**D3G160-GN02-11**

# EC centrifugal fan

forward curved, dual inlet

with housing (flange)

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## Nominal data

| | |
|---|---|
| **Type** | **D3G160-GN02-11** |
| **Motor** | **M3G074-CF** |

| | | |
|---|---|---|
| Phase | | 1~ |
| Nominal voltage | VAC | 230 |
| Nominal voltage range | VAC | 200 .. 240 |
| Frequency | Hz | 50/60 |
| Type of data definition | | ml |
| Speed (rpm) | $min^{-1}$ | 1330 |
| Power input | W | 165 |
| Current draw | A | 1.3 |
| Min. back pressure | Pa | 0 |
| 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** | 3 kg |
| **Size** | 160 mm |
| **Surface of rotor** | Thick layer passivated |
| **Material of impeller** | Sheet steel, galvanised |
| **Housing material** | PP plastic |
| **Direction of rotation** | Counter-clockwise, seen on rotor |
| **Type of protection** | IP 54 |
| **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** | Any |
| **Condensate discharge holes** | None, open rotor |
| **Operation mode** | S1 |
| **Motor bearing** | Ball bearing |
| **Technical features** | - Output 10 VDC, max. 1.1 mA<br>- Tach output<br>- Output limit<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 electronics / motor |
| **EMC interference immunity** | Acc. to EN 61000-6-2 (industrial environment) |
| **EMC interference emission** | Acc. to EN 61000-6-4 (industrial environment) |
| **Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)** | <= 3.5 mA |
| **Electrical leads** | With plug |
| **Motor protection** | PTC resistor |
| **Cable exit** | Variable |
| **Protection class** | I (if protective earth is connected by customer) |
| **Product conforming to standard** | EN 60335-1; CE |



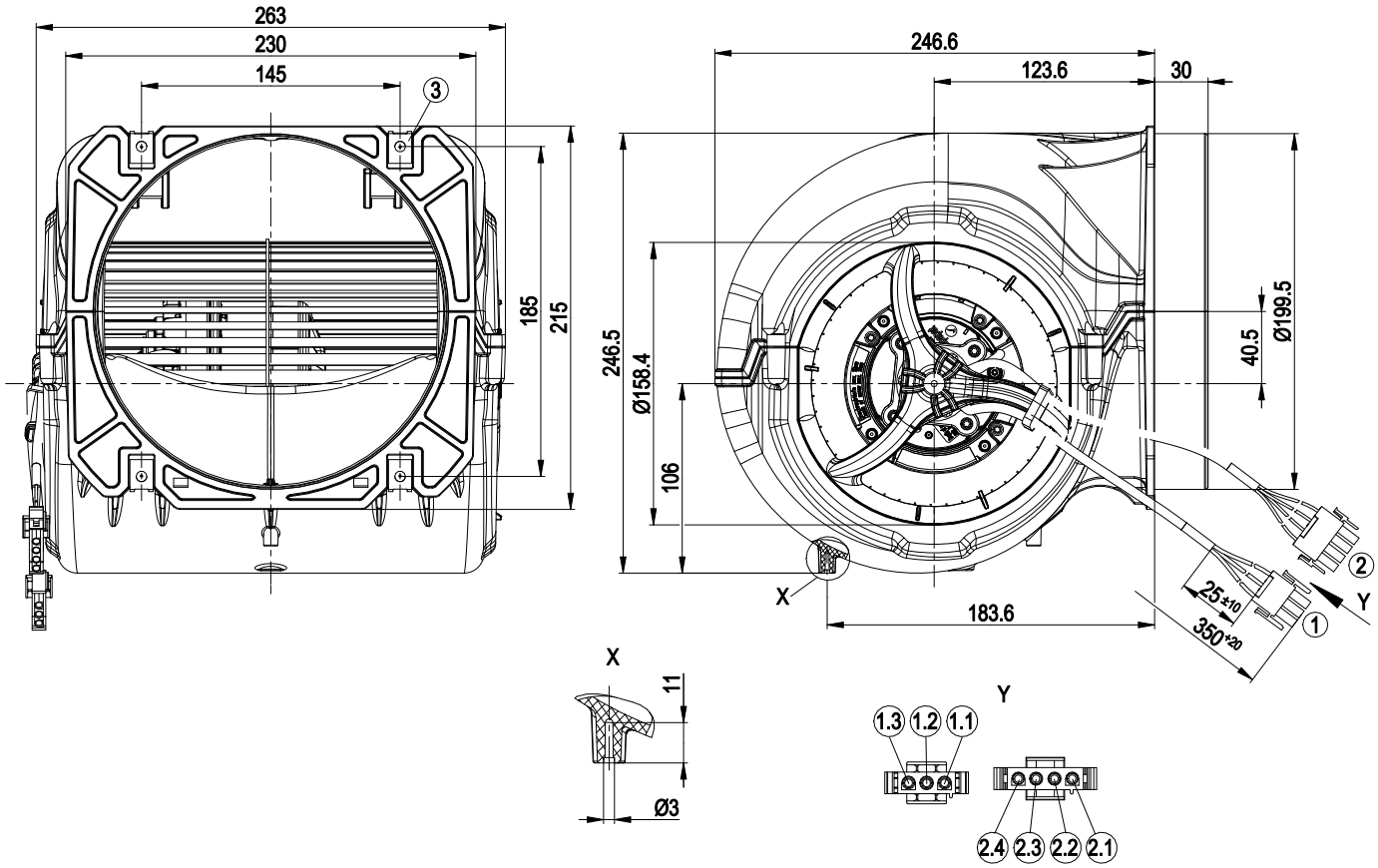
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## Product drawing




| | |
|---|---|
| 1 | Connection line PVC AWG20, connector housing 3-pole tyco 1241809-2, 3x plug pin tyco 926885-1 crimped |
| 1.1 | PE (green/yellow) |
| 1.2 | N (blue) |
| 1.3 | L (black) |
| 2 | Connection line PVC AWG22, tyco 4-pole connector housing 926298-6, 4x tyco plug pin 926885-1 crimped |
| 2.1 | +10 V (red) |
| 2.2 | GND (blue) |
| 2.3 | 0-10 V PWM (yellow) |
| 2.4 | Tach (white) |
| 3 | 4x sheet metal nut for thread EN ISO 1478-ST4.8 (min. screw length 14.5 mm plus thickness of mounting material) |



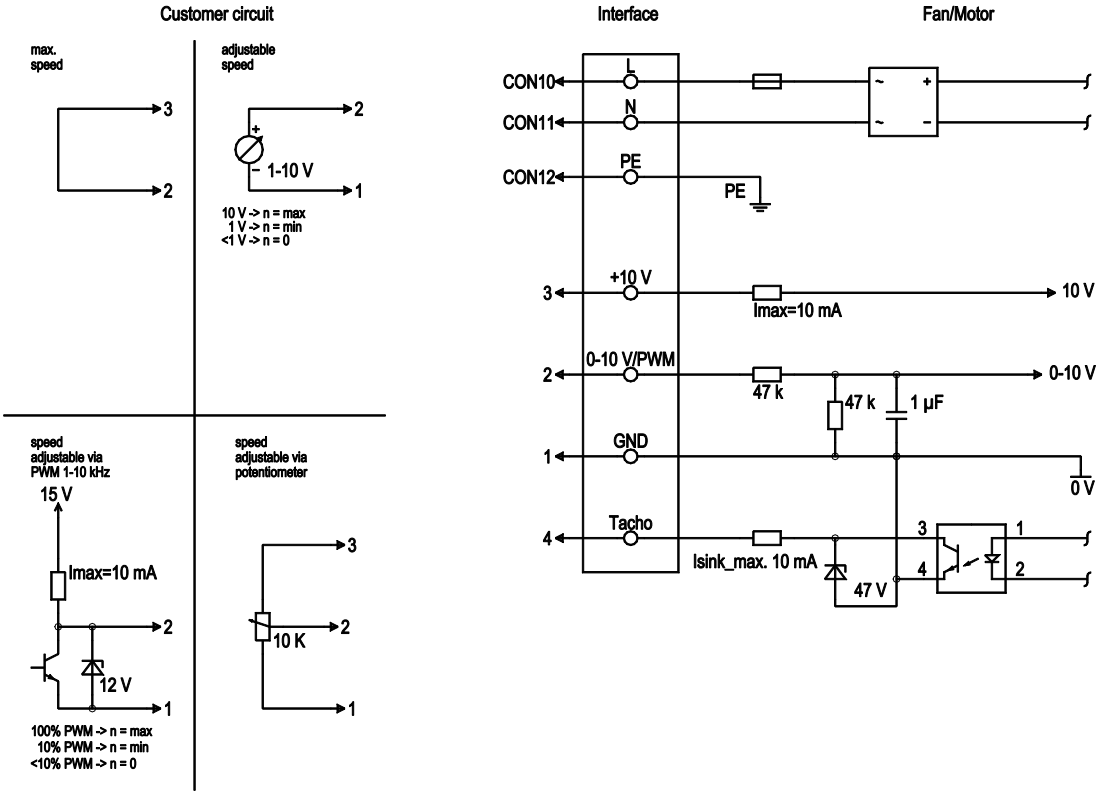
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## Connection screen




| No. | Conn. | Designation | Colour | Function / assignment |
|---|---|---|---|---|
| | CON10 | L | black | Mains connection, power supply, phase, see type plate for voltage range |
| | CON11 | N | blue | Mains connection, power supply, neutral conductor, see type plate for voltage range |
| | CON12 | PE | green/yellow | Earth connection |
| | 2 | 0- 10V PWM | yellow | 0-10 V/PWM control input, Ri=100 kΩ, SELV |
| | 4 | Tach | white | Speed monitoring output, open collector, 1 pulse per revolution, Isink max = 10 mA, SELV |
| | 3 | +10 V | red | Fixed voltage output 10 VDC +/-3 %, Imax. 10 mA, short-circuit-proof, power supply for ext. devices (e.g. potentiometer), SELV |
| | 1 | GND | blue | Signal ground for control interface, SELV |



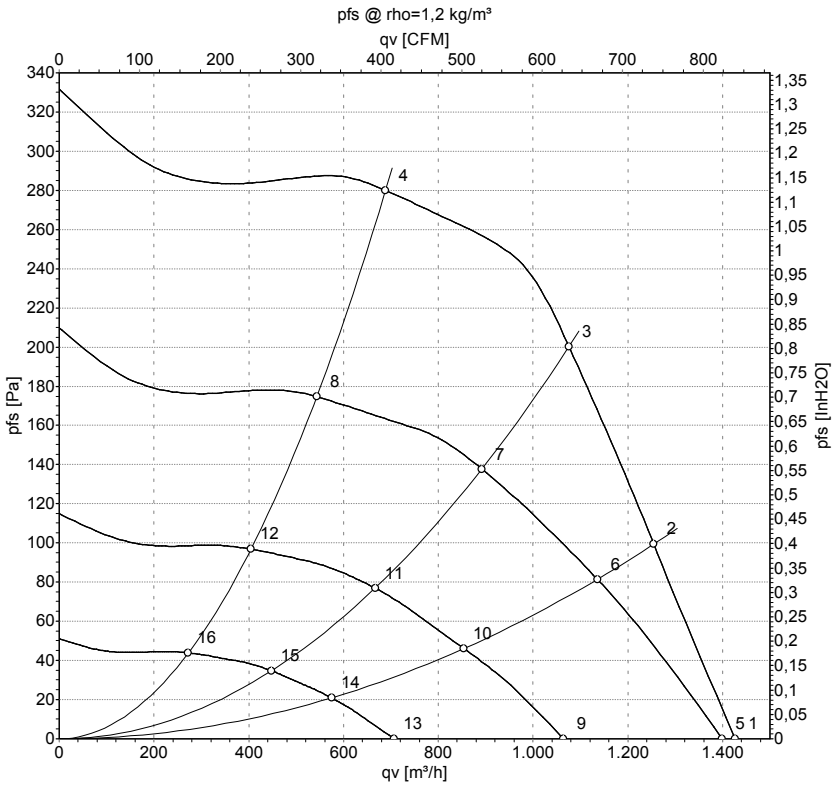
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## Charts: Air flow 50 Hz




Measurement: LU-144933-1

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 | $LpA_{in}$ | $LwA_{in}$ | $q_V$ | $p_{fs}$ | $q_V$ | $p_{fs}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | V | Hz | $min^{-1}$ | W | A | dB(A) | dB(A) | $m^3/h$ | Pa | cfm | inH2O |
| 1 | 230 | 50 | 1330 | 165 | 1.30 | 60 | 73 | 1425 | 0 | 840 | 0.00 |
| 2 | 230 | 50 | 1520 | 165 | 1.30 | 59 | 72 | 1255 | 100 | 740 | 0.40 |
| 3 | 230 | 50 | 1715 | 165 | 1.28 | 58 | 70 | 1075 | 200 | 635 | 0.80 |
| 4 | 230 | 50 | 1860 | 115 | 0.96 | 56 | 68 | 690 | 280 | 405 | 1.12 |
| 5 | 230 | 50 | 1310 | 156 | 1.21 | | | 1400 | 0 | 825 | 0.00 |
| 6 | 230 | 50 | 1380 | 121 | 1.00 | | | 1135 | 81 | 670 | 0.33 |
| 7 | 230 | 50 | 1430 | 94 | 0.79 | | | 890 | 138 | 525 | 0.55 |
| 8 | 230 | 50 | 1490 | 61 | 0.52 | | | 545 | 175 | 320 | 0.70 |
| 9 | 230 | 50 | 1015 | 72 | 0.60 | | | 1065 | 0 | 625 | 0.00 |
| 10 | 230 | 50 | 1050 | 56 | 0.48 | | | 855 | 46 | 505 | 0.18 |
| 11 | 230 | 50 | 1080 | 43 | 0.39 | | | 665 | 77 | 395 | 0.31 |
| 12 | 230 | 50 | 1120 | 29 | 0.28 | | | 405 | 97 | 240 | 0.39 |
| 13 | 230 | 50 | 695 | 25 | 0.24 | | | 705 | 0 | 415 | 0.00 |
| 14 | 230 | 50 | 720 | 19 | 0.18 | | | 575 | 21 | 340 | 0.08 |
| 15 | 230 | 50 | 735 | 16 | 0.15 | | | 450 | 35 | 265 | 0.14 |
| 16 | 230 | 50 | 765 | 12 | 0.12 | | | 275 | 44 | 160 | 0.18 |

U = Supply voltage · f = Frequency · n = Speed (rpm) · $P_{ed}$ = Power input · I = Current draw · $LpA_{in}$ = Sound pressure level inlet side · $LwA_{in}$ = Sound power level inlet side · $q_V$ = Air flow $p_{fs}$ = Pressure increase



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