

W2E143-AB09-22 ebmpapst Datasheet

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## Nominal data

|                             |                   |         |         |
|-----------------------------|-------------------|---------|---------|
| Type                        | W2E143-AB09-22    |         |         |
| Motor                       | M2E052-BF         |         |         |
| Phase                       |                   | 1~      | 1~      |
| Nominal voltage             | VAC               | 230     | 230     |
| Frequency                   | Hz                | 50      | 60      |
| Method of obtaining data    |                   | fa      | fa      |
| Valid for approval/standard |                   | CE      | CE      |
| Speed (rpm)                 | min <sup>-1</sup> | 2800    | 3300    |
| Power consumption           | W                 | 24      | 30      |
| Current draw                | A                 | 0.12    | 0.14    |
| Capacitor                   | μF                | 0.75    | 0.75    |
| Capacitor voltage           | VDB               | 400     | 400     |
| Capacitor standard          |                   | S0 (CE) | S0 (CE) |
| Min. ambient temperature    | °C                | -25     | -25     |
| Max. ambient temperature    | °C                | 60      | 75      |

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



## Technical description

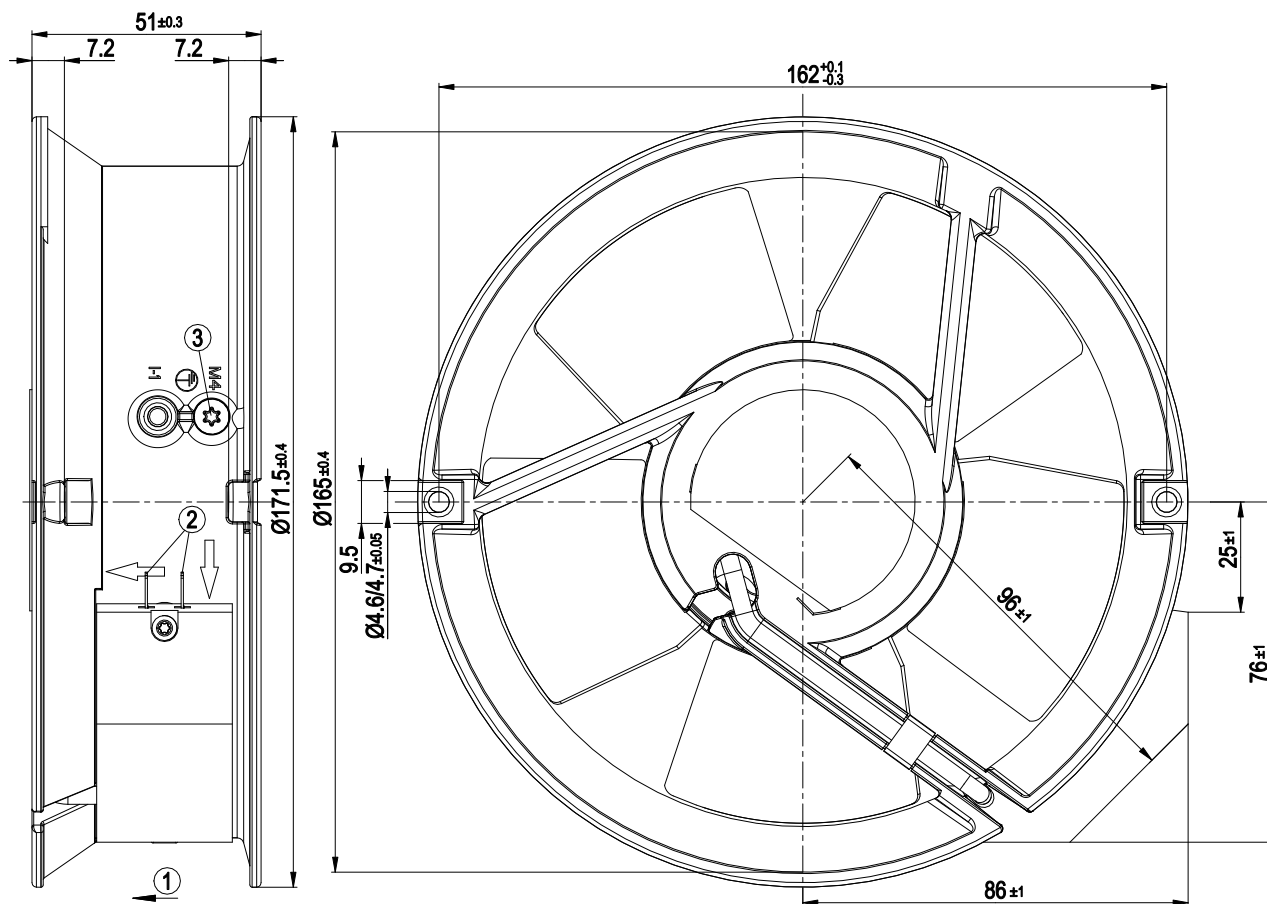
|                                                                            |                                                                                    |
|----------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Weight                                                                     | 0.9 kg                                                                             |
| Size                                                                       | 143 mm                                                                             |
| Motor size                                                                 | 52                                                                                 |
| Rotor surface                                                              | Rotor open, painted black                                                          |
| Blade material                                                             | Sheet steel, painted black                                                         |
| Fan housing material                                                       | Die-cast aluminum, painted black                                                   |
| Number of blades                                                           | 5                                                                                  |
| Airflow direction                                                          | V                                                                                  |
| Direction of rotation                                                      | Counterclockwise, viewed toward rotor                                              |
| Degree of protection                                                       | IP20                                                                               |
| Insulation class                                                           | "B"                                                                                |
| Moisture (F) / Environmental (H) protection class                          | H0+                                                                                |
| 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, open rotor                                                                   |
| Mode                                                                       | S1                                                                                 |
| Motor bearing                                                              | Ball bearing                                                                       |
| Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system) | < 0.75 mA                                                                          |
| Electrical hookup                                                          | Plug                                                                               |
| Motor protection                                                           | Thermal overload protector (TOP) internally connected                              |
| Protection class                                                           | I (if protective earth is connected by customer to the housing's connection point) |
| Motor capacitor according to EN 60252-1 in safety protection class         | S0                                                                                 |
| Conformity with standards                                                  | EN 60335-1; CE                                                                     |
| Approval                                                                   | CSA C22.2 No. 113; EAC; VDE; UL 507                                                |



## AC axial compact fan

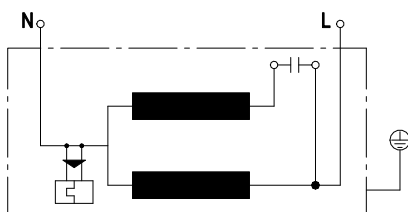
sickle-shaped blades (S series)

## Product drawing



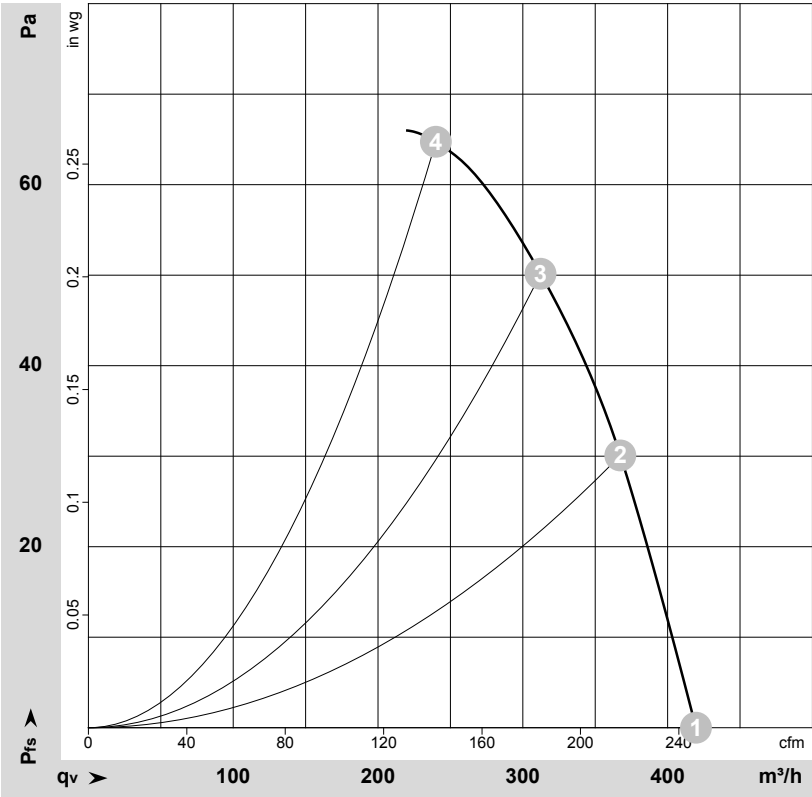
|   |                                         |
|---|-----------------------------------------|
| 1 | Airflow direction "V"                   |
| 2 | Flat plug 2.8 x 0.5 mm                  |
| 3 | M4 screw for fastening ground connector |

## Connection diagram



AC axial compact fan  
sickle-shaped blades (S series)

Curves: Air performance 50 Hz



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

Measurement: LU-58509-1

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

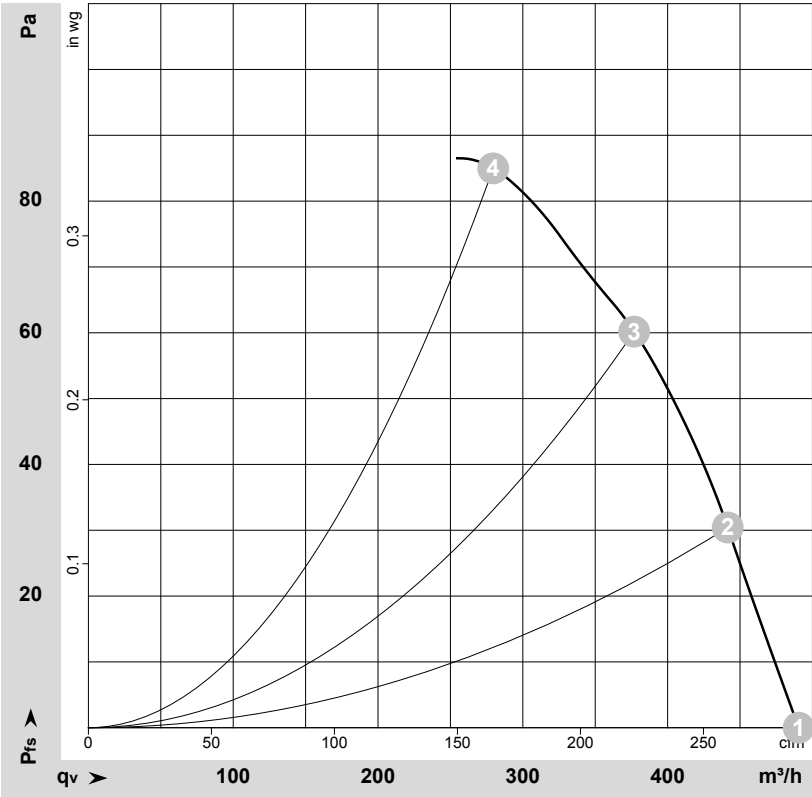
|   | U   | f  | n                 | P <sub>e</sub> | I    | q <sub>v</sub>    | p <sub>fs</sub> | q <sub>v</sub> | p <sub>fs</sub> |
|---|-----|----|-------------------|----------------|------|-------------------|-----------------|----------------|-----------------|
|   | V   | Hz | min <sup>-1</sup> | W              | A    | m <sup>3</sup> /h | Pa              | cfm            | in. wg          |
| 1 | 230 | 50 | 2800              | 26             | 0.13 | 420               | 0               | 245            | 0.00            |
| 2 | 230 | 50 | 2770              | 27             | 0.13 | 365               | 30              | 215            | 0.12            |
| 3 | 230 | 50 | 2755              | 27             | 0.13 | 310               | 50              | 185            | 0.20            |
| 4 | 230 | 50 | 2750              | 28             | 0.13 | 240               | 65              | 140            | 0.26            |

U = Voltage · 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



AC axial compact fan  
sickle-shaped blades (S series)

Curves: Air performance 60 Hz



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

Measurement: LU-58510-1

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    | m <sup>3</sup> /h | Pa              | cfm            | in. wg          |
| 1 | 230 | 60 | 3300              | 29             | 0.13 | 490               | 0               | 290            | 0.00            |
| 2 | 230 | 60 | 3210              | 31             | 0.14 | 440               | 30              | 260            | 0.12            |
| 3 | 230 | 60 | 3175              | 32             | 0.14 | 375               | 60              | 220            | 0.24            |
| 4 | 230 | 60 | 3140              | 33             | 0.14 | 280               | 85              | 165            | 0.34            |

U = Voltage · 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

