**D3G120-AA03-12**

# EC centrifugal fan

forward-curved, dual-intake

with housing (without flange)

**ebm-papst Mulfingen GmbH & Co. KG**
Bachmühle 2 · D-74673 Mulfingen
Phone +49 7938 81-0
Fax +49 7938 81-110
info1@de.ebmpapst.com
www.ebmpapst.com

Limited partnership · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRB 590142

## Nominal data

| | |
|---|---|
| **Type** | **D3G120-AA03-12** |
| **Motor** | **M3G055-BI** |

| | | |
|---|---|---|
| Phase | | 1~ |
| Nominal voltage | VAC | 230 |
| Nominal voltage range | VAC | 200 .. 240 |
| Frequency | Hz | 50/60 |
| Method of obtaining data | | fa |
| Speed (rpm) | $min^{-1}$ | 1950 |
| Power consumption | W | 83 |
| Current draw | A | 0.74 |
| Min. ambient temperature | °C | -25 |
| Max. ambient temperature | °C | 40 |

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

# EC centrifugal fan

forward-curved, dual-intake

with housing (without flange)

## Technical description

| | |
|---|---|
| **Weight** | 2.2 kg |
| **Size** | 120 mm |
| **Motor size** | 55 |
| **Rotor surface** | Thick-film passivated |
| **Impeller material** | Sheet steel, galvanized |
| **Housing material** | Sheet steel, galvanized |
| **Motor suspension** | Motor vibration-damped on both sides |
| **Direction of rotation** | Clockwise, viewed toward rotor |
| **Degree of protection** | IP54; installation- and position-dependent |
| **Insulation class** | "B" |
| **Moisture (F) / Environmental (H) protection class** | H1 |
| **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 |
| **Mode** | S1 |
| **Motor mounting** | Ball bearing with low-temperature lubricant |
| **Technical features** | - Output 10 VDC, max. 1.1 mA<br>- Tach output<br>- Power limiter<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>- Overvoltage detection<br>- Thermal overload protection for electronics/motor<br>- Line undervoltage detection |
| **Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)** | <= 3.5 mA |
| **Motor protection** | Electronic motor protection |
| **Protection class** | I (with customer connection of protective earth) |
| **Conformity with standards** | EN 60335-1; CE |
| **Approval** | CCC |



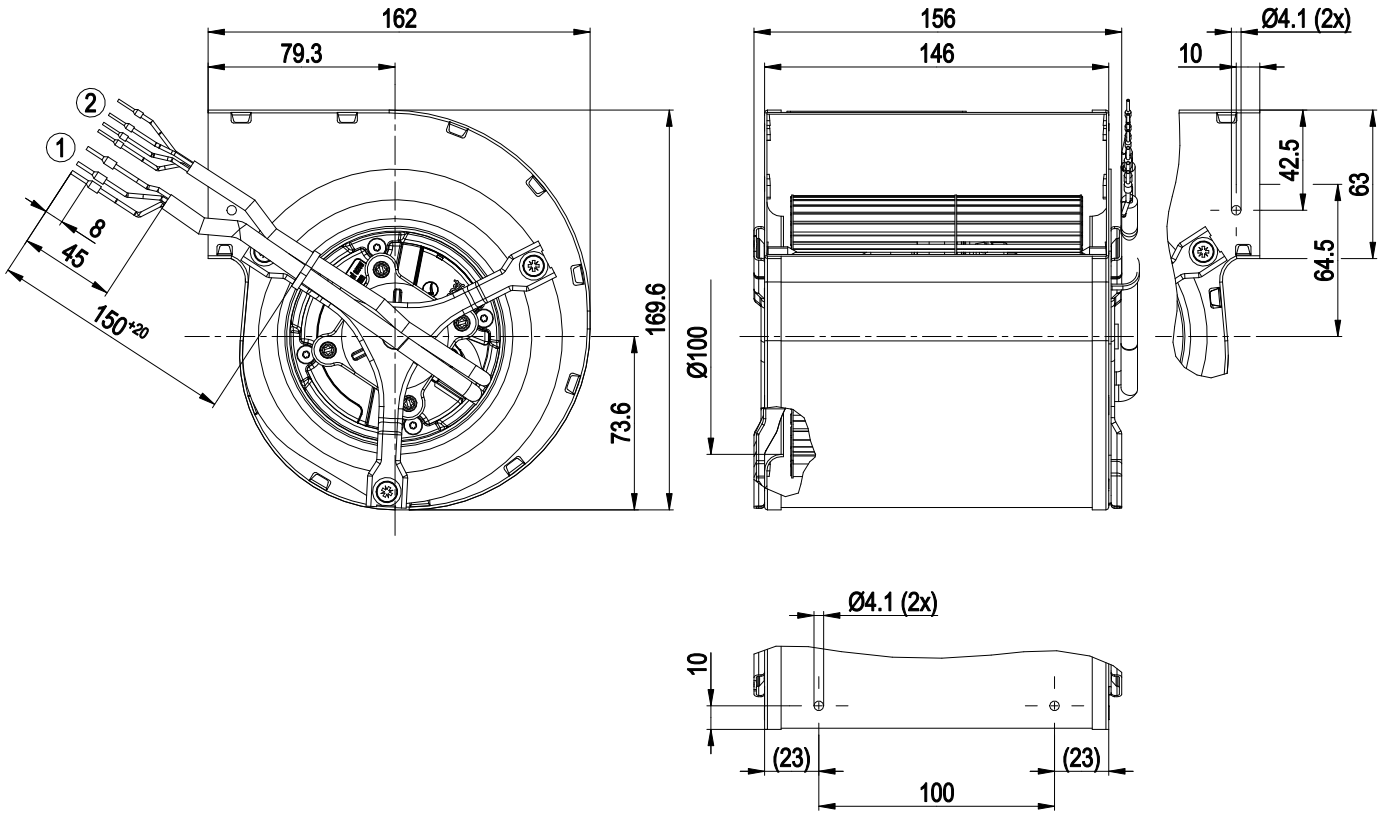
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

# EC centrifugal fan

forward-curved, dual-intake

with housing (without flange)

## Product drawing




| | | | | | |
|---|---|---|---|---|---|
| 1 | Cable PVC AWG20 | | 3x wire-end ferrule | 2 | Cable PVC AWG22 |
| | 4x wire-end ferrule | | | | |



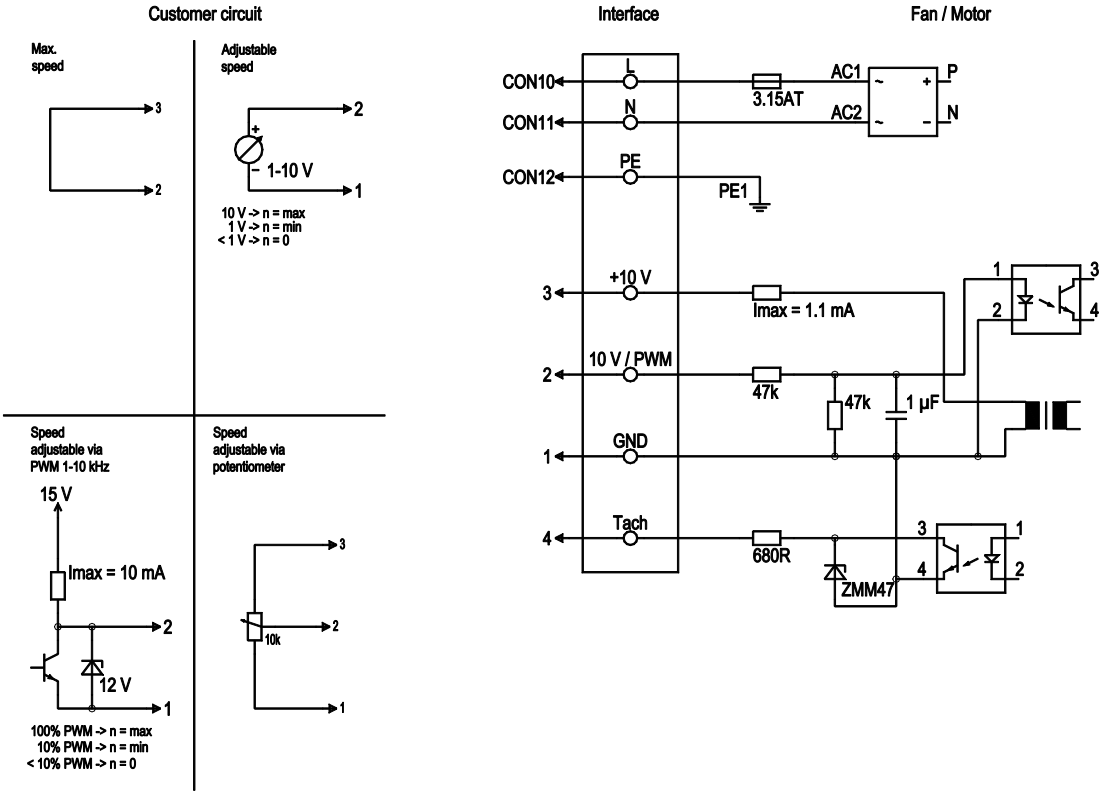
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

# EC centrifugal fan

forward-curved, dual-intake

with housing (without flange)

## Connection diagram




| No. | Conn. | Designation | Color | Function/assignment |
|---|---|---|---|---|
| | CON10 | L | black | Power supply 230 VAC, 50-60 Hz, see nameplate for voltage range |
| | CON11 | N | blue | Neutral conductor |
| | CON12 | PE | green/yellow | Protective earth |
| | 1 | GND | blue | GND connection for control interface |
| | 2 | 0-10V PWM | yellow | Control input 0-10 V or PWM, electrically isolated |
| | 3 | 10 V / max. 1,1 mA | red | Voltage output 10 VDC 1.1 mA, electrically isolated, short-circuit-proof |
| | 4 | Tacho | white | Tach output: open collector, 1 pulse per revolution, electrically isolated |



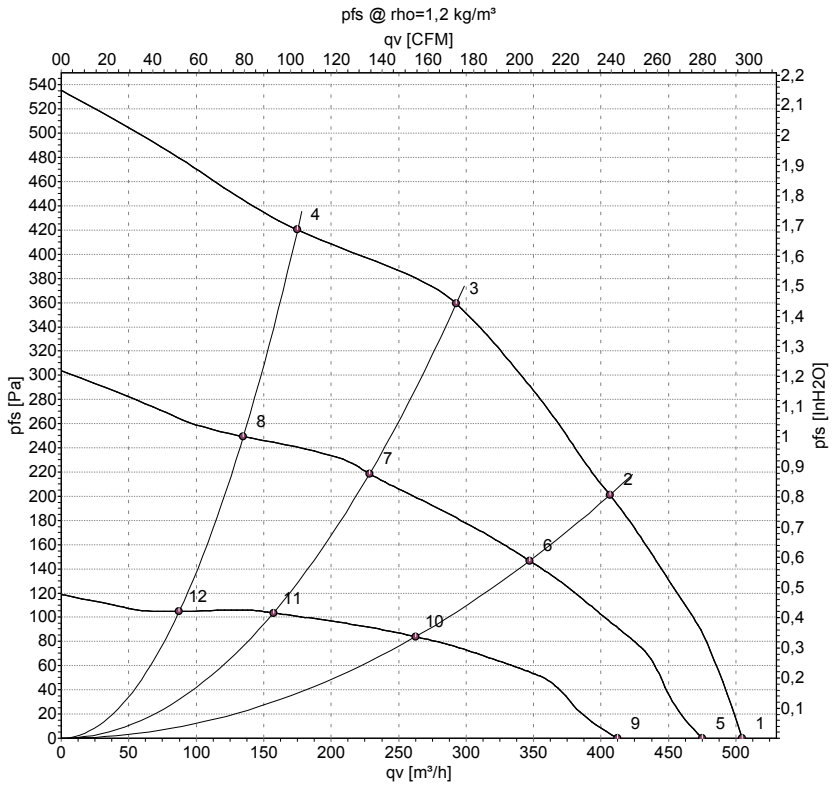
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

# EC centrifugal fan

forward-curved, dual-intake

with housing (without flange)

## Curves: Air performance 50 Hz




Measurement: LU-158421-1
Measurement: LU-158652-1

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 | $LpA_{in}$ | $q_V$ | $p_{fs}$ | $q_V$ | $p_{fs}$ |
|---|---|---|---|---|---|---|---|---|---|---|
| | V | Hz | $min^{-1}$ | W | A | dB(A) | $m^3/h$ | Pa | cfm | in. wg |
| 1 | 230 | 50 | 1950 | 83 | 0.74 | 58 | 505 | 0 | 295 | 0.00 |
| 2 | 230 | 50 | 2465 | 82 | 0.70 | 57 | 405 | 200 | 240 | 0.80 |
| 3 | 230 | 50 | 2970 | 81 | 0.69 | 59 | 295 | 360 | 170 | 1.45 |
| 4 | 230 | 50 | 3245 | 66 | 0.57 | 60 | 175 | 420 | 105 | 1.69 |
| 5 | 230 | 50 | 1845 | 67 | 0.59 | | 475 | 0 | 280 | 0.00 |
| 6 | 230 | 50 | 2115 | 51 | 0.45 | | 345 | 147 | 205 | 0.59 |
| 7 | 230 | 50 | 2325 | 39 | 0.39 | | 230 | 218 | 135 | 0.88 |
| 8 | 230 | 50 | 2470 | 31 | 0.31 | | 135 | 249 | 80 | 1.00 |
| 9 | 230 | 50 | 1600 | 44 | 0.39 | | 410 | 0 | 240 | 0.00 |
| 10 | 230 | 50 | 1600 | 22 | 0.20 | | 265 | 84 | 155 | 0.34 |
| 11 | 230 | 50 | 1600 | 13 | 0.13 | | 155 | 104 | 90 | 0.42 |
| 12 | 230 | 50 | 1600 | 9.0 | 0.08 | | 85 | 105 | 50 | 0.42 |

U = Power supply · f = Frequency · n = Speed (rpm) · $P_{ed}$ = Power consumption · I = Current draw · $LpA_{in}$ = Sound pressure level intake side · $q_V$ = Air flow · $p_{fs}$ = Pressure increase



ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com