

# AC axial fan

sickle-shaped blades (S series)  
with guard grille for short nozzle

S2E300-AP02-35 ebmpapst Datasheet  
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## Nominal data

|                             |                    |         |         |      |
|-----------------------------|--------------------|---------|---------|------|
| Type                        | S2E300-AP02-35     |         |         |      |
| Motor                       | M2E074-DF          |         |         |      |
| Phase                       |                    | 1~      | 1~      | 1~   |
| Nominal voltage             | VAC                | 230     | 230     | 230  |
| Frequency                   | Hz                 | 50      | 60      | 60   |
| Method of obtaining data    |                    | fa      | fa      | fa   |
| Valid for approval/standard |                    | CE      | CE      | UL   |
| Speed (rpm)                 | min <sup>-1</sup>  | 2700    | 3000    | 3000 |
| Power consumption           | W                  | 230     | 350     | 370  |
| Current draw                | A                  | 1.10    | 1.55    | 1.56 |
| Capacitor                   | μF                 | 8       | 8       | 8    |
| Capacitor voltage           | VDB                | 400     | 400     | 400  |
| Capacitor standard          |                    | S0 (CE) | S0 (CE) | UL   |
| Max. back pressure          | Pa                 | 160     | 50      | 50   |
| Max. back pressure          | inH <sub>2</sub> O | 0.64    | 0.2     | 0.2  |
| Min. ambient temperature    | °C                 | -25     | -25     | -25  |
| Max. ambient temperature    | °C                 | 70      | 50      | 50   |

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 $\eta_{es}$ | % | 30.9   | 30.2      |
| 02 Measurement category           |   | A      |           |
| 03 Efficiency category            |   | Static |           |
| 04 Efficiency grade N             |   | 40.7   | 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                | 0.28 |
| 09 Air flow $q_v$             | m <sup>3</sup> /h | 2290 |
| 09 Pressure increase $p_{fs}$ | Pa                | 140  |
| 10 Speed (rpm) n              | min <sup>-1</sup> | 2570 |
| 11 Specific ratio*            |                   | 1.00 |

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

LU-29177



# AC axial fan

sickle-shaped blades (S series)  
with guard grille for short nozzle

## Technical description

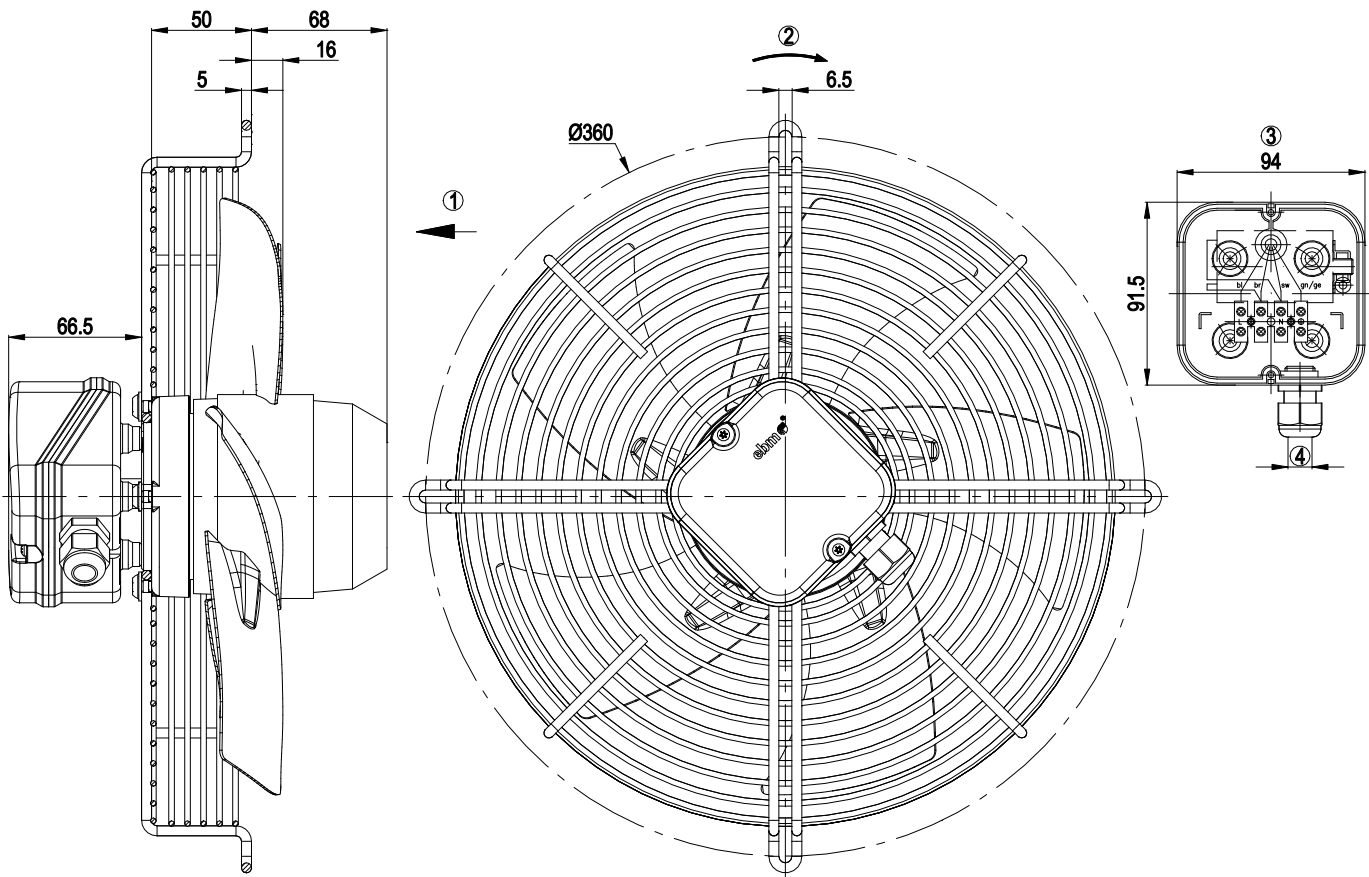
|                                                                            |                                                              |
|----------------------------------------------------------------------------|--------------------------------------------------------------|
| Weight                                                                     | 4.3 kg                                                       |
| Fan size                                                                   | 300 mm                                                       |
| Rotor surface                                                              | Painted black                                                |
| Terminal box material                                                      | ABS plastic, black                                           |
| Blade material                                                             | Sheet steel, painted black                                   |
| Guard grille material                                                      | Steel, coated with black plastic (RAL 9005)                  |
| Number of blades                                                           | 5                                                            |
| Airflow direction                                                          | "V"                                                          |
| Direction of rotation                                                      | Counterclockwise, viewed toward rotor                        |
| Degree of protection                                                       | IP44                                                         |
| Insulation class                                                           | "F"                                                          |
| 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                                                      | Shaft horizontal or rotor on bottom; rotor on top on request |
| Condensation drainage holes                                                | On rotor side                                                |
| 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         | S0                                                           |
| Conformity with standards                                                  | EN 61800-5-1; CE                                             |
| Approval                                                                   | CCC; EAC                                                     |



# AC axial fan

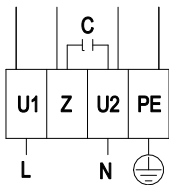
sickle-shaped blades (S series)  
with guard grille for short nozzle

## Product drawing



|   |                                                             |
|---|-------------------------------------------------------------|
| 1 | Direction of air flow "V"                                   |
| 2 | Direction of rotation counterclockwise, viewed toward rotor |
| 3 | Shown without terminal box cover                            |
| 4 | Cable diameter: max. 7.5 mm                                 |

## Connection diagram



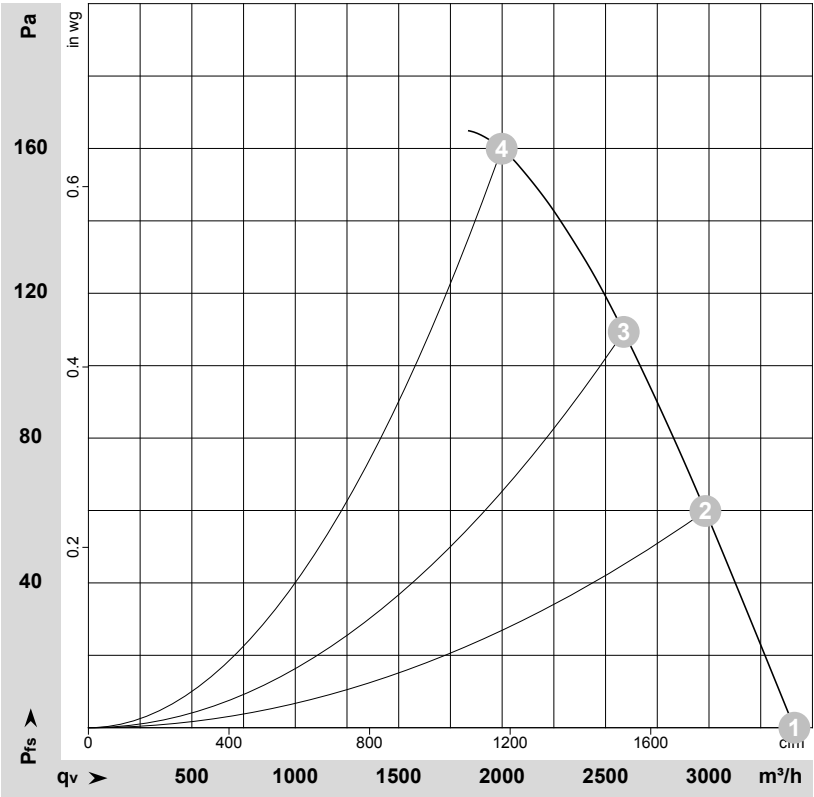
|    |              |   |       |   |              |
|----|--------------|---|-------|---|--------------|
| L  | = U1 = blue  | Z | brown | N | = U2 = black |
| PE | green/yellow |   |       |   |              |



# AC axial fan

sickle-shaped blades (S series)  
with guard grille for short nozzle

## Curves: Air performance 50 Hz



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

Measurement: LU-29177-1

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            | inH <sub>2</sub> O |
| 1 | 230 | 50 | 2700              | 230            | 1.10 | 3415              | 0               | 2010           | 0.00               |
| 2 | 230 | 50 | 2675              | 256            | 1.12 | 2985              | 60              | 1755           | 0.24               |
| 3 | 230 | 50 | 2615              | 275            | 1.20 | 2590              | 110             | 1525           | 0.44               |
| 4 | 230 | 50 | 2540              | 300            | 1.31 | 2000              | 160             | 1175           | 0.64               |

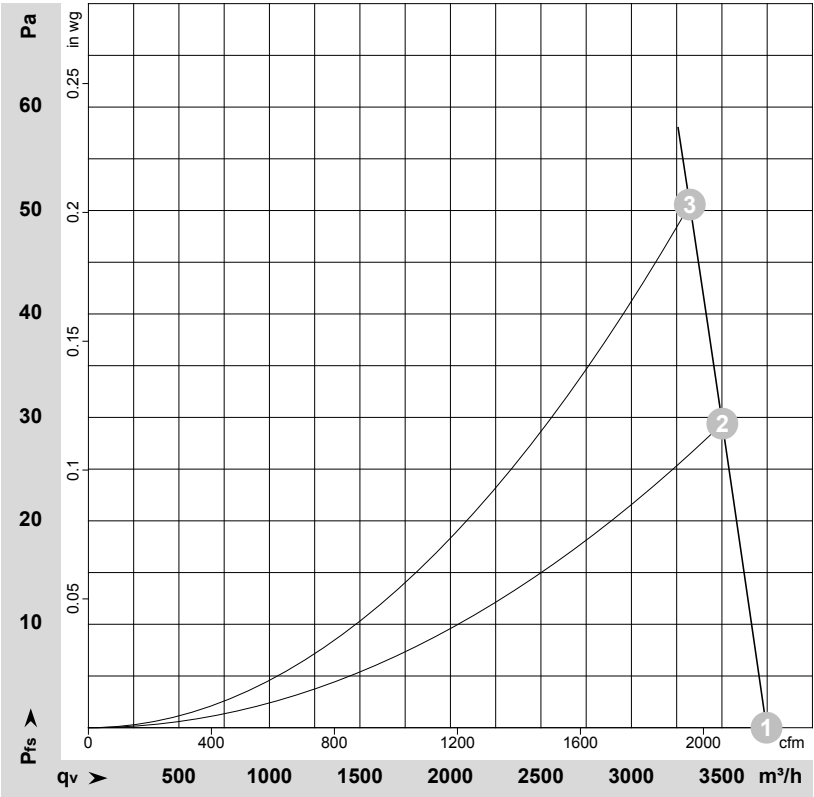
U = Power supply · f = Frequency · n = Speed (rpm) · P<sub>e</sub> = Power consumption · I = Current draw · q<sub>v</sub> = Air flow · p<sub>fs</sub> = Pressure increase



# AC axial fan

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## Curves: Air performance 60 Hz



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

Measurement: LU-29105-1

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            | inH <sub>2</sub> O |
| 1 | 230 | 60 | 3000              | 350            | 1.55 | 3745              | 0               | 2205           | 0.00               |
| 2 | 230 | 60 | 2930              | 357            | 1.58 | 3500              | 30              | 2060           | 0.12               |
| 3 | 230 | 60 | 2875              | 362            | 1.60 | 3325              | 50              | 1955           | 0.20               |

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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