**G3G120-BC25-10**

# EC centrifugal fan

forward-curved, single-intake

with housing (flange)

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## Nominal data

| | |
|---|---|
| **Type** | **G3G120-BC25-10** |
| **Motor** | **M3G055-BD** |

| | | |
|---|---|---|
| Phase | | 1~ |
| Nominal voltage | VAC | 230 |
| Nominal voltage range | VAC | 200 .. 240 |
| Frequency | Hz | 50/60 |
| Method of obtaining data | | ml |
| Speed (rpm) | $min^{-1}$ | 2770 |
| Power consumption | W | 84 |
| Current draw | A | 0.7 |
| 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** | 1.6 kg |
| **Size** | 120 mm |
| **Motor size** | 55 |
| **Rotor surface** | Thick-film passivated |
| **Impeller material** | Sheet steel, galvanized |
| **Housing material** | Die-cast aluminum |
| **Direction of rotation** | Clockwise, viewed toward rotor |
| **Degree of protection** | IP54 |
| **Insulation class** | "B" |
| **Moisture (F) / Environmental (H) protection class** | H1 |
| **Max. permitted ambient temp. for motor (transport/storage)** | + 80 °C |
| **Min. permitted ambient temp. for motor (transport/storage)** | - 40 °C |
| **Installation position** | Shaft horizontal or rotor on bottom; rotor on top on request |
| **Condensation drainage holes** | None, open rotor |
| **Mode** | S1 |
| **Motor mounting** | 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 |
| **Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)** | <= 3.5 mA |
| **Motor protection** | Electronic motor protection |
| **With cable** | Variable |
| **Protection class** | I (with customer connection of protective earth) |
| **Conformity with standards** | EN 60335-1; CE |



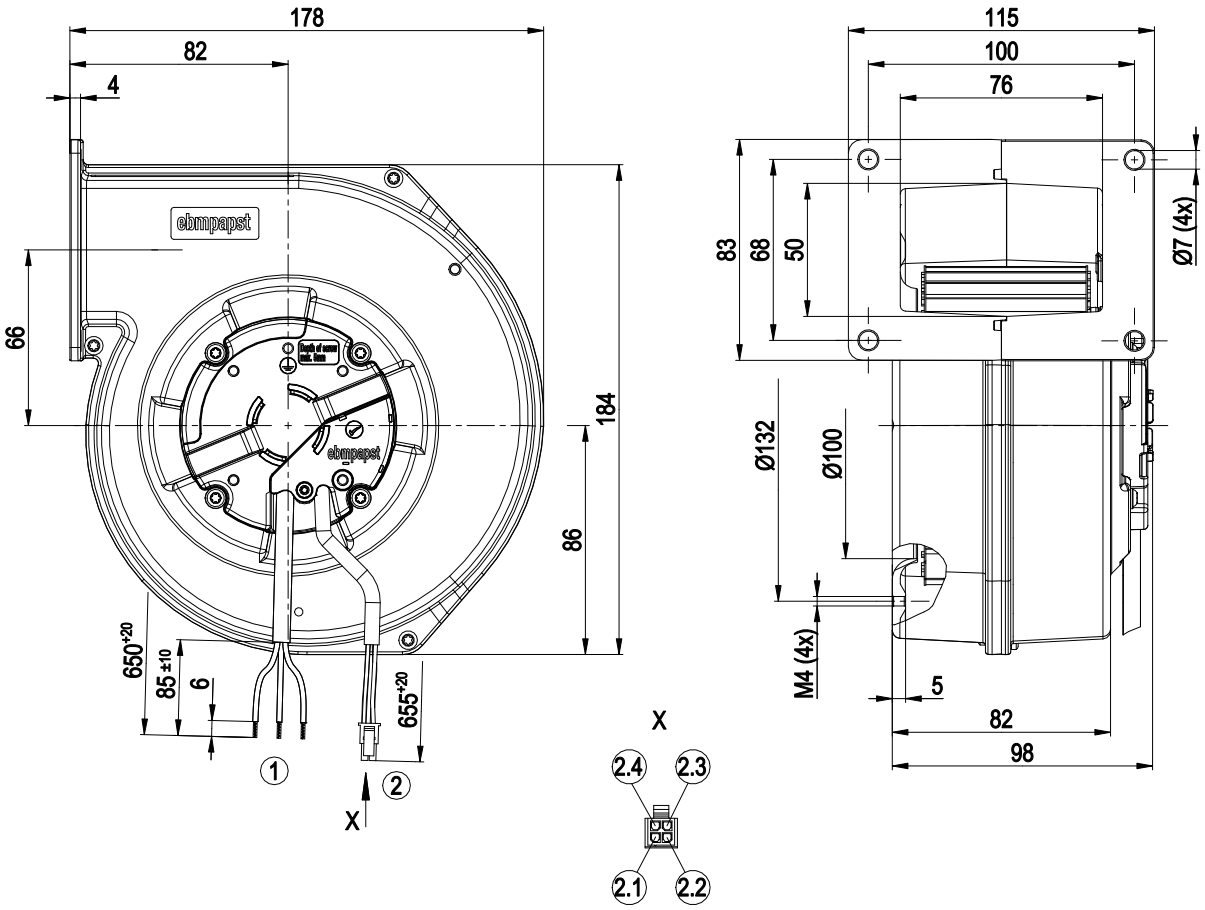
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## Product drawing




| | |
|---|---|
| 1 | Cable PVC AWG20 |
| | 3x splice |
| 2 | Cable PVC AWG22 |
| | 4-pole connector housing Molex 43025-0400, 4x socket Molex 43030-0001 |
| 2.1 | 10 V/max. 1.1 mA (red) |
| 2.2 | 0-10 V/PWM (yellow) |
| 2.3 | GND (blue) |
| 2.4 | Tach (white) |



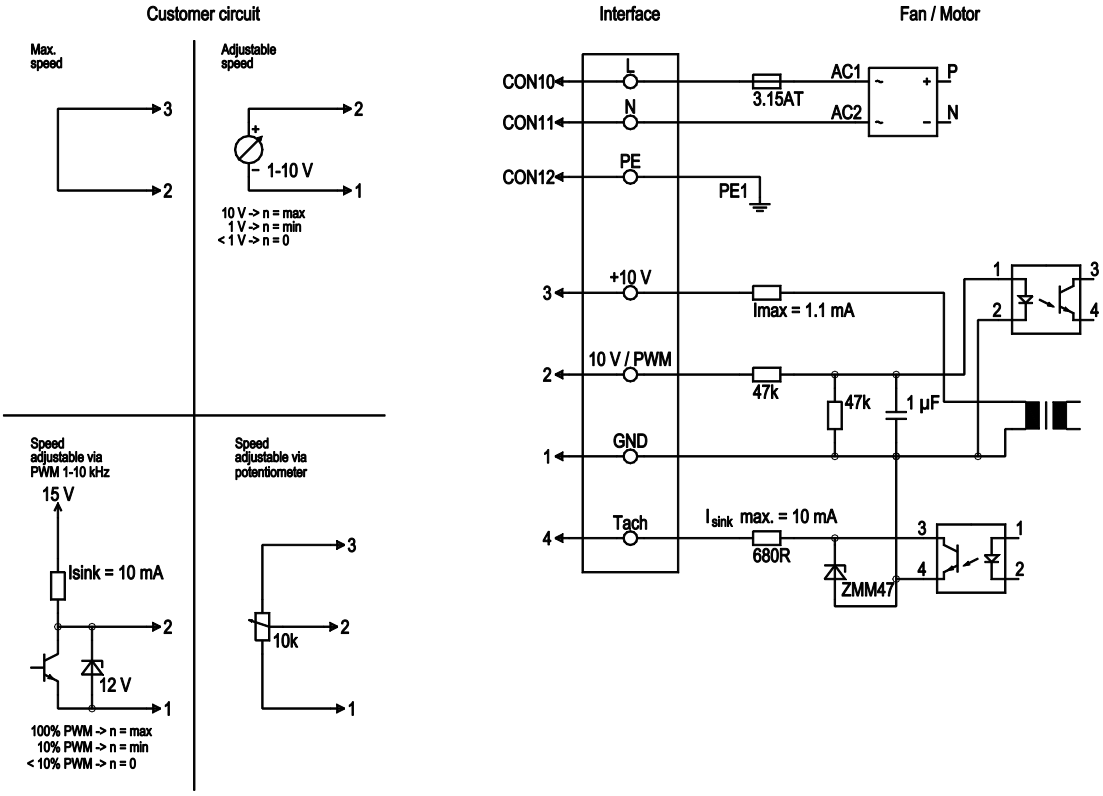
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## Connection diagram




| 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 | 10V/ max 1.1mA | red | Voltage output 10 V / 1.1 mA, electrically isolated, not short-circuit-proof |
| | 4 | Tach | white | Tach output: Open collector, 1 pulse per revolution, electrically isolated, Isink max = 10 mA |



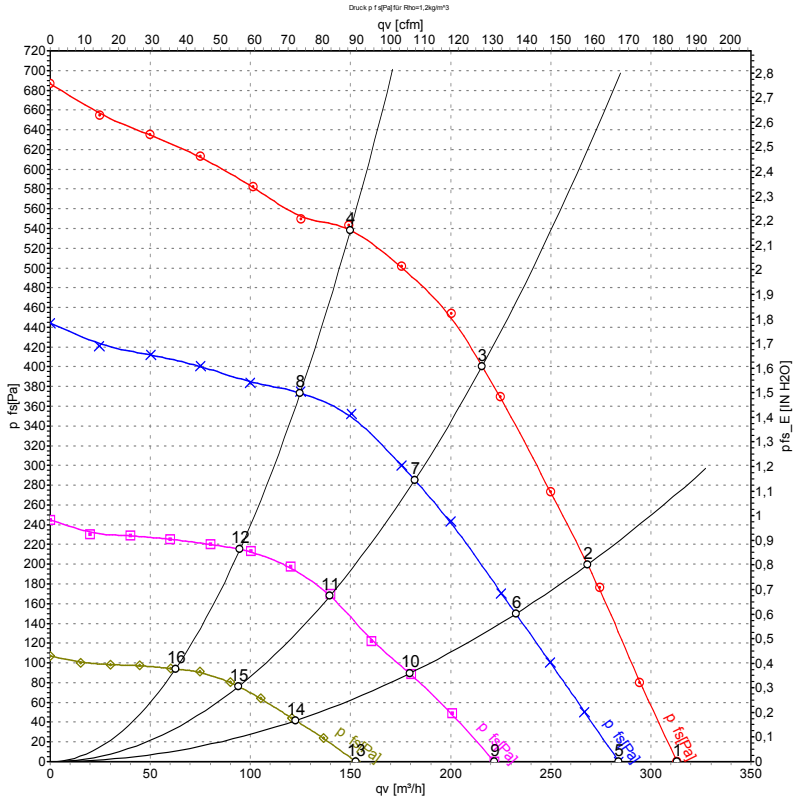
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## Curves: Air performance 50 Hz




Measurement: LU-135394-1
Measurement: LU-135396-1
Measurement: LU-135397-1
Measurement: LU-135399-1

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 | 230 | 50 | 2770 | 84 | 0.70 | 64 | 71 | 315 | 0 | 185 | 0.00 |
| 2 | 230 | 50 | 3120 | 81 | 0.68 | 64 | 72 | 270 | 200 | 160 | 0.80 |
| 3 | 230 | 50 | 3365 | 71 | 0.60 | 63 | 72 | 215 | 400 | 125 | 1.61 |
| 4 | 230 | 50 | 3665 | 58 | 0.52 | 65 | 73 | 150 | 540 | 90 | 2.17 |
| 5 | 230 | 50 | 2535 | 60 | 0.52 | | | 285 | 0 | 165 | 0.00 |
| 6 | 230 | 50 | 2705 | 52 | 0.47 | | | 235 | 150 | 135 | 0.60 |
| 7 | 230 | 50 | 2880 | 43 | 0.42 | | | 180 | 285 | 105 | 1.14 |
| 8 | 230 | 50 | 3070 | 34 | 0.35 | | | 125 | 375 | 75 | 1.51 |
| 9 | 230 | 50 | 2030 | 31 | 0.31 | | | 220 | 0 | 130 | 0.00 |
| 10 | 230 | 50 | 2140 | 26 | 0.27 | | | 180 | 90 | 105 | 0.36 |
| 11 | 230 | 50 | 2240 | 22 | 0.23 | | | 140 | 170 | 80 | 0.68 |
| 12 | 230 | 50 | 2370 | 17 | 0.19 | | | 95 | 215 | 55 | 0.86 |
| 13 | 230 | 50 | 1420 | 13 | 0.16 | | | 155 | 0 | 90 | 0.00 |
| 14 | 230 | 50 | 1485 | 11 | 0.13 | | | 125 | 42 | 70 | 0.17 |
| 15 | 230 | 50 | 1540 | 9.4 | 0.12 | | | 95 | 76 | 55 | 0.31 |
| 16 | 230 | 50 | 1605 | 7.8 | 0.11 | | | 65 | 94 | 35 | 0.38 |

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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