**D3G160-BF60-11**

# EC centrifugal fan

forward curved, dual inlet

with housing (flange)



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## Nominal data

| | |
|---|---|
| **Type** | **D3G160-BF60-11** |
| **Motor** | **M3G074-CF** |

| | | |
|---|---|---|
| Phase | | 1~ |
| Nominal voltage | VAC | 230 |
| Nominal voltage range | VAC | 200 .. 277 |
| Frequency | Hz | 50/60 |
| Type of data definition | | fa |
| Speed (rpm) | $min^{-1}$ | 1370 |
| Power input | W | 150 |
| Current draw | A | 1.1 |
| Min. ambient temperature | °C | -25 |
| Max. ambient temperature | °C | 60 |

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** | 5.5 kg |
| **Size** | 160 mm |
| **Surface of rotor** | Thick layer passivated |
| **Material of electronics housing** | Die-cast aluminum |
| **Material of impeller** | Sheet steel, sendzimir galvanized |
| **Housing material** | Sheet steel, sendzimir galvanized |
| **Motor suspension** | Motor mounted with anti-vibration on both sides |
| **Direction of rotation** | Clockwise, seen on rotor |
| **Type of protection** | IP 44; Depending on installation and position |
| **Insulation class** | "B" |
| **Humidity (F)/environmental protection class (H)** | F3-1 |
| **Max. permissible ambient motor temp. (transp./ storage)** | +80 °C |
| **Min. permissible ambient motor temp. (transp./storage)** | -40 °C |
| **Mounting position** | Shaft horizontal |
| **Condensate discharge holes** | None |
| **Operation mode** | S1 |
| **Motor bearing** | Ball bearing |
| **Technical features** | - Control input 0-10 VDC / PWM<br>- Output 10 VDC, max. 1.1 mA<br>- Tach output<br>- Motor current limit<br>- Soft start<br>- Over-temperature protected electronics / motor |
| **EMC interference immunity** | Acc. to EN 61000-6-2 |
| **EMC harmonics** | Acc. to EN 61000-3-2/3 |
| **EMC interference emission** | Acc. to EN 61000-6-3 |
| **Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)** | < 3.5 mA |
| **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 60950-1; EN 60335-1; EN 61800-5-1; CE |
| **Approval** | CSA C22.2 No.77; UL 2111 |



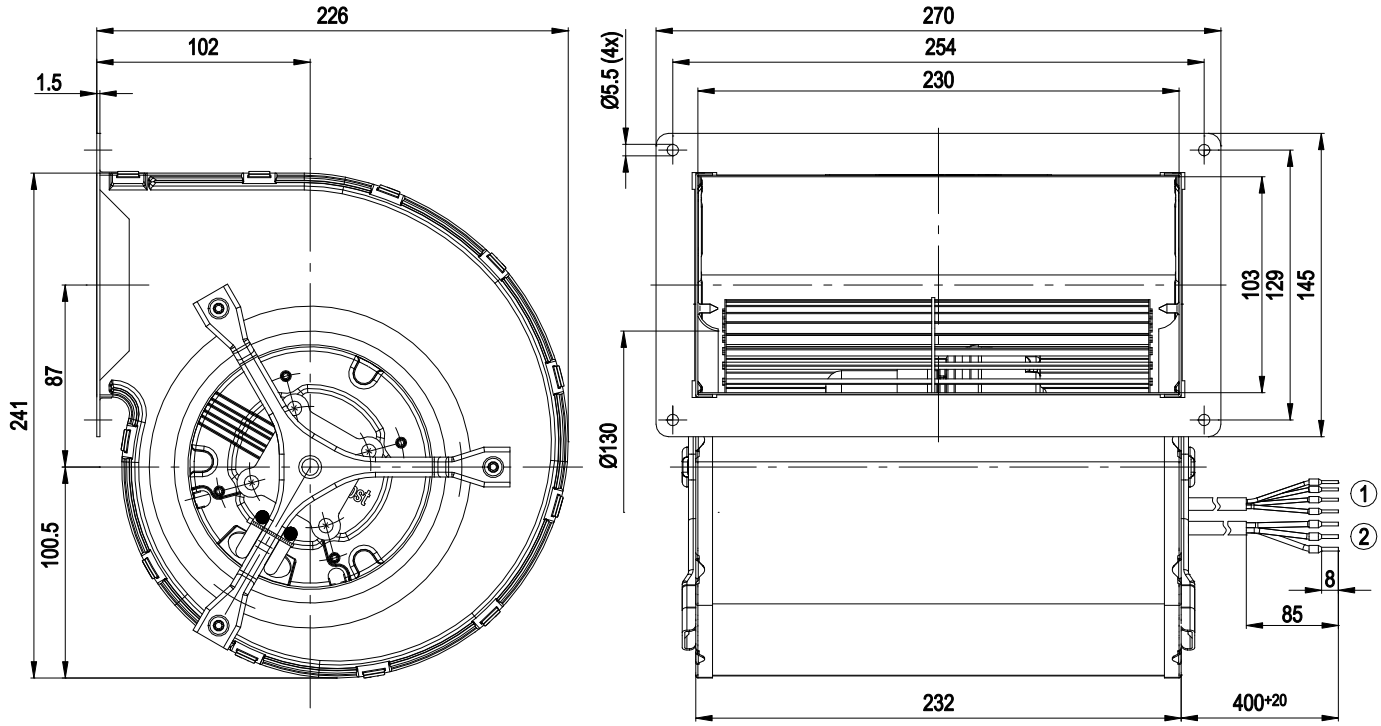
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## Product drawing




| | |
|---|---|
| 1 | Connection line AWG22, 4x crimped core-end sleeves |
| 2 | Connection line AWG18, 3x crimped core-end sleeves |



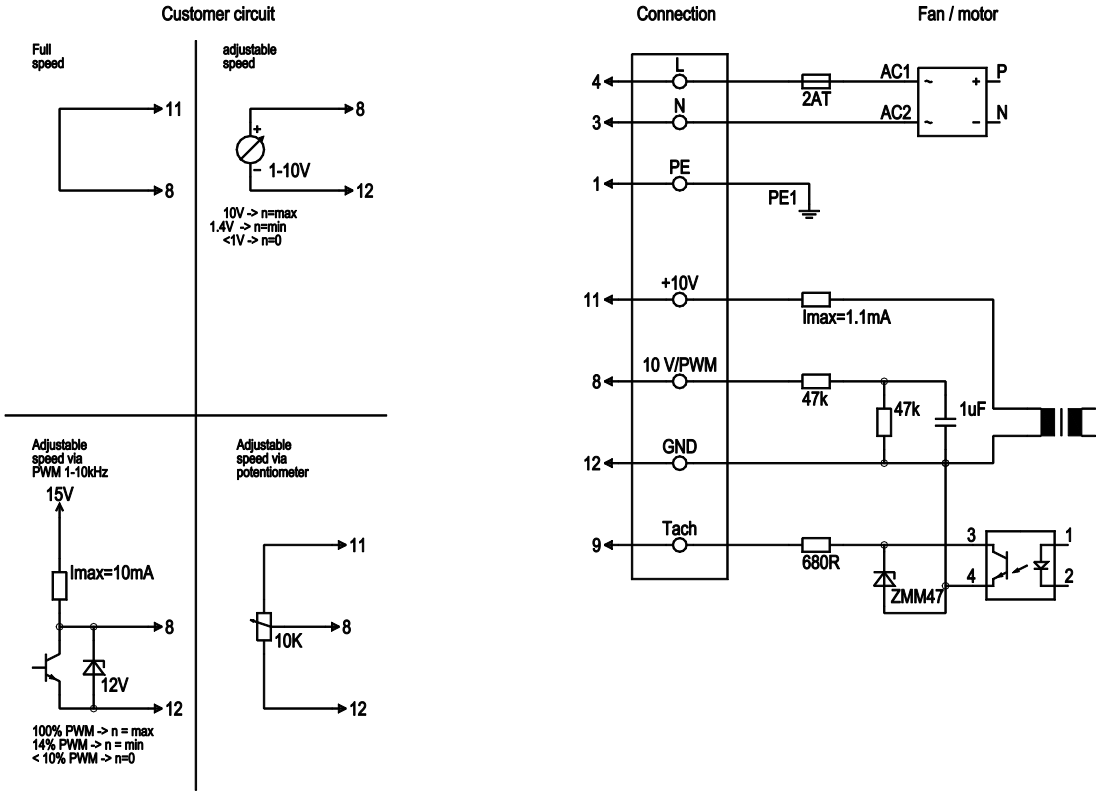
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## Connection screen




| No. | Conn. | Designation | Colour | Function / assignment |
|---|---|---|---|---|
| | 4 | L | black | Power supply 230 VAC, 50-60 Hz, see type plate for voltage range |
| | 3 | N | blue | Neutral conductor |
| | 1 | PE | green/yellow | Protective earth |
| | 8 | 0-10 V PWM | yellow | Control input 0 - 10 V or PWM, electrically isolated |
| | 9 | Tach | white | Tach output: open collector, 1 pulse per revolution, electrically isolated |
| | 11 | 10V / max 1.1 mA | red | Voltage output 10 V / max. 1.1 mA, electrically isolated |
| | 12 | GND | blue | GND - Connection for control interface |



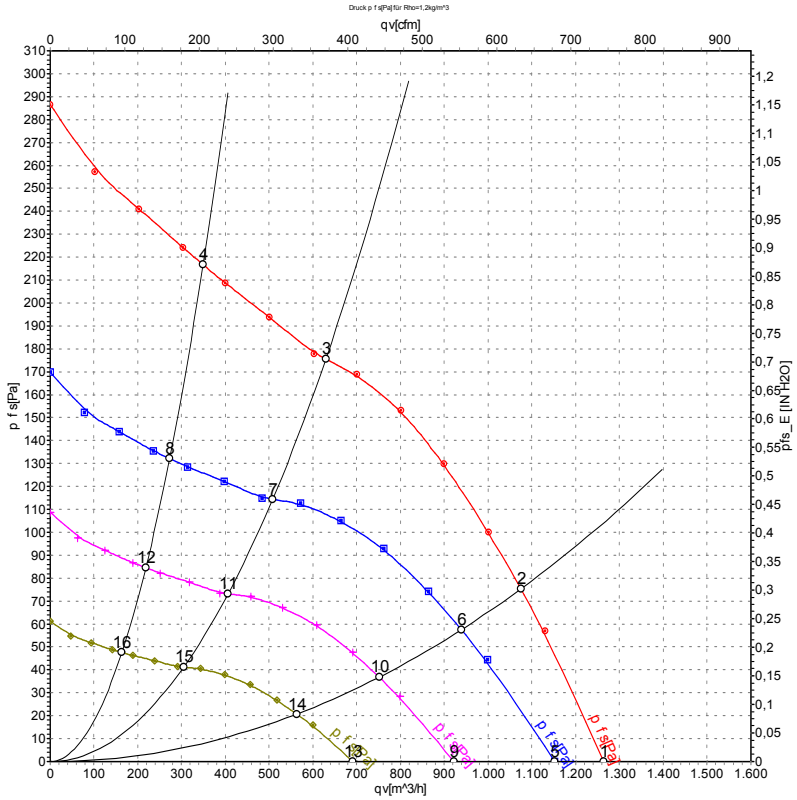
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## Charts: Air flow 50 Hz




Measurement: LU-109581-1

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 | 1370 | 150 | 1.10 | 1255 | 0 | 740 | 0.00 |
| 2 | 230 | 50 | 1430 | 131 | 0.96 | 1075 | 75 | 635 | 0.30 |
| 3 | 230 | 50 | 1550 | 85 | 0.63 | 630 | 175 | 370 | 0.70 |
| 4 | 230 | 50 | 1600 | 62 | 0.47 | 350 | 215 | 205 | 0.86 |
| 5 | 230 | 50 | 1250 | 115 | 0.84 | 1150 | 0 | 680 | 0.00 |
| 6 | 230 | 50 | 1250 | 88 | 0.64 | 940 | 58 | 555 | 0.23 |
| 7 | 230 | 50 | 1250 | 45 | 0.33 | 510 | 114 | 300 | 0.46 |
| 8 | 230 | 50 | 1250 | 30 | 0.22 | 275 | 132 | 160 | 0.53 |
| 9 | 230 | 50 | 1000 | 59 | 0.43 | 920 | 0 | 545 | 0.00 |
| 10 | 230 | 50 | 1000 | 45 | 0.33 | 750 | 37 | 440 | 0.15 |
| 11 | 230 | 50 | 1000 | 23 | 0.17 | 405 | 73 | 240 | 0.29 |
| 12 | 230 | 50 | 1000 | 15 | 0.11 | 220 | 84 | 130 | 0.34 |
| 13 | 230 | 50 | 750 | 25 | 0.18 | 690 | 0 | 405 | 0.00 |
| 14 | 230 | 50 | 750 | 19 | 0.14 | 565 | 21 | 330 | 0.08 |
| 15 | 230 | 50 | 750 | 9.7 | 0.07 | 305 | 41 | 180 | 0.16 |
| 16 | 230 | 50 | 750 | 6.4 | 0.05 | 165 | 48 | 95 | 0.19 |

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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