

G3G120-BB01-06

# EC centrifugal fan

forward curved, single inlet

with housing (flange)

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## Nominal data

|                          |                   |            |
|--------------------------|-------------------|------------|
| Type                     | G3G120-BB01-06    |            |
| Motor                    | M3G055-BD         |            |
| Phase                    |                   | 1~         |
| Nominal voltage          | VAC               | 230        |
| Nominal voltage range    | VAC               | 200 .. 240 |
| Frequency                | Hz                | 50/60      |
| Type of data definition  |                   | ml         |
| Speed (rpm)              | min <sup>-1</sup> | 2130       |
| Power input              | W                 | 38         |
| Current draw             | A                 | 0.3        |
| 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

|   |   |
|---|---|
| <b>Mass</b>   | 1.9 kg  |
| <b>Size</b>   | 120 mm  |
| <b>Surface of rotor</b>   | Thick layer passivated  |
| <b>Material of impeller</b>   | Sheet steel, galvanised   |
| <b>Housing material</b>   | Die-cast aluminium  |
| <b>Direction of rotation</b>  | Clockwise, seen on rotor  |
| <b>Type of protection</b>   | IP 54   |
| <b>Insulation class</b>   | "B"   |
| <b>Humidity (F)/environmental protection class (H)</b>                    | H0 - dry environment  |
| <b>Max. permissible ambient motor temp. (transp./ storage)</b>            | + 80 °C   |
| <b>Min. permissible ambient motor temp. (transp./storage)</b>             | - 40 °C   |
| <b>Mounting position</b>  | Any   |
| <b>Condensate discharge holes</b>   | None, open rotor  |
| <b>Operation mode</b>   | S1  |
| <b>Motor bearing</b>  | Ball bearing  |
| <b>Technical features</b>   | <ul style="list-style-type: none"> <li>- Output 10 VDC, max. 10 mA</li> <li>- Tach output</li> <li>- Output limit</li> <li>- Motor current limit</li> <li>- Soft start</li> <li>- Control input 0-10 VDC / PWM</li> <li>- Control interface with SELV potential safely disconnected from the mains</li> <li>- Overvoltage detection</li> <li>- Over-temperature protected electronics / motor</li> <li>- Line undervoltage detection</li> </ul> |
| <b>EMC interference immunity</b>  | Acc. to EN 61000-6-2 (industrial environment)   |
| <b>EMC harmonics</b>  | Acc. to EN 61000-3-2/3  |
| <b>EMC interference emission</b>  | Acc. to EN 61000-6-3 (household environment)  |
| <b>Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)</b> | <= 3.5 mA   |
| <b>Motor protection</b>   | Locked-rotor protection   |
| <b>Cable exit</b>   | Variable  |
| <b>Protection class</b>   | I (if protective earth is connected by customer)  |
| <b>Product conforming to standard</b>                                     | EN 60335-1; CE  |
| <b>Approval</b>   | C22.2 Nr.77 + CAN/CSA-E60730-1; EAC; UL 1004-7 + 60730  |

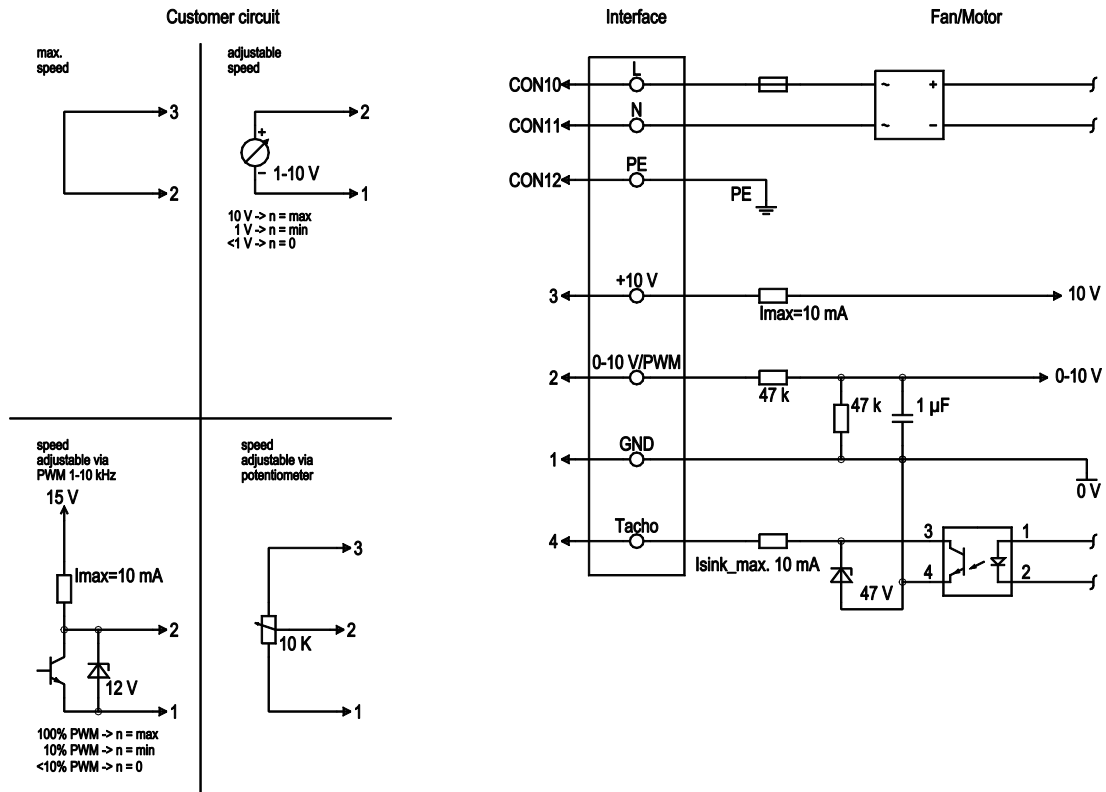




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## Connection screen



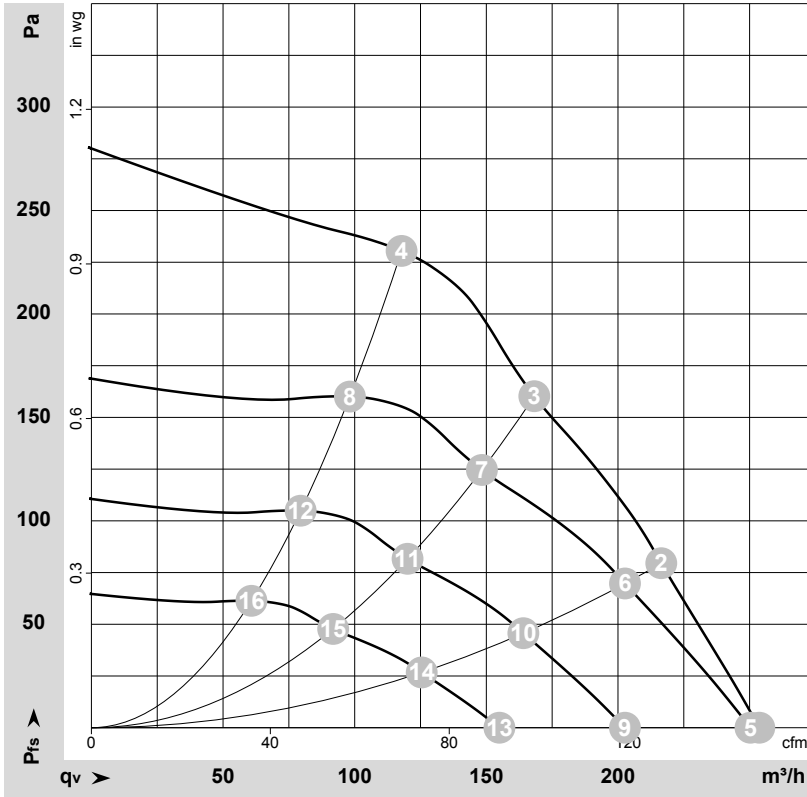
| No. | Conn. | Designation | Colour       | Function / assignment   |
|-----|-------|-------------|--------------|---|
|     | CON10 | L           | brown        | Mains connection, power supply, phase, see type plate for voltage range   |
|     | CON11 | N           | blue         | Mains connection, 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, R <sub>i</sub> =100 kΩ, SELV  |
|     | 4     | Tach        | white        | Speed monitoring output, open collector, 1 pulse per revolution, I <sub>sink max</sub> = 10 mA, SELV  |
|     | 3     | +10 V       | red          | Fixed voltage output 10 VDC +/-3 %, I <sub>max</sub> . 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



$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-172500-1

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebmpapst. Suction-side noise levels: L<sub>WA</sub> measured as per ISO 13347 / L<sub>pA</sub> 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 <sub>ed</sub> | I    | q <sub>v</sub>    | P <sub>fs</sub> | q <sub>v</sub> | P <sub>fs</sub> |
|----|-----|----|-------------------|-----------------|------|-------------------|-----------------|----------------|-----------------|
|    | V   | Hz | min <sup>-1</sup> | W               | A    | m <sup>3</sup> /h | Pa              | cfm            | in. wg          |
| 1  | 230 | 50 | 2130              | 38              | 0.30 | 255               | 0               | 150            | 0.00            |
| 2  | 230 | 50 | 2240              | 33              | 0.26 | 215               | 80              | 125            | 0.32            |
| 3  | 230 | 50 | 2380              | 28              | 0.22 | 170               | 160             | 100            | 0.64            |
| 4  | 230 | 50 | 2520              | 22              | 0.18 | 120               | 230             | 70             | 0.92            |
| 5  | 230 | 50 | 2100              | 37              | 0.28 | 250               | 0               | 145            | 0.00            |
| 6  | 230 | 50 | 2100              | 27              | 0.21 | 205               | 70              | 120            | 0.28            |
| 7  | 230 | 50 | 2100              | 19              | 0.15 | 150               | 124             | 85             | 0.50            |
| 8  | 230 | 50 | 2100              | 13              | 0.10 | 100               | 161             | 60             | 0.65            |
| 9  | 230 | 50 | 1700              | 19              | 0.15 | 205               | 0               | 120            | 0.00            |
| 10 | 230 | 50 | 1700              | 15              | 0.11 | 165               | 46              | 95             | 0.18            |
| 11 | 230 | 50 | 1700              | 10.0            | 0.08 | 120               | 82              | 70             | 0.33            |
| 12 | 230 | 50 | 1700              | 7.0             | 0.06 | 80                | 106             | 45             | 0.43            |
| 13 | 230 | 50 | 1300              | 9.0             | 0.07 | 155               | 0               | 90             | 0.00            |
| 14 | 230 | 50 | 1300              | 7.0             | 0.05 | 125               | 27              | 75             | 0.11            |
| 15 | 230 | 50 | 1300              | 5.0             | 0.04 | 90                | 48              | 55             | 0.19            |
| 16 | 230 | 50 | 1300              | 3.00            | 0.02 | 60                | 62              | 35             | 0.25            |

U = Supply voltage · f = Frequency · n = Speed (rpm) · P<sub>ed</sub> = Power input · I = Current draw · q<sub>v</sub> = Air flow · P<sub>fs</sub> = Pressure increase

