

# AC centrifugal fan

forward-curved, dual-intake

with housing (flange)

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## Nominal data

| Type                        | D4E240-BA01-01    |         |         |
|-----------------------------|-------------------|---------|---------|
| Motor                       | M4E094-IF         |         |         |
| Phase                       |                   | 1~      | 1~      |
| Nominal voltage             | VAC               | 230     | 230     |
| Frequency                   | Hz                | 50      | 60      |
| Method of obtaining data    |                   | fa      | ml      |
| Valid for approval/standard |                   | -       | -       |
| Speed (rpm)                 | min <sup>-1</sup> | 1300    | 1310    |
| Power consumption           | W                 | 1020    | 1320    |
| Current draw                | A                 | 4.45    | 5.75    |
| Capacitor                   | µF                | 25      | 25      |
| Capacitor voltage           | VDB               | 400     | 450     |
| Capacitor standard          |                   | S2 (CE) | S2 (CE) |
| Min. back pressure          | Pa                | 0       | 50      |
| Min. back pressure          | in. wg            | 0       | 0.2     |
| Min. ambient temperature    | °C                | -40     | -40     |
| Max. ambient temperature    | °C                | 70      | 55      |
| Starting current            | A                 | 8.3     | 7.5     |

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



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## Technical description

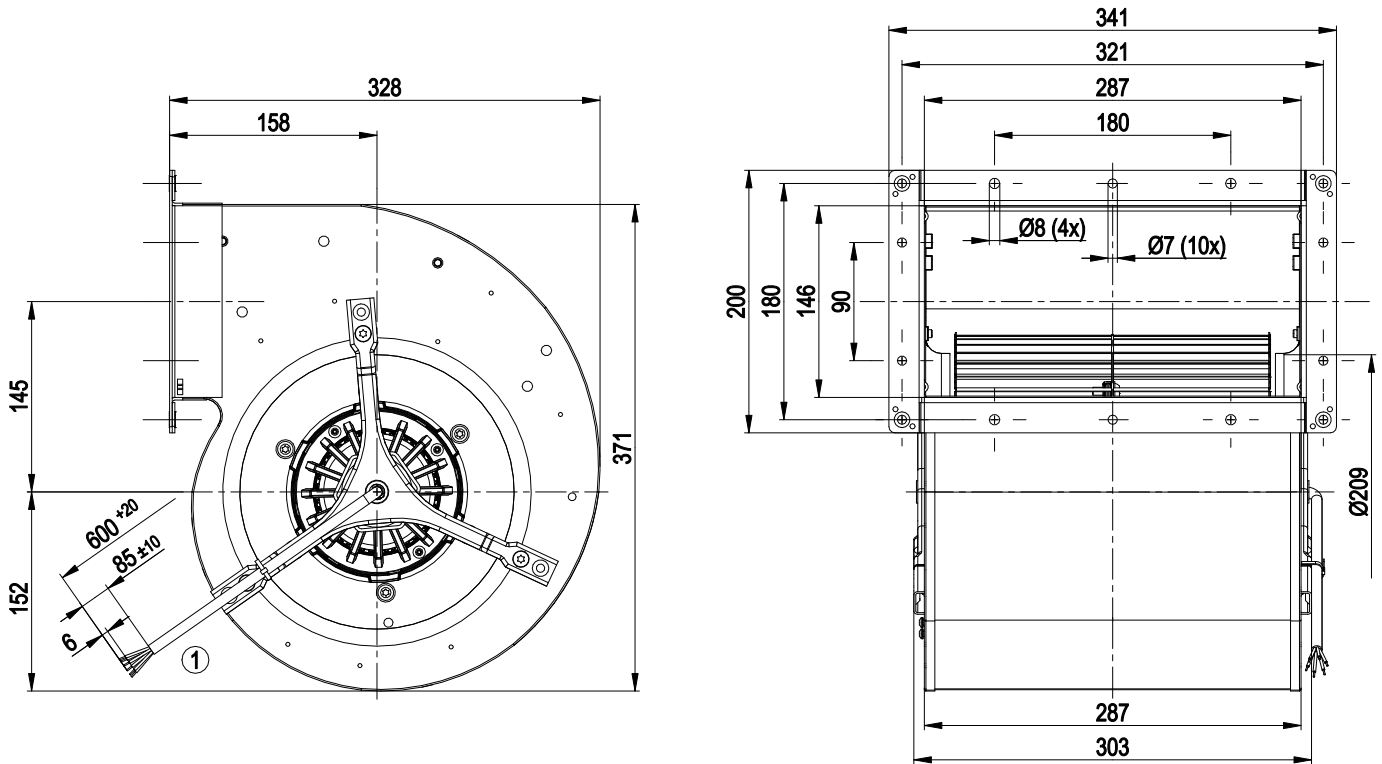
|                                                                            |                                                                                                                                                                                                                          |
|----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Weight                                                                     | 14.8 kg                                                                                                                                                                                                                  |
| Fan size                                                                   | 240 mm                                                                                                                                                                                                                   |
| 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                                                       | IP10                                                                                                                                                                                                                     |
| Insulation class                                                           | "F"                                                                                                                                                                                                                      |
| Moisture (F) / Environmental (H) protection class                          | F0                                                                                                                                                                                                                       |
| Ambient temperature note                                                   | Occasional start-up between -40°C and -25°C is permissible.<br>For continuous operation at temperatures below -25°C (e.g. refrigeration applications) we recommend our fan design with special low-temperature bearings. |
| Max. permitted ambient temp. for motor (transport/storage)                 | +80 °C                                                                                                                                                                                                                   |
| Min. permitted ambient temp. for motor (transport/storage)                 | -40 °C                                                                                                                                                                                                                   |
| Installation position                                                      | Any                                                                                                                                                                                                                      |
| Condensation drainage holes                                                | None                                                                                                                                                                                                                     |
| Mode                                                                       | S1                                                                                                                                                                                                                       |
| Motor bearing                                                              | Ball bearing                                                                                                                                                                                                             |
| Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system) | <= 3.5 mA                                                                                                                                                                                                                |
| Motor protection                                                           | Thermal overload protector (TOP) with basic insulation                                                                                                                                                                   |
| With cable                                                                 | Axial                                                                                                                                                                                                                    |
| Protection class                                                           | I (with customer connection of protective earth)                                                                                                                                                                         |
| Motor capacitor according to EN 60252-1 in safety protection class         | S2                                                                                                                                                                                                                       |
| Conformity with standards                                                  | EN 60034-1 (2010)                                                                                                                                                                                                        |
| Approval                                                                   | CCC; EAC                                                                                                                                                                                                                 |



# AC centrifugal fan

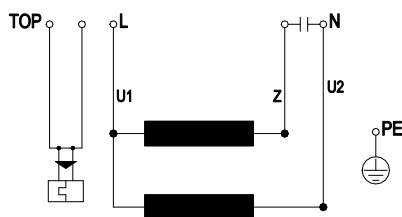
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## Product drawing



1 Cable ETFE AWG18, 6x crimped splices

## Connection diagram

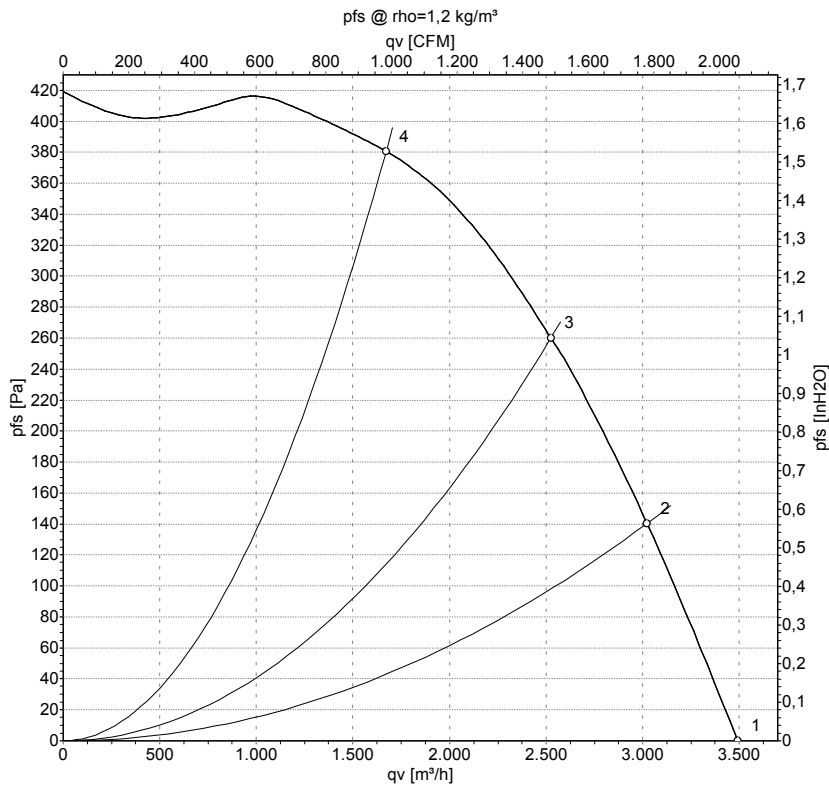


|     |         |    |              |   |       |
|-----|---------|----|--------------|---|-------|
| TOP | 2x gray | U1 | blue         | Z | brown |
| U2  | black   | PE | green/yellow |   |       |

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## Curves: Air performance 50 Hz



Measurement: LU-66809-1

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 <sub>e</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    | m³/h           | Pa              | cfm            | in. wg          |
| 1 | 230 | 50 | 1300              | 1020           | 4.45 | 3495           | 0               | 2055           | 0.00            |
| 2 | 230 | 50 | 1340              | 868            | 3.82 | 3025           | 140             | 1780           | 0.56            |
| 3 | 230 | 50 | 1375              | 749            | 3.33 | 2525           | 260             | 1485           | 1.04            |
| 4 | 230 | 50 | 1420              | 584            | 2.67 | 1670           | 380             | 985            | 1.53            |

U = Power supply · f = Frequency · n = Speed (rpm) · P<sub>e</sub> = Power consumption · I = Current draw · q<sub>v</sub> = Air flow · p<sub>fs</sub> = Pressure increase

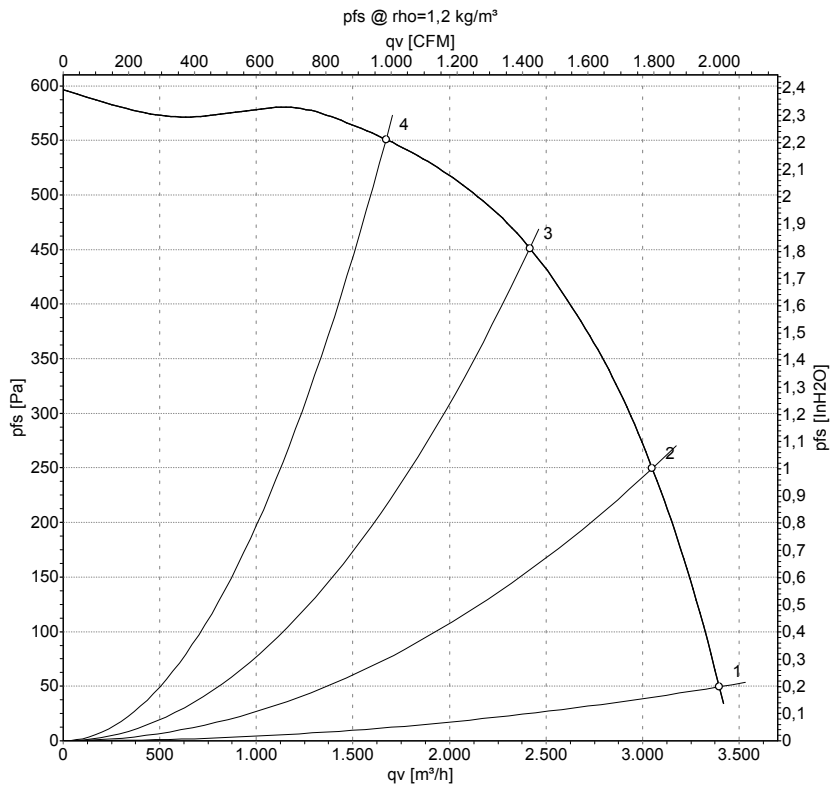


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## Curves: Air performance 60 Hz



Measurement: LU-66810-1

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 <sub>e</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    | m³/h           | Pa              | cfm            | in. wg          |
| 1 | 230 | 60 | 1310              | 1320           | 5.75 | 3400           | 50              | 2000           | 0.20            |
| 2 | 230 | 60 | 1490              | 1176           | 5.14 | 3050           | 250             | 1795           | 1.00            |
| 3 | 230 | 60 | 1600              | 1022           | 4.57 | 2415           | 450             | 1425           | 1.81            |
| 4 | 230 | 60 | 1665              | 874            | 4.08 | 1670           | 550             | 985            | 2.21            |

U = Power supply · f = Frequency · n = Speed (rpm) · P<sub>e</sub> = Power consumption · I = Current draw · q<sub>v</sub> = Air flow · p<sub>fs</sub> = Pressure increase

