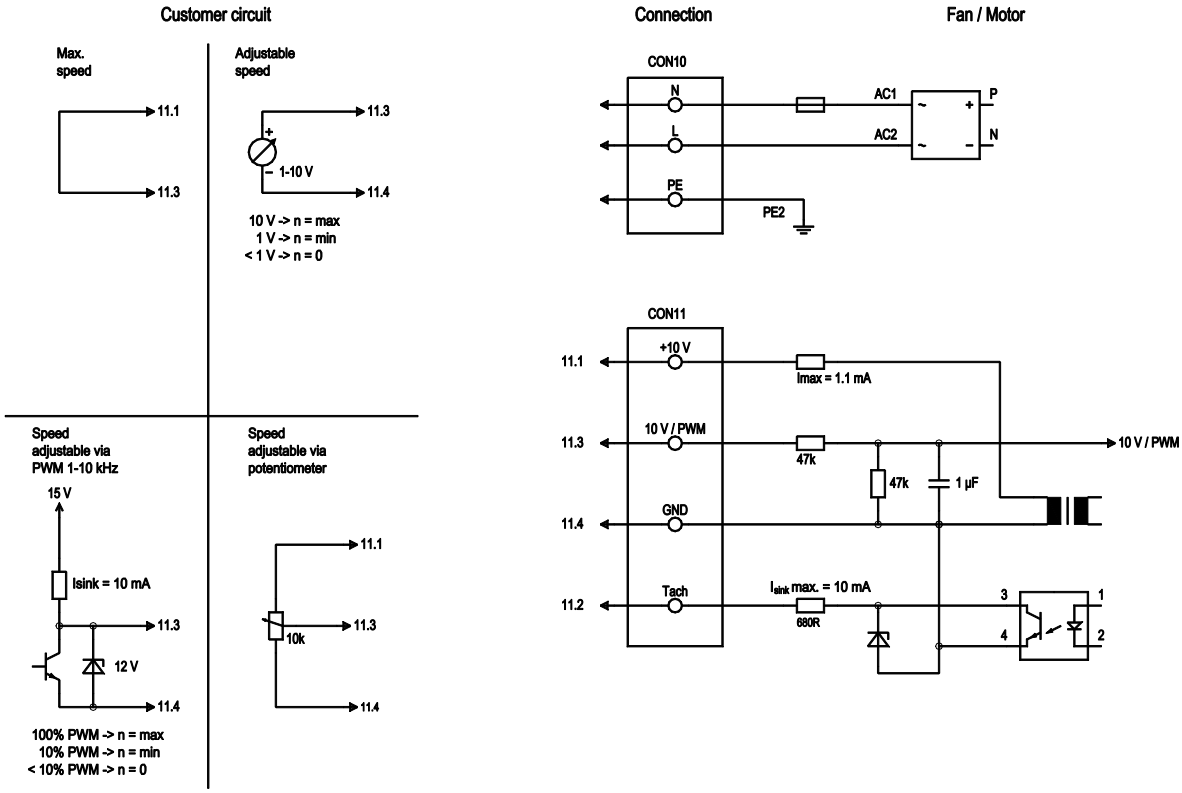
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## Connection diagram




| No. | Conn. | Designation | Color | Function/assignment |
|---|---|---|---|---|
| CON10 | 10.1 | PE | green/yellow | Protective earth |
| CON10 | 10.2 | L | black | Power supply 115 VAC, 50-60 Hz, see nameplate 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 | Tach | white | Tach output: Open collector, 1 pulse per revolution, 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 of control interface |



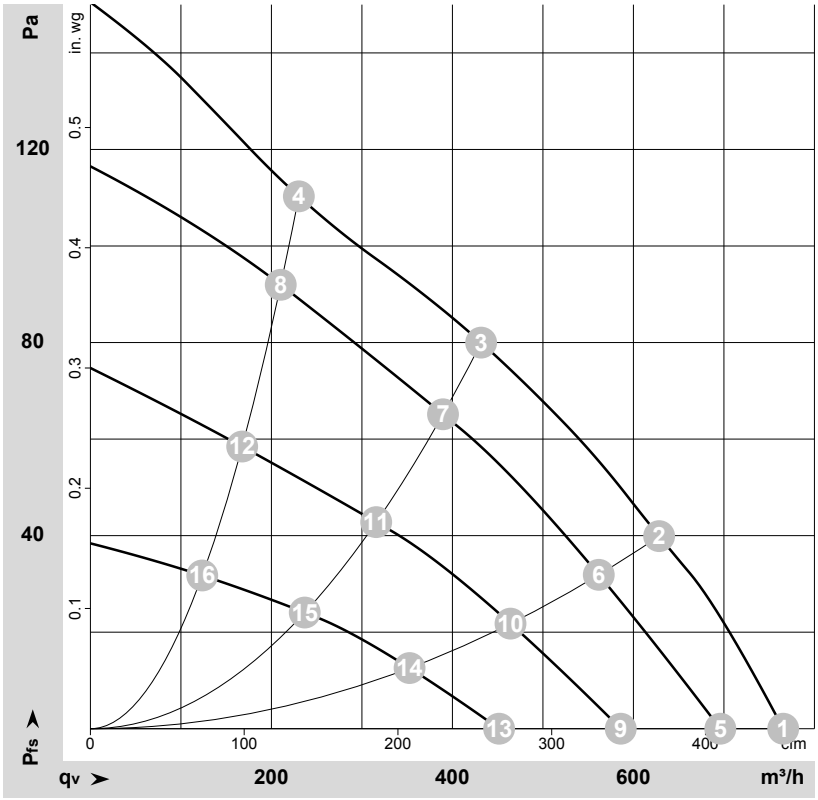
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## Curves: Air performance 50 Hz




ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-182383-1
Measurement: LU-186004-1
Measurement: LU-186006-1
Measurement: LU-186008-1

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 | f | n | $P_{ed}$ | I | $LpA_{in}$ | $LwA_{in}$ | $q_V$ | $p_{fs}$ | $q_V$ | $p_{fs}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | V | Hz | $min^{-1}$ | W | A | dB(A) | dB(A) | $m^3/h$ | Pa | cfm | in. wg |
| 1 | 115 | 50 | 1050 | 55 | 0.83 | 51 | 63 | 765 | 0 | 450 | 0.00 |
| 2 | 115 | 50 | 1165 | 48 | 0.71 | 50 | 60 | 630 | 40 | 370 | 0.16 |
| 3 | 115 | 50 | 1310 | 37 | 0.55 | 49 | 59 | 430 | 80 | 255 | 0.32 |
| 4 | 115 | 50 | 1460 | 26 | 0.40 | 48 | 59 | 230 | 110 | 135 | 0.44 |
| 5 | 115 | 50 | 965 | 43 | 0.65 | 50 | 60 | 695 | 0 | 410 | 0.00 |
| 6 | 115 | 50 | 1060 | 36 | 0.55 | 47 | 58 | 560 | 33 | 330 | 0.13 |
| 7 | 115 | 50 | 1180 | 28 | 0.43 | 46 | 56 | 390 | 65 | 230 | 0.26 |
| 8 | 115 | 50 | 1310 | 20 | 0.31 | 46 | 56 | 210 | 92 | 125 | 0.37 |
| 9 | 115 | 50 | 815 | 25 | 0.40 | 44 | 55 | 585 | 0 | 345 | 0.00 |
| 10 | 115 | 50 | 875 | 21 | 0.33 | 41 | 52 | 465 | 23 | 275 | 0.09 |
| 11 | 115 | 50 | 955 | 16 | 0.25 | 40 | 50 | 315 | 43 | 185 | 0.17 |
| 12 | 115 | 50 | 1040 | 11 | 0.18 | 39 | 50 | 170 | 58 | 100 | 0.23 |
| 13 | 115 | 50 | 625 | 12 | 0.20 | 37 | 48 | 450 | 0 | 265 | 0.00 |
| 14 | 115 | 50 | 670 | 10.0 | 0.17 | 34 | 45 | 355 | 13 | 210 | 0.05 |
| 15 | 115 | 50 | 720 | 8.0 | 0.14 | 32 | 42 | 235 | 24 | 140 | 0.10 |
| 16 | 115 | 50 | 775 | 6.0 | 0.11 | 31 | 41 | 125 | 32 | 75 | 0.13 |

U = Power supply · f = Frequency · 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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