

# AC axial fan

sickled blades (S series)

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## Nominal data

|                               |                   |         |         |         |         |
|-------------------------------|-------------------|---------|---------|---------|---------|
| Type                          | A6E500-BB05-10    |         |         |         |         |
| Motor                         | M6E094-FA         |         |         |         |         |
| Phase                         |                   | 1~      | 1~      | 1~      | 1~      |
| Nominal voltage               | VAC               | 230     | 230     | 230     | 230     |
| Frequency                     | Hz                | 50      | 50      | 60      | 60      |
| Type of data definition       |                   | ml      | ml      | ml      | ml      |
| Valid for approval / standard |                   | CE      | CE      | CE      | CE      |
| Speed                         | min <sup>-1</sup> | 845     | 845     | 875     | 875     |
| Power input                   | W                 | 220     | 220     | 290     | 290     |
| Current draw                  | A                 | 0.98    | 0.98    | 1.27    | 1.27    |
| Motor capacitor               | µF                | 6       | 6       | 6       | 6       |
| Capacitor voltage             | VDB               | 400     | 400     | 400     | 400     |
| Capacitor standard            |                   | P0 (CE) | P0 (CE) | P0 (CE) | P0 (CE) |
| Max. back pressure            | Pa                | 60      | 60      | 60      | 60      |
| Min. ambient temperature      | °C                | -40     | -40     | -40     | -40     |
| Max. ambient temperature      | °C                | 95      | 95      | 80      | 80      |

ml = max. load · me = max. efficiency · fa = running at free air · cs = customer specs · cu = customer unit  
Subject to alterations

## Data according to ErP directive

|                                 |        |
|---------------------------------|--------|
| Installation category           | A      |
| Efficiency category             | Static |
| Variable speed drive integrated | No     |
| Specific ratio*                 | 1,00   |

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

|                                | Actual            | Request 2013 | Request 2015 |
|--------------------------------|-------------------|--------------|--------------|
| Overall efficiency $\eta_{es}$ | 29,4              | 25,4         | 29,4         |
| Efficiency grade N             | 40                | 36           | 40           |
| Power input $P_e$              | kW                | 0,21         |              |
| Air flow $q_v$                 | m <sup>3</sup> /h | 3770         |              |
| Pressure increase $p_{fs}$     | Pa                | 60           |              |
| Speed n                        | min <sup>-1</sup> | 850          |              |

Data established at point of optimum efficiency



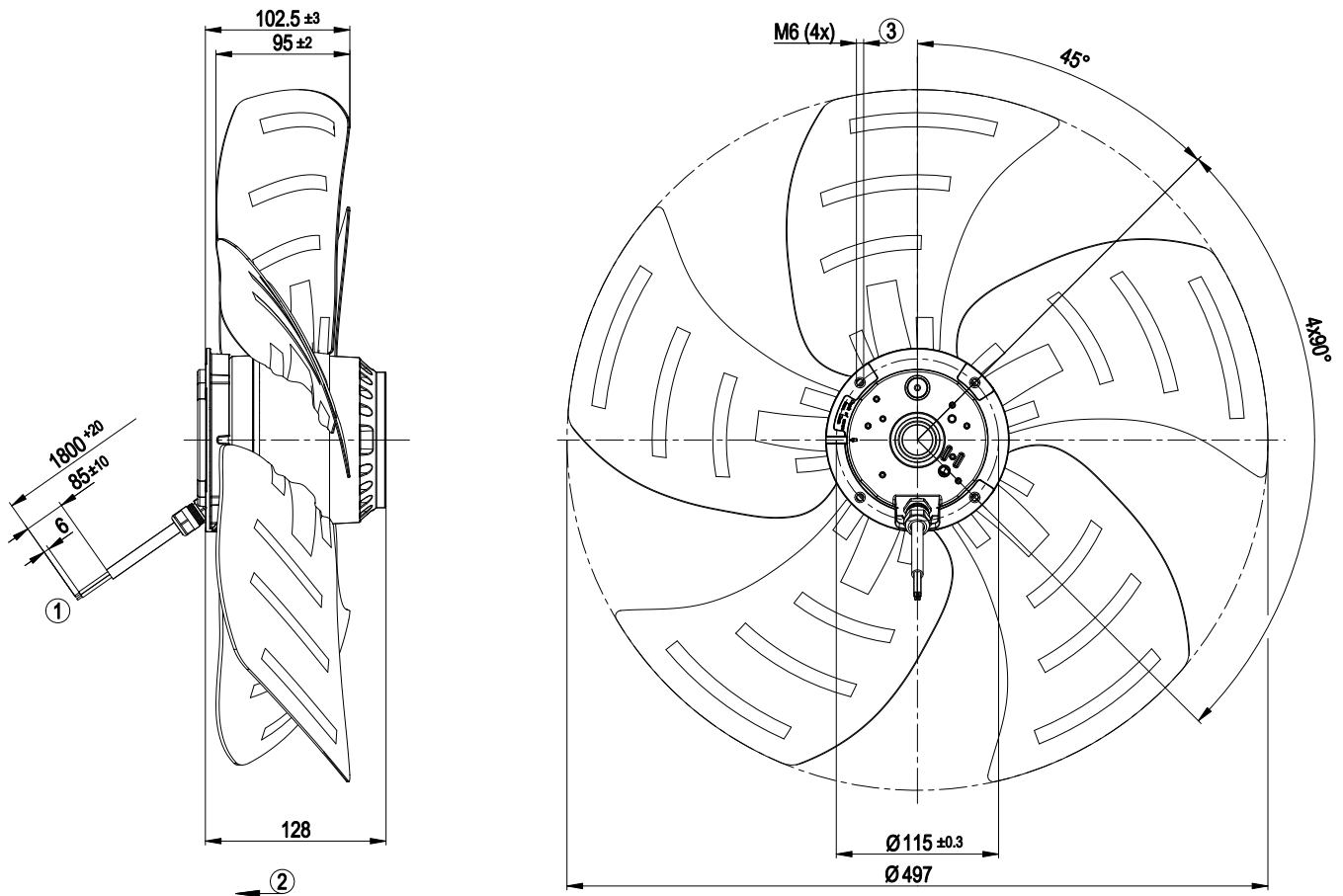
## Technical features

|                                                         |                                                              |
|---------------------------------------------------------|--------------------------------------------------------------|
| Size                                                    | 500 mm                                                       |
| Surface of rotor                                        | Coated in black                                              |
| Material of blades                                      | Sheet steel, coated in black                                 |
| Number of blades                                        | 5                                                            |
| Direction of air flow                                   | "V"                                                          |
| Direction of rotation                                   | Counter-clockwise, seen on rotor                             |
| Type of protection                                      | IP 54                                                        |
| Insulation class                                        | "F"                                                          |
| Humidity class                                          | F3-1                                                         |
| 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                                                 |
| Leakage current                                         | <= 3.5 mA                                                    |
| Motor protection                                        | Thermal overload protector (TOP) brought out                 |
| Cable exit                                              | Variable                                                     |
| Protection class                                        | I (if protective earth is connected by customer)             |
| Product conforming to standard                          | EN 60034-1 (2004)                                            |

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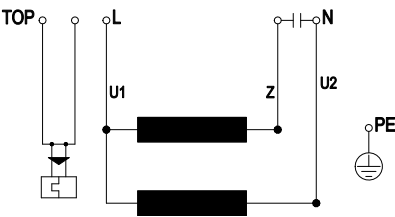
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## Product drawing



|   |                                                                               |
|---|-------------------------------------------------------------------------------|
| 1 | Connection line silicone 6G 0.50 mm <sup>2</sup> , 6x brass lead tips crimped |
| 2 | Direction of air flow "V"                                                     |
| 3 | Depth of screw max. 12 mm                                                     |

Connection screen



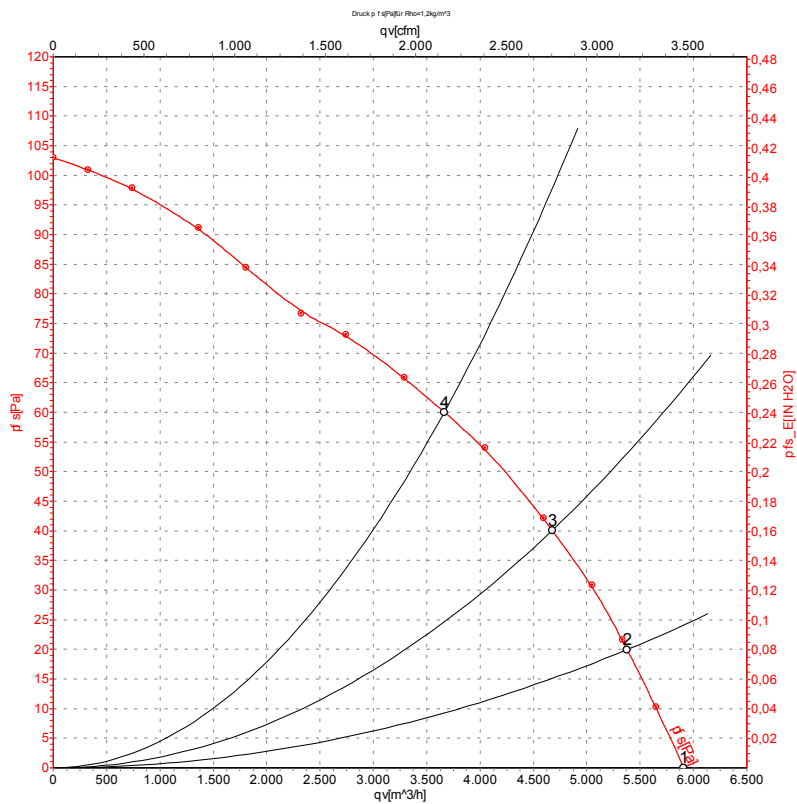
|     |          |    |                |   |       |
|-----|----------|----|----------------|---|-------|
| TOP | 2 x grey | U1 | blue           | Z | brown |
| U2  | black    | PE | green / yellow |   |       |



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## Charts: Air flow 50 Hz



Measurement: LU-52337

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

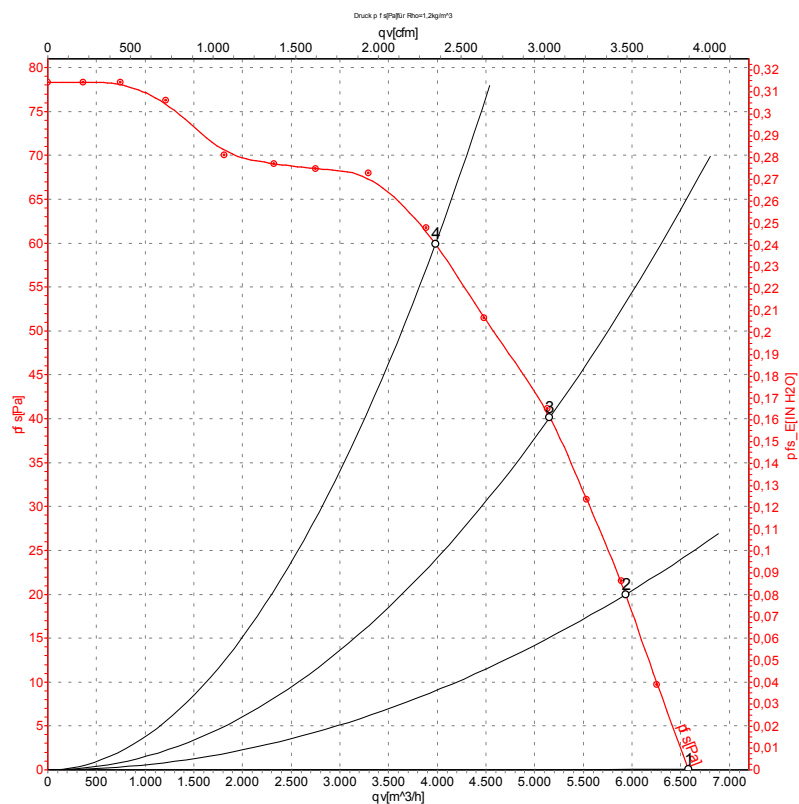
|   | U   | f  | n                 | P <sub>e</sub> | I    | qv   | p <sub>fs</sub> |
|---|-----|----|-------------------|----------------|------|------|-----------------|
|   | V   | Hz | min <sup>-1</sup> | W              | A    | m³/h | Pa              |
| 1 | 230 | 50 | 895               | 190            | 0.84 | 5900 | 0               |
| 2 | 230 | 50 | 880               | 199            | 0.88 | 5375 | 20              |
| 3 | 230 | 50 | 865               | 211            | 0.93 | 4675 | 40              |
| 4 | 230 | 50 | 845               | 220            | 0.98 | 3665 | 60              |



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## Charts: Air flow 60 Hz



Measurement: LU-52336

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    | qv   | p <sub>fs</sub> |
|---|-----|----|-------------------|----------------|------|------|-----------------|
|   | V   | Hz | min <sup>-1</sup> | W              | A    | m³/h | Pa              |
| 1 | 230 | 60 | 995               | 267            | 1.16 | 6580 | 0               |
| 2 | 230 | 60 | 960               | 277            | 1.20 | 5935 | 20              |
| 3 | 230 | 60 | 925               | 284            | 1.23 | 5155 | 40              |
| 4 | 230 | 60 | 875               | 290            | 1.27 | 3980 | 60              |

