

# AC axial fan

sickled blades (S series)

with guard grille for short nozzle

S4E250-AH02-13 ebmpapst Datasheet

sales@fansco.com

www.fansco.com

## Nominal data

|                               |                   |         |         |
|-------------------------------|-------------------|---------|---------|
| Type                          | S4E250-AH02-13    |         |         |
| Motor                         | M4E068-BF         |         |         |
| Phase                         |                   | 1~      | 1~      |
| Nominal voltage               | VAC               | 230     | 230     |
| Frequency                     | Hz                | 50      | 60      |
| Type of data definition       |                   | fa      | fa      |
| Valid for approval / standard |                   | CE      | CE      |
| Speed (rpm)                   | min <sup>-1</sup> | 1400    | 1630    |
| Power input                   | W                 | 42      | 45      |
| Current draw                  | A                 | 0.19    | 0.20    |
| Motor capacitor               | µF                | 1.5     | 1.5     |
| Capacitor voltage             | VDB               | 400     | 400     |
| Capacitor standard            |                   | S0 (CE) | S0 (CE) |
| Max. back pressure            | Pa                | 80      | 100     |
| Min. ambient temperature      | °C                | -25     | -25     |
| Max. ambient temperature      | °C                | 75      | 90      |
| Starting current              | A                 | 0.33    | 0.32    |

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit  
Subject to alterations



# AC axial fan

sickled blades (S series)  
with guard grille for short nozzle

## Technical features

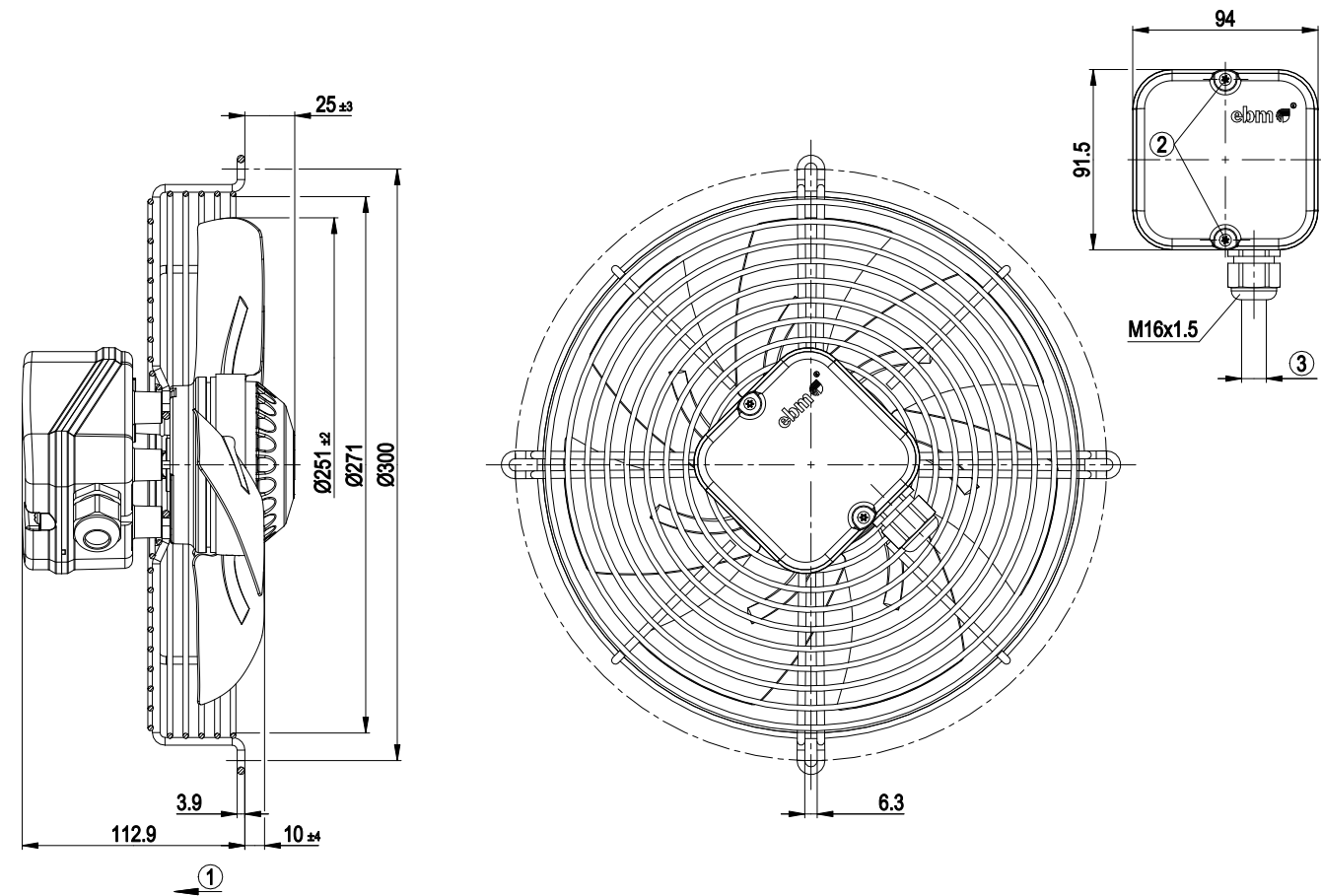
|                                                                    |                                                                   |
|--------------------------------------------------------------------|-------------------------------------------------------------------|
| Mass                                                               | 2.2 kg                                                            |
| Size                                                               | 250 mm                                                            |
| Surface of rotor                                                   | Coated in black                                                   |
| Material of terminal box                                           | PC / ABS plastic                                                  |
| Material of blades                                                 | Sheet steel, coated in black                                      |
| Material of guard grille                                           | Steel, coated in black plastic (RAL9005)                          |
| Number of blades                                                   | 7                                                                 |
| Direction of air flow                                              | "V"                                                               |
| Direction of rotation                                              | Counter-clockwise, seen on rotor                                  |
| Type of protection                                                 | IP 44; Depending on installation and position as per EN 60034-5   |
| Insulation class                                                   | "F"                                                               |
| Humidity (F)/environmental protection class (H)                    | F5                                                                |
| Max. permissible ambient motor temp. (transp./ storage)            | + 80 °C                                                           |
| Min. permissible ambient motor temp. (transp./storage)             | - 40 °C                                                           |
| Mounting position                                                  | Shaft horizontal or rotor on bottom; rotor on top on request      |
| Condensate discharge holes                                         | Rotor-side                                                        |
| Operation mode                                                     | S1                                                                |
| Motor bearing                                                      | Ball bearing                                                      |
| Touch current acc. IEC 60990 (measuring network Fig. 4, TN system) | < 0.75 mA                                                         |
| Electrical leads                                                   | Via terminal box, integrated capacitor connected via terminal box |
| Motor protection                                                   | Thermal overload protector (TOP) wired internally                 |
| Cable exit                                                         | Variable                                                          |
| Protection class                                                   | I (if protective earth is connected by customer)                  |
| Motor capacitor according to EN 60252-1 in safety protection class | S0                                                                |
| Product conforming to standard                                     | EN 60335-1; CE                                                    |
| Approval                                                           | CSA C22.2 No.100; UL 1004-1                                       |



# AC axial fan

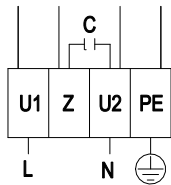
sickled blades (S series)  
with guard grille for short nozzle

Product drawing



|   |                                                          |
|---|----------------------------------------------------------|
| 1 | Direction of air flow "V"                                |
| 2 | Tightening torque 0.5±0.1 Nm                             |
| 3 | Cable diameter max. 7.5 mm, tightening torque 1.3±0.2 Nm |

Connection screen

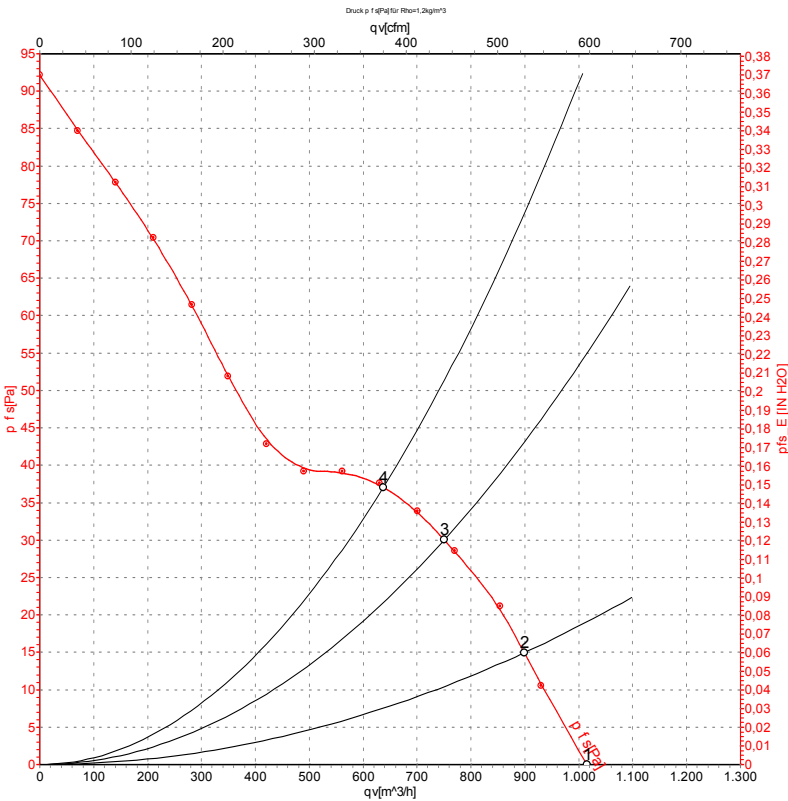


|    |              |   |       |   |              |
|----|--------------|---|-------|---|--------------|
| L  | = U1 = blue  | Z | brown | N | = U2 = black |
| PE | green/yellow |   |       |   |              |



AC axial fan  
sickled blades (S series)  
with guard grille for short nozzle

Charts: Air flow 50 Hz



Measurement: LU-60036-1

Air performance measured as per ISO 5801  
Installation category A. For detailed  
information on the measuring set-up, please  
contact ebm-papst. Suction-side noise  
levels: L<sub>wA</sub> measured as per ISO 13347 /  
L<sub>pA</sub> measured with 1m distance to fan axis.  
The values given are valid under the  
measuring conditions mentioned above and  
may vary according to the actual installation  
situation. With any deviation from the  
standard set-up, the specific values have to  
be checked and reviewed with the unit  
installed.

Measured values

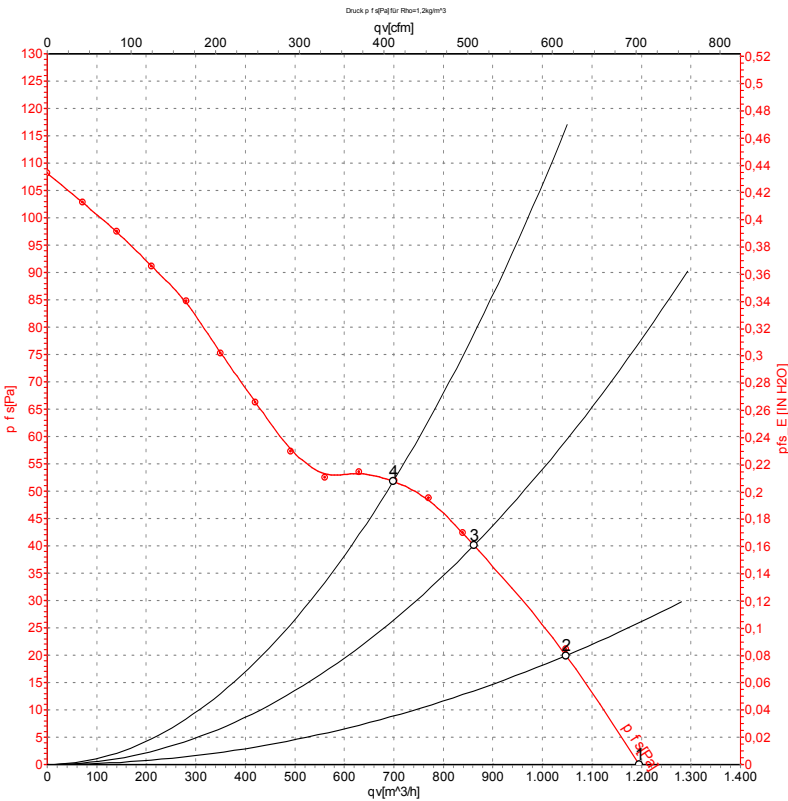
|   | U   | f  | n                 | P <sub>e</sub> | I    | q <sub>v</sub> | P <sub>is</sub> | q <sub>v</sub> | P <sub>is</sub>    |
|---|-----|----|-------------------|----------------|------|----------------|-----------------|----------------|--------------------|
|   | V   | Hz | min <sup>-1</sup> | W              | A    | m³/h           | Pa              | cfm            | inH <sub>2</sub> O |
| 1 | 230 | 50 | 1400              | 42             | 0.19 | 1015           | 0               | 595            | 0.00               |
| 2 | 230 | 50 | 1385              | 43             | 0.20 | 900            | 15              | 530            | 0.06               |
| 3 | 230 | 50 | 1370              | 44             | 0.20 | 750            | 30              | 440            | 0.12               |
| 4 | 230 | 50 | 1350              | 45             | 0.22 | 640            | 35              | 375            | 0.14               |

U = Supply voltage · f = Frequency · n = Speed (rpm) · P<sub>e</sub> = Power input · I = Current draw · q<sub>v</sub> = Air flow · P<sub>is</sub> = Pressure increase



AC axial fan  
sickled blades (S series)  
with guard grille for short nozzle

Charts: Air flow 60 Hz



Measurement: LU-60037-1

Air performance measured as per ISO 5801  
Installation category A. For detailed  
information on the measuring set-up, please  
contact ebm-papst. Suction-side noise  
levels: L<sub>wA</sub> measured as per ISO 13347 /  
L<sub>pA</sub> measured with 1m distance to fan axis.  
The values given are valid under the  
measuring conditions mentioned above and  
may vary according to the actual installation  
situation. With any deviation from the  
standard set-up, the specific values have to  
be checked and reviewed with the unit  
installed.

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            | inH <sub>2</sub> O |
| 1 | 230 | 60 | 1630              | 45             | 0.20 | 1200           | 0               | 705            | 0.00               |
| 2 | 230 | 60 | 1625              | 47             | 0.21 | 1045           | 20              | 615            | 0.08               |
| 3 | 230 | 60 | 1570              | 49             | 0.21 | 860            | 40              | 505            | 0.16               |
| 4 | 230 | 60 | 1570              | 50             | 0.23 | 700            | 50              | 410            | 0.20               |

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

