

# AC centrifugal fan

forward-curved, dual-intake

with housing and mounting bracket

D4E225-FH05-16 ebmpapst Datasheet

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## Nominal data

|                             |                    |      |
|-----------------------------|--------------------|------|
| Type                        | D4E225-FH05-16     |      |
| Motor                       | M4E094-LA          |      |
| Phase                       |                    | 1~   |
| Nominal voltage             | VAC                | 230  |
| Frequency                   | Hz                 | 50   |
| Method of obtaining data    |                    | cs   |
| Valid for approval/standard |                    | CE   |
| Speed (rpm)                 | min <sup>-1</sup>  | 1415 |
| Power consumption           | W                  | 500  |
| Current draw                | A                  | 2.4  |
| Capacitor                   | μF                 | 14   |
| Capacitor voltage           | VDB                | 450  |
| Min. back pressure          | Pa                 | 300  |
| Min. back pressure          | inH <sub>2</sub> O | 1.2  |
| Min. ambient temperature    | °C                 | -40  |
| Max. ambient temperature    | °C                 | 65   |
| Starting current            | A                  | 8.0  |

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

## Data according to ErP Directive

|                                |   | Actual | Req. 2015 |
|--------------------------------|---|--------|-----------|
| 01 Overall efficiency $\eta_e$ | % | 41.1   | 41.1      |
| 02 Measurement category        |   | B      |           |
| 03 Efficiency category         |   | Total  |           |
| 04 Efficiency grade N          |   | 49     | 49        |
| 05 Variable speed drive        |   | No     |           |

Data obtained at optimum efficiency level.

The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

|                            |                   |      |
|----------------------------|-------------------|------|
| 09 Power consumption $P_e$ | kW                | 0.57 |
| 09 Air flow $q_v$          | m <sup>3</sup> /h | 2290 |
| 09 Pressure increase $p_f$ | Pa                | 353  |
| 10 Speed (rpm) n           | min <sup>-1</sup> | 1395 |
| 11 Specific ratio*         |                   | 1.00 |

\* Specific ratio =  $1 + p_f / 100\,000\text{ Pa}$ 

LU-163196



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## Technical description

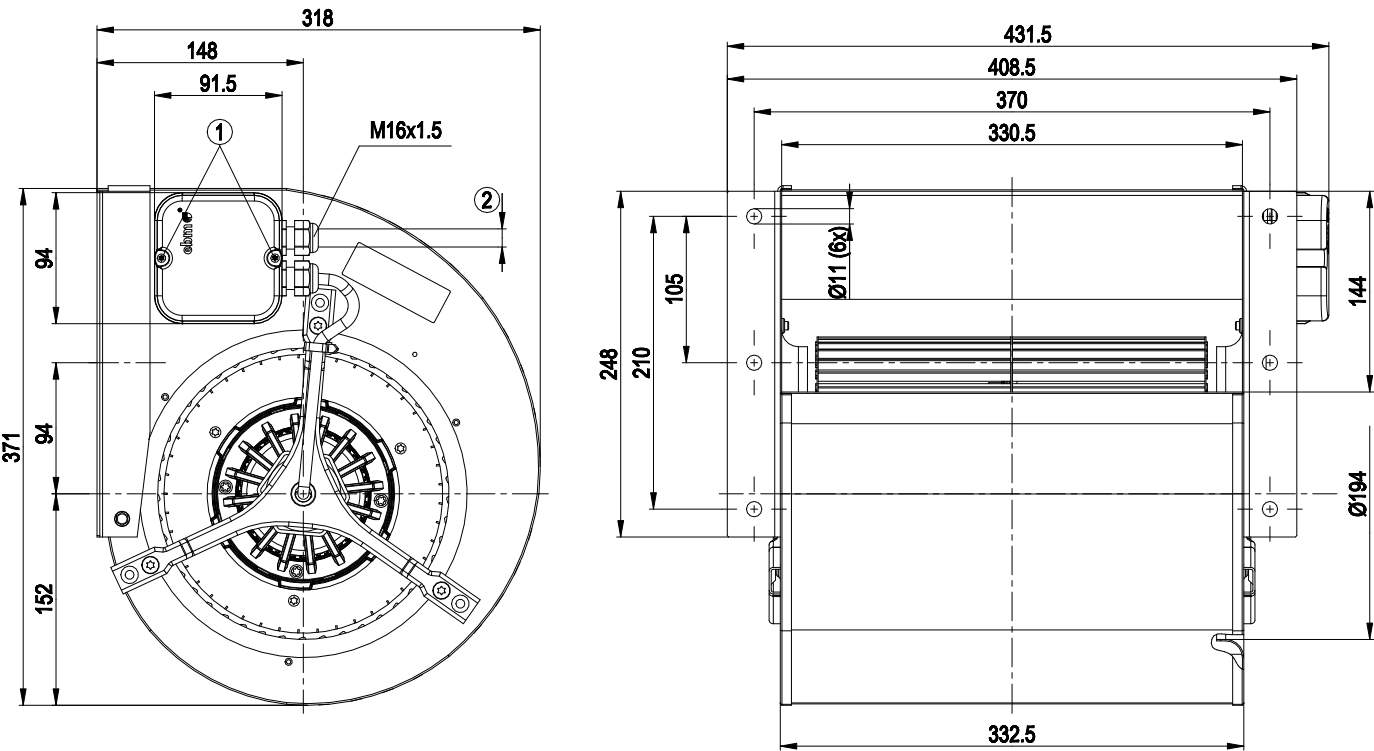
|                                                                            |                                                       |
|----------------------------------------------------------------------------|-------------------------------------------------------|
| Weight                                                                     | 18.5 kg                                               |
| Fan size                                                                   | 225 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                                                       | IP44                                                  |
| Insulation class                                                           | "F"                                                   |
| Moisture (F) / Environmental (H) protection class                          | F1-1                                                  |
| 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) | < 0.75 mA                                             |
| Electrical hookup                                                          | Via terminal box, capacitor integrated and connected  |
| Motor protection                                                           | Thermal overload protector (TOP) internally connected |
| With cable                                                                 | Axial                                                 |
| Protection class                                                           | I (with customer connection of protective earth)      |
| Motor capacitor according to EN 60252-1 in safety protection class         | P0/S0                                                 |
| Conformity with standards                                                  | EN 60034-1 (2010); CE                                 |



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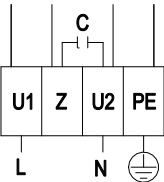
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## Product drawing



- 1 Tightening torque  $0.8 \pm 0.15$  Nm
- 2 Cable diameter min. 4 mm, max. 10 mm, tightening torque  $2.5 \pm 0.4$  Nm

## Connection diagram



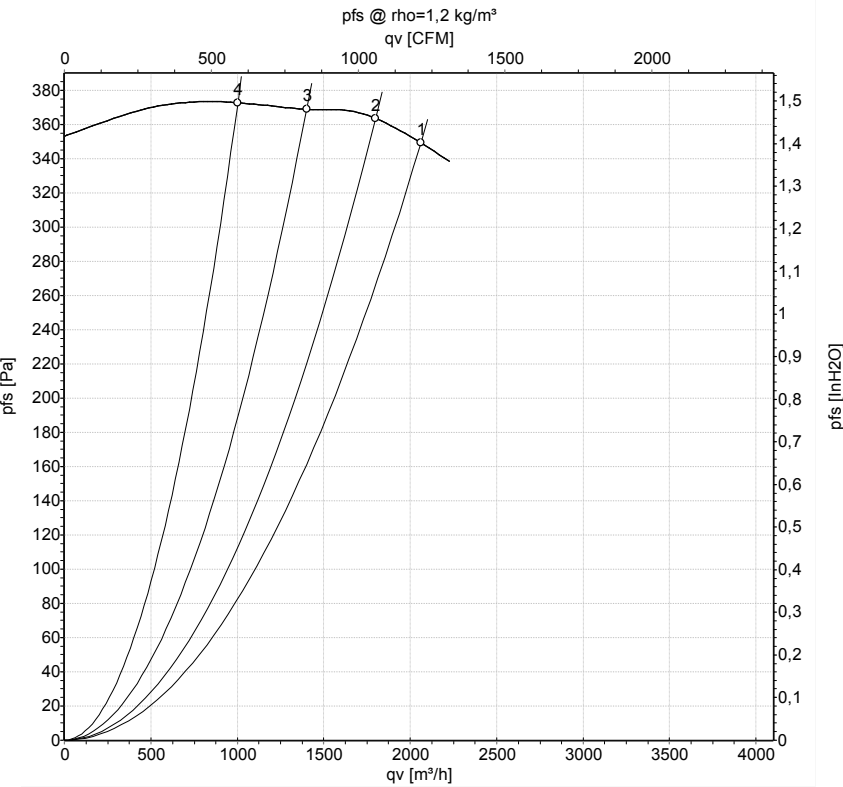
|    |              |   |       |   |              |
|----|--------------|---|-------|---|--------------|
| L  | = U1 = blue  | Z | brown | N | = U2 = black |
| PE | green/yellow |   |       |   |              |



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## Curves: Air performance 50 Hz



Measurement: LU-163196-1

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    | qv                | p <sub>fs</sub> | qv   | p <sub>fs</sub>    |
|---|-----|----|-------------------|----------------|------|-------------------|-----------------|------|--------------------|
|   | V   | Hz | min <sup>-1</sup> | W              | A    | m <sup>3</sup> /h | Pa              | CFM  | inH <sub>2</sub> O |
| 1 | 230 | 50 | 1415              | 500            | 2.40 | 2060              | 350             | 1215 | 1.41               |
| 2 | 230 | 50 | 1420              | 490            | 2.34 | 1800              | 365             | 1060 | 1.47               |
| 3 | 230 | 50 | 1435              | 448            | 2.13 | 1400              | 368             | 825  | 1.48               |
| 4 | 230 | 50 | 1445              | 406            | 1.98 | 1005              | 370             | 590  | 1.49               |

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

