**D3G318-BB35-05**

# EC centrifugal fan

forward curved, dual inlet

with housing (large flange)

D3G318-BB35-05 ebmpapst Datasheet
sales@fansco.com
www.fansco.com

Limited partnership · Headquarters Mulfingen
County court Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
County court Stuttgart · HRB 590142

ErP2015 EXCEEDS THE NORM

## Nominal data

| | |
|---|---|
| **Type** | **D3G318-BB35-05** |
| **Motor** | **M3G112-GA** |

| | | |
|---|---|---|
| Phase | | 3~ |
| Nominal voltage | VAC | 400 |
| Nominal voltage range | VAC | 380 .. 480 |
| Frequency | Hz | 50/60 |
| Type of data definition | | ml |
| State | | prelim. |
| Speed | $min^{-1}$ | 880 |
| Power input | W | 1000 |
| Current draw | A | 1.7 |
| Min. back pressure | Pa | 150 |
| Min. ambient temperature | °C | -25 |
| Max. ambient temperature | °C | 40 |

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

## Data according to ErP directive

| | |
|---|---|
| Installation category | A |
| Efficiency category | Static |
| Variable speed drive | Yes |
| Specific ratio* | 1.00 |

* Specific ratio = 1 + $p_{fs}$ / 100 000 Pa

| | | Actual | Request 2013 | Request 2015 |
|---|---|---|---|---|
| Overall efficiency $\eta_{es}$ | % | 52.5 | 29.7 | 36.7 |
| Efficiency grade N | | 59.8 | 37 | 44 |
| Power input $P_{ed}$ | kW | 0.69 | | |
| Air flow $q_v$ | $m^3/h$ | 3505 | | |
| Pressure increase $p_{fs}$ | Pa | 343 | | |
| Speed n | $min^{-1}$ | 1010 | | |

Data definition with optimum efficiency. LU-107484
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.



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## Technical features

| | |
|---|---|
| **Mass** | 23.1 kg |
| **Size** | 318 mm |
| **Surface of rotor** | Coated in black |
| **Material of electronics housing** | Die-cast aluminium |
| **Material of impeller** | Sheet steel, galvanised |
| **Housing material** | Sheet steel, galvanised |
| **Motor suspension** | Motor anti-vibration mounted on one side |
| **Direction of rotation** | Clockwise, seen on rotor |
| **Type of protection** | IP 54 |
| **Insulation class** | "B" |
| **Humidity class** | F4-1 |
| **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** | - Integrated PID controller<br>- Motor current limit<br>- PFC, passive<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<br>- Line undervoltage / phase failure detection |
| **EMC interference immunity** | Acc. to EN 61000-6-2 (industrial environment) |
| **EMC harmonics** | Acc. to EN 61000-3-2/3 |
| **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** | Thermal overload protector (TOP) wired internally |
| **Cable exit** | Variable |
| **Protection class** | I (if protective earth is connected by customer) |
| **Product conforming to standard** | EN 61800-5-1; CE |
| **Approval** | EAC |

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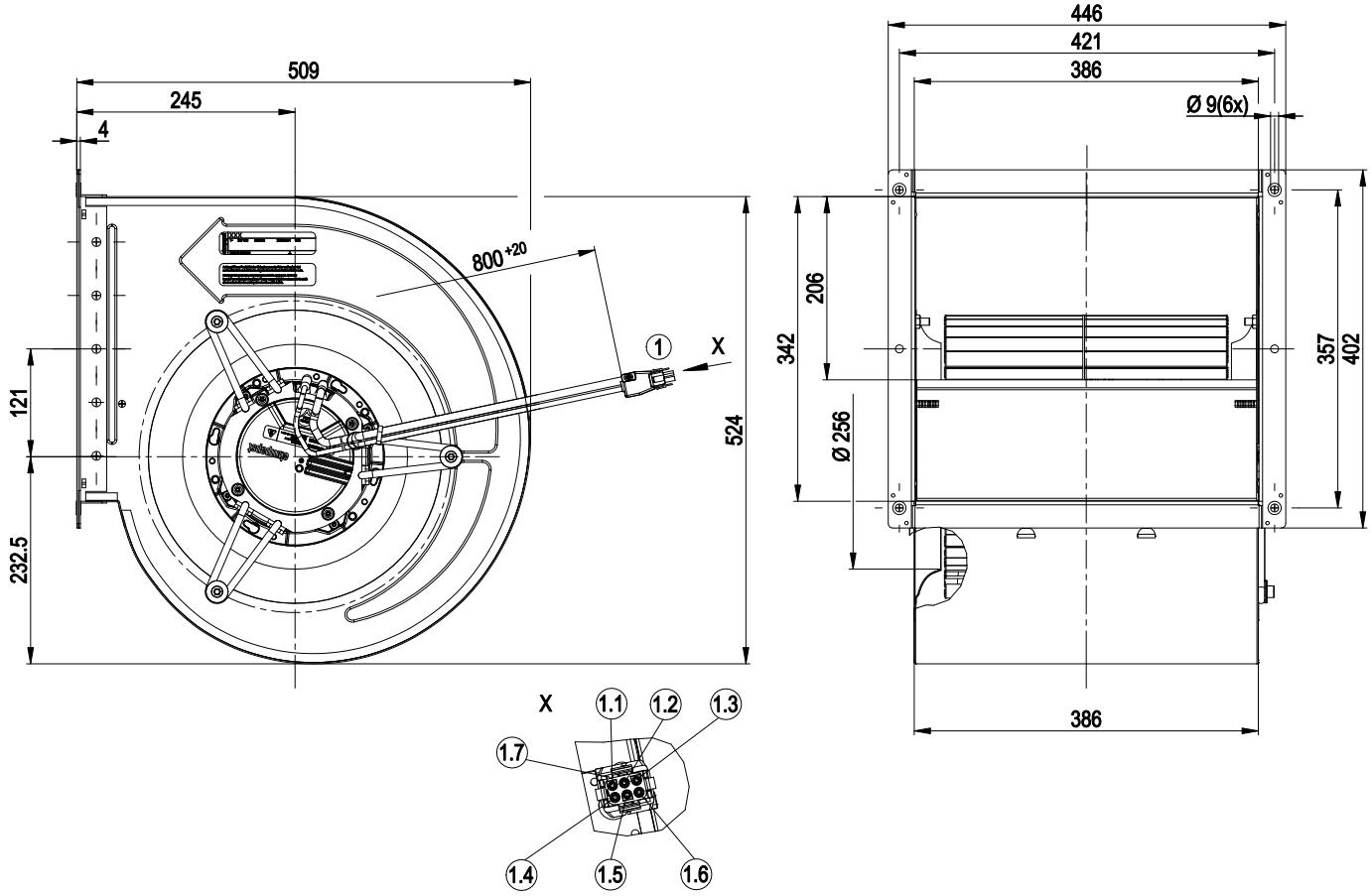
## Product drawing




| | |
|---|---|
| 1 | Connection line PVC AWG18/AWG22 with 6-pole connector housing AMP 350 715-4, 5x plug pin AMP 926885-1, 1x plug pin AMP 350654-1 (PE) |
| 1.1 | 0-10V / PWM (yellow) |
| 1.2 | GND (blue) |
| 1.3 | PE (green/yellow) |
| 1.4 | L1 (black) |
| 1.5 | L2 (blue) |
| 1.6 | L3 (brown) |
| 1.7 | Polarising rib |

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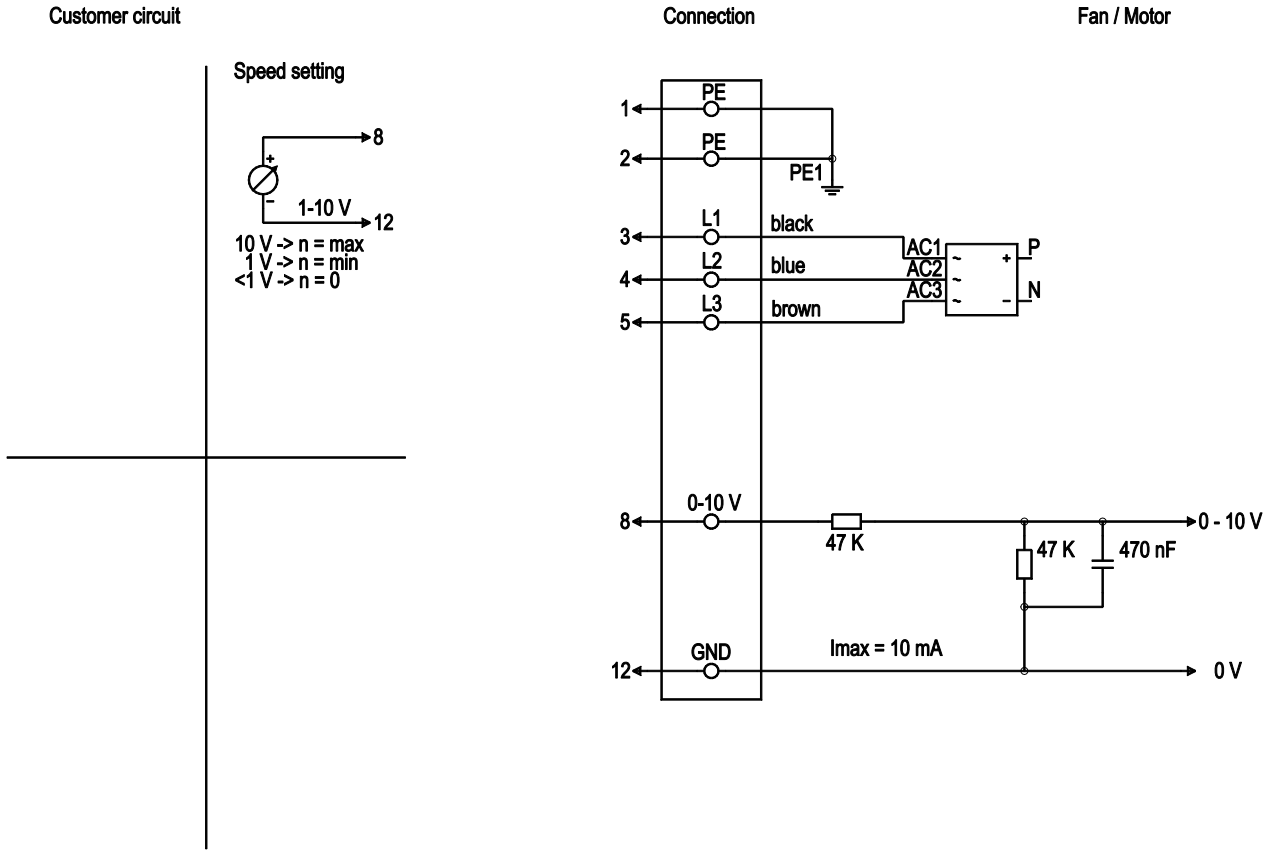
## Connection screen




| No. | Conn. | Designation | Colour | Function / assignment |
|---|---|---|---|---|
| 1 | 1, 2 | PE | green/yellow | Protective earth |
| 1 | 3 | L1 | black | Supply voltage 50 / 60 Hz |
| 1 | 4 | L2 | brown | Supply voltage, 50/60 Hz |
| 1 | 5 | L3 | brown | Supply voltage, 50/60 Hz |
| 2 | 8 | 0 - 10 V | yellow | Control input, set value 0 - 10 VDC, impedance 100 kOhm, SELV |
| 2 | 10 | P | red | internal |
| 2 | 12 | GND | blue | Reference ground for control interface, SELV |

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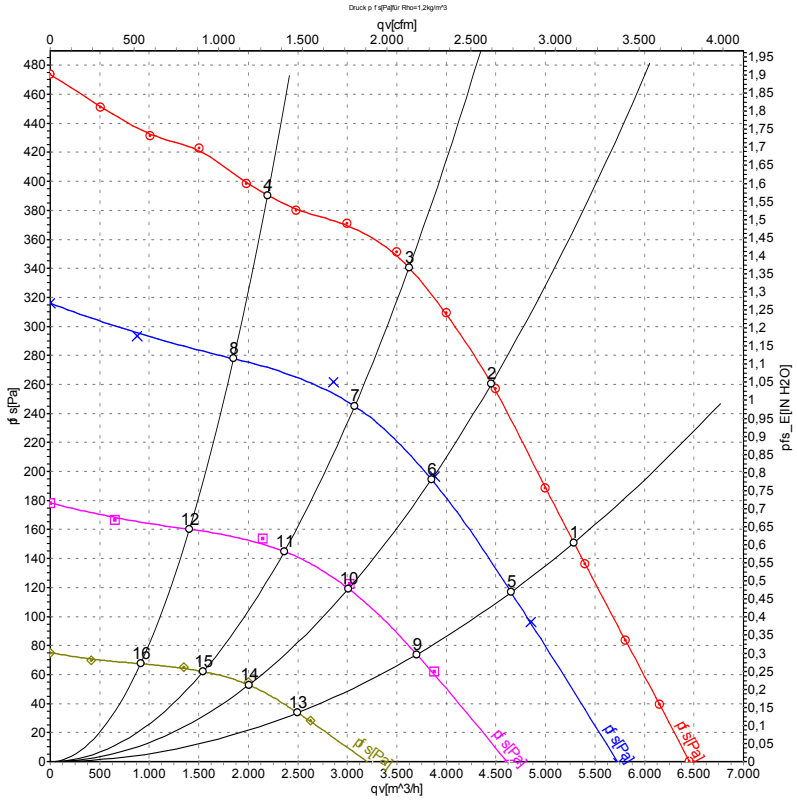
## Charts: Air flow 50 Hz




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 | $LpA_{in}$ | $LwA_{in}$ | $LwA_{out}$ | qv | $p_{fs}$ |
|---|---|---|---|---|---|---|---|---|---|---|
| | V | Hz | $min^{-1}$ | W | A | dB(A) | dB(A) | dB(A) | $m^3/h$ | Pa |
| 1 | 400 | 50 | 880 | 1000 | 1.70 | 72 | 80 | 83 | 5290 | 150 |
| 2 | 400 | 50 | 945 | 852 | 1.39 | 69 | 78 | 80 | 4455 | 260 |
| 3 | 400 | 50 | 1000 | 717 | 1.20 | 67 | 76 | 79 | 3625 | 340 |
| 4 | 400 | 50 | 1105 | 525 | 0.96 | 67 | 75 | 79 | 2195 | 390 |
| 5 | 400 | 50 | 770 | 642 | 1.10 | 68 | 77 | 79 | 4655 | 117 |
| 6 | 400 | 50 | 820 | 528 | 0.96 | 65 | 73 | 76 | 3850 | 199 |
| 7 | 400 | 50 | 860 | 437 | 0.82 | 62 | 71 | 73 | 3075 | 248 |
| 8 | 400 | 50 | 915 | 301 | 0.60 | 61 | 70 | 73 | 1855 | 278 |
| 9 | 400 | 50 | 615 | 327 | 0.65 | 62 | 71 | 73 | 3700 | 75 |
| 10 | 400 | 50 | 645 | 261 | 0.53 | 58 | 67 | 69 | 3015 | 123 |
| 11 | 400 | 50 | 670 | 209 | 0.44 | 56 | 65 | 68 | 2365 | 146 |
| 12 | 400 | 50 | 700 | 143 | 0.32 | 54 | 62 | 66 | 1405 | 160 |
| 13 | 400 | 50 | 420 | 108 | 0.26 | 51 | 60 | 61 | 2500 | 34 |
| 14 | 400 | 50 | 430 | 86 | 0.23 | 47 | 56 | 57 | 2005 | 55 |
| 15 | 400 | 50 | 440 | 71 | 0.20 | 44 | 53 | 54 | 1545 | 62 |
| 16 | 400 | 50 | 455 | 53 | 0.17 | 42 | 51 | 53 | 915 | 68 |

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