

W2D250-HJ02-12 ebmpapst Datasheet

sales@fansco.com

www.fansco.com

## Nominal data

|                             |                   |      |      |      |
|-----------------------------|-------------------|------|------|------|
| Type                        | W2D250-HJ02-12    |      |      |      |
| Motor                       | M2D068-DC         |      |      |      |
| Phase                       |                   | 3~   | 3~   | 3~   |
| Nominal voltage             | VAC               | 400  | 400  | 460  |
| Wiring                      |                   | Y    | Y    | Y    |
| Frequency                   | Hz                | 50   | 60   | 60   |
| Method of obtaining data    |                   | fa   | fa   | fa   |
| Valid for approval/standard |                   | CE   | CE   | CE   |
| Speed (rpm)                 | min <sup>-1</sup> | 2660 | 2920 | 3050 |
| Power consumption           | W                 | 115  | 165  | 180  |
| Current draw                | A                 | 0.23 | 0.27 | 0.28 |
| Max. back pressure          | Pa                | 155  | 175  | 195  |
| Max. back pressure          | in. wg            | 0.62 | 0.7  | 0.78 |
| Min. ambient temperature    | °C                | -25  | -25  | -25  |
| Max. ambient temperature    | °C                | 65   | 45   | 45   |

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

## Data according to Commission Regulation (EU) 327/2011

|                                   |   | Actual | Req. 2015 |
|-----------------------------------|---|--------|-----------|
| 01 Overall efficiency $\eta_{es}$ | % | 28.4   | 28.3      |
| 02 Measurement category           |   | A      |           |
| 03 Efficiency category            |   | Static |           |
| 04 Efficiency grade N             |   | 40.1   | 40        |
| 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                | 0.14 |
| 09 Air flow $q_v$             | m <sup>3</sup> /h | 1450 |
| 09 Pressure increase $p_{fs}$ | Pa                | 100  |
| 10 Speed (rpm) n              | min <sup>-1</sup> | 2530 |
| 11 Specific ratio*            |                   | 1.00 |

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

LU-51572

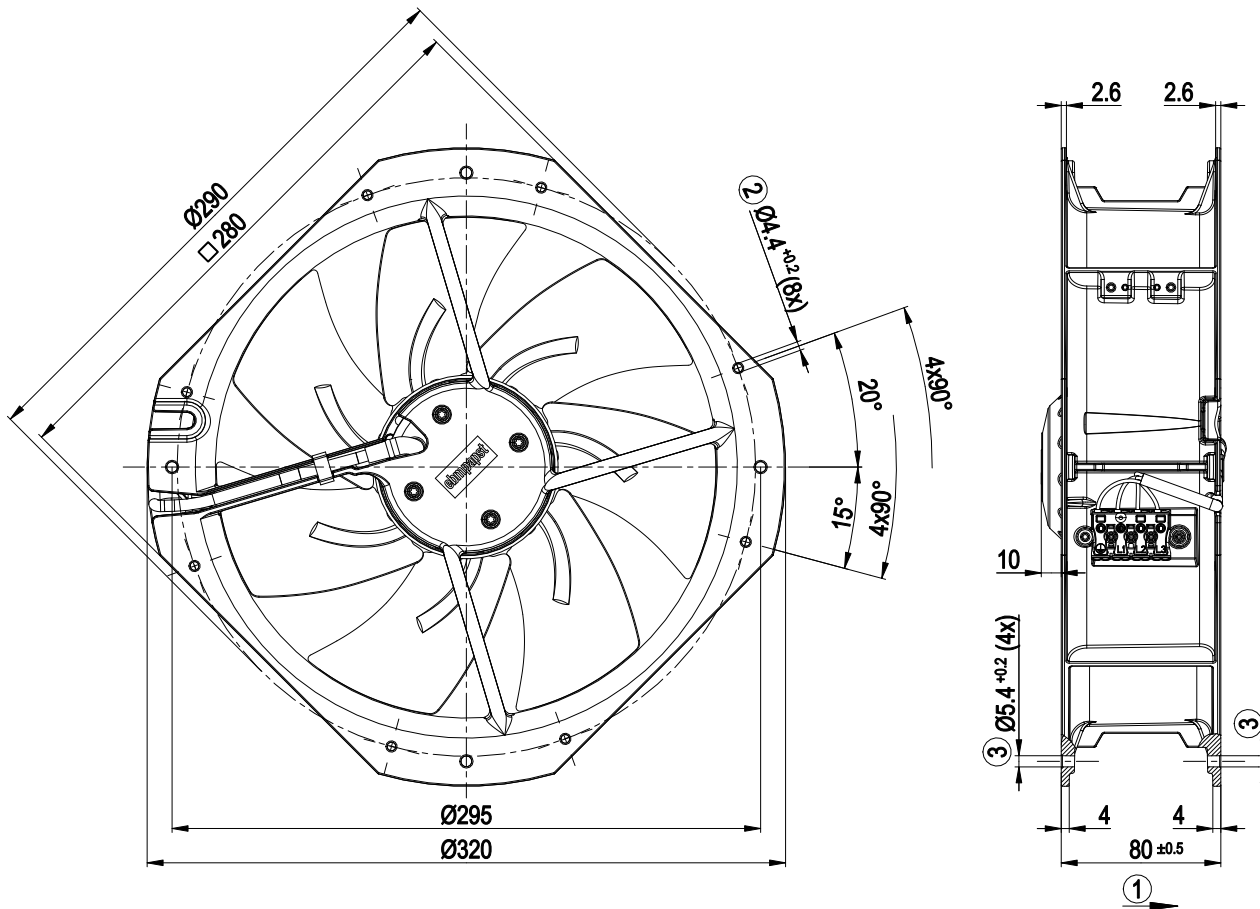


## Technical description

|                                                                            |                                                       |
|----------------------------------------------------------------------------|-------------------------------------------------------|
| Weight                                                                     | 3.5 kg                                                |
| Size                                                                       | 250 mm                                                |
| Motor size                                                                 | 68                                                    |
| Rotor surface                                                              | Painted black                                         |
| Blade material                                                             | Sheet steel, painted black                            |
| Fan housing material                                                       | Die-cast aluminum                                     |
| Number of blades                                                           | 7                                                     |
| Airflow direction                                                          | V                                                     |
| Direction of rotation                                                      | Counterclockwise, viewed toward rotor                 |
| Degree of protection                                                       | IP44; installation- and position-dependent            |
| Insulation class                                                           | "B"                                                   |
| Moisture (F) / Environmental (H) protection class                          | F2-2; H1+                                             |
| 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 strip                                    |
| Motor protection                                                           | Thermal overload protector (TOP) internally connected |
| With cable                                                                 | Axial                                                 |
| Protection class                                                           | I (with customer connection of protective earth)      |
| Conformity with standards                                                  | EN 60335-1; CE                                        |
| Approval                                                                   | CSA C22.2 No. 100; UL 1004-1                          |

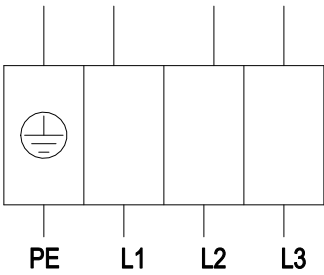


## Product drawing



|   |                            |
|---|----------------------------|
| 1 | Airflow direction "V"      |
| 2 | For self-tapping M5 screws |
| 3 | For self-tapping M6 screws |

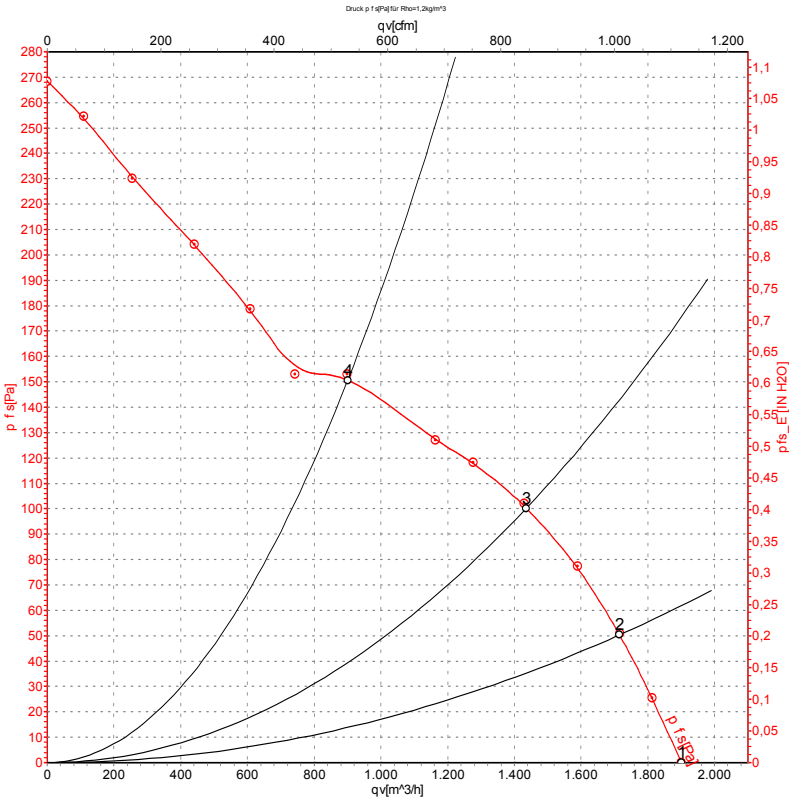
Connection diagram



|    |              |    |       |    |      |
|----|--------------|----|-------|----|------|
| PE | green/yellow | L1 | black | L2 | blue |
| L3 | brown        |    |       |    |      |



Curves: Air performance 50 Hz



Measurement: LU-42099-1

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.

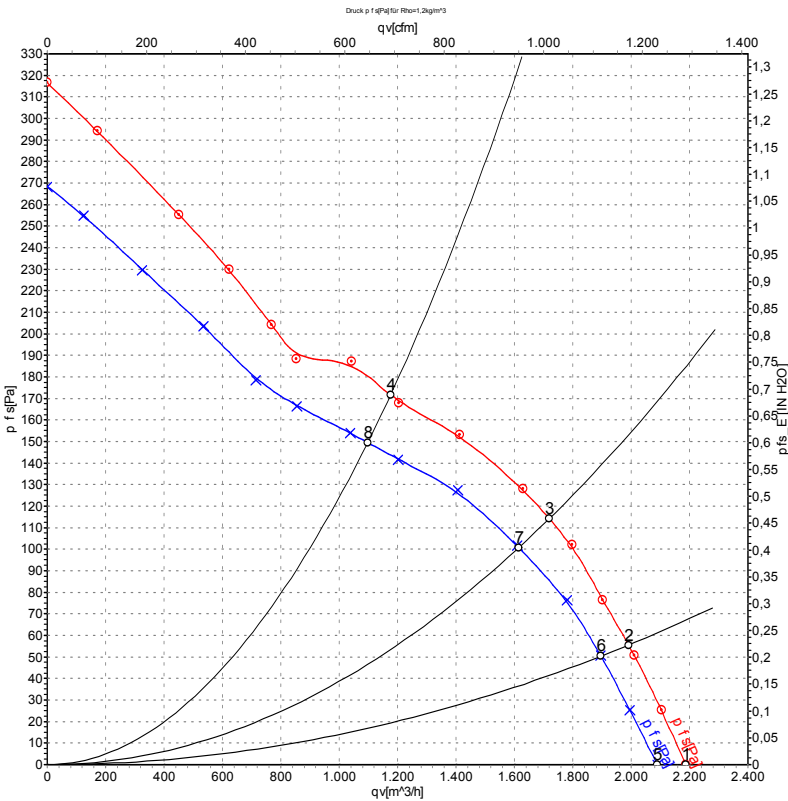
Measured values

|   | U   | f  | n                 | P <sub>e</sub> | I    | q <sub>v</sub> | P <sub>ts</sub> | q <sub>v</sub> | P <sub>ts</sub> |
|---|-----|----|-------------------|----------------|------|----------------|-----------------|----------------|-----------------|
|   | V   | Hz | min <sup>-1</sup> | W              | A    | m³/h           | Pa              | cfm            | in. wg          |
| 1 | 400 | 50 | 2660              | 115            | 0.23 | 1900           | 0               | 1120           | 0.00            |
| 2 | 400 | 50 | 2610              | 129            | 0.25 | 1715           | 50              | 1010           | 0.20            |
| 3 | 400 | 50 | 2545              | 146            | 0.27 | 1435           | 100             | 845            | 0.40            |
| 4 | 400 | 50 | 2470              | 164            | 0.29 | 900            | 150             | 530            | 0.60            |

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



Curves: Air performance 60 Hz



Measurement: LU-42101-1  
Measurement: LU-42100-1

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>ts</sub> | q <sub>v</sub> | p <sub>ts</sub> |
|---|-----|----|-------------------|----------------|------|-------------------|-----------------|----------------|-----------------|
|   | V   | Hz | min <sup>-1</sup> | W              | A    | m <sup>3</sup> /h | Pa              | cfm            | in. wg          |
| 1 | 460 | 60 | 3050              | 180            | 0.28 | 2185              | 0               | 1285           | 0.00            |
| 2 | 460 | 60 | 2985              | 198            | 0.29 | 1990              | 56              | 1170           | 0.22            |
| 3 | 460 | 60 | 2900              | 220            | 0.32 | 1720              | 114             | 1010           | 0.46            |
| 4 | 460 | 60 | 2785              | 248            | 0.35 | 1175              | 170             | 690            | 0.68            |
| 5 | 400 | 60 | 2920              | 165            | 0.27 | 2090              | 0               | 1230           | 0.00            |
| 6 | 400 | 60 | 2835              | 182            | 0.29 | 1895              | 50              | 1115           | 0.20            |
| 7 | 400 | 60 | 2730              | 200            | 0.32 | 1615              | 100             | 950            | 0.40            |
| 8 | 400 | 60 | 2610              | 221            | 0.35 | 1095              | 150             | 645            | 0.60            |

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

