

# EC axial fan

sickle-shaped blades (S series)

with round full nozzle

W3G300-CB56-01 ebmpapst Datasheet

sales@fansco.com

www.fansco.com

## Nominal data

|                          |                   |            |
|--------------------------|-------------------|------------|
| Type                     | W3G300-CB56-01    |            |
| Motor                    | M3G074-CF         |            |
| Phase                    |                   | 1~         |
| Nominal voltage          | VAC               | 230        |
| Nominal voltage range    | VAC               | 200 .. 277 |
| Frequency                | Hz                | 50/60      |
| Method of obtaining data |                   | fa         |
| Speed (rpm)              | min <sup>-1</sup> | 1710       |
| Power consumption        | W                 | 76         |
| Current draw             | A                 | 0.55       |
| Min. ambient temperature | °C                | -25        |
| Max. ambient temperature | °C                | 60         |

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment

Subject to change



# EC axial fan

sickle-shaped blades (S series)

with round full nozzle

## Technical description

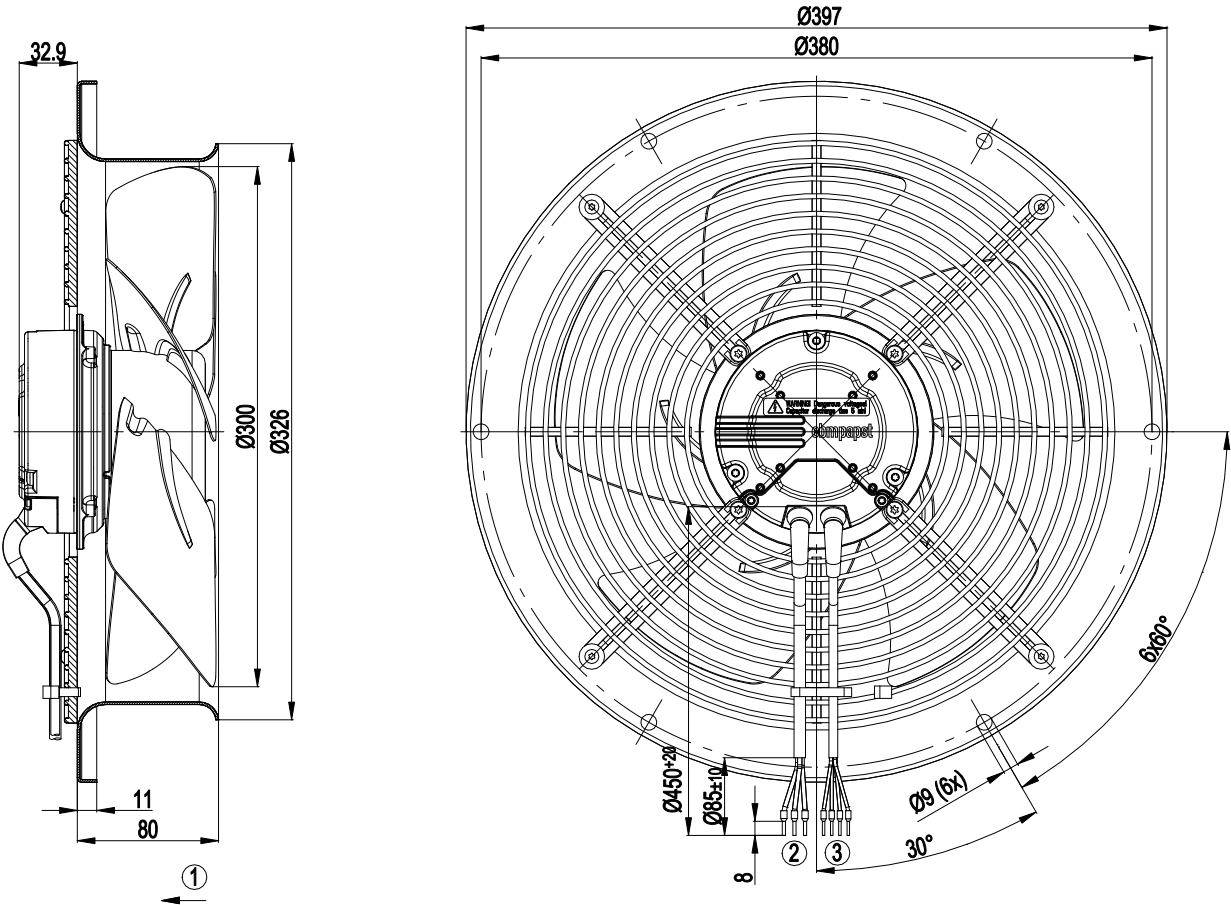
|                                                                            |                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Weight                                                                     | 4.3 kg                                                                                                                                                                                                                           |
| Size                                                                       | 300 mm                                                                                                                                                                                                                           |
| Motor size                                                                 | 74                                                                                                                                                                                                                               |
| Rotor surface                                                              | Painted black                                                                                                                                                                                                                    |
| Electronics housing material                                               | Die-cast aluminum                                                                                                                                                                                                                |
| Impeller material                                                          | Sheet steel, painted black                                                                                                                                                                                                       |
| Housing material                                                           | Die-cast aluminum                                                                                                                                                                                                                |
| Fan housing material                                                       | Sheet steel, pre-galvanized and coated with black plastic                                                                                                                                                                        |
| Guard grille material                                                      | Steel, phosphated and coated with black plastic                                                                                                                                                                                  |
| Number of blades                                                           | 5                                                                                                                                                                                                                                |
| Airflow direction                                                          | V                                                                                                                                                                                                                                |
| Direction of rotation                                                      | Counterclockwise, viewed toward rotor                                                                                                                                                                                            |
| Degree of protection                                                       | IP44                                                                                                                                                                                                                             |
| Insulation class                                                           | "B"                                                                                                                                                                                                                              |
| Moisture (F) / Environmental (H) protection class                          | H1; F3-1                                                                                                                                                                                                                         |
| 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                                                                                                                                                                                                                     |
| Technical features                                                         | <ul style="list-style-type: none"> <li>- Output 10 VDC, max. 1.1 mA</li> <li>- Tach output</li> <li>- Soft start</li> <li>- Control input 0-10 VDC / PWM</li> <li>- Thermal overload protection for electronics/motor</li> </ul> |
| Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system) | <= 3.5 mA                                                                                                                                                                                                                        |
| Motor protection                                                           | Thermal overload protector (TOP) internally connected                                                                                                                                                                            |
| With cable                                                                 | Variable                                                                                                                                                                                                                         |
| Protection class                                                           | I (with customer connection of protective earth)                                                                                                                                                                                 |
| Conformity with standards                                                  | CE                                                                                                                                                                                                                               |
| Approval                                                                   | UL 1004-7 + 60730; CSA C22.2 No. 77 + CAN/CSA-E60730-1                                                                                                                                                                           |



# EC axial fan

sickle-shaped blades (S series)  
with round full nozzle

Product drawing



|   |                                          |
|---|------------------------------------------|
| 1 | Direction of air flow "V"                |
| 2 | Cable H03VV-F3G0.5, 3x crimped ferrules  |
| 3 | Cable A03VV-F4x0.25, 4x crimped ferrules |

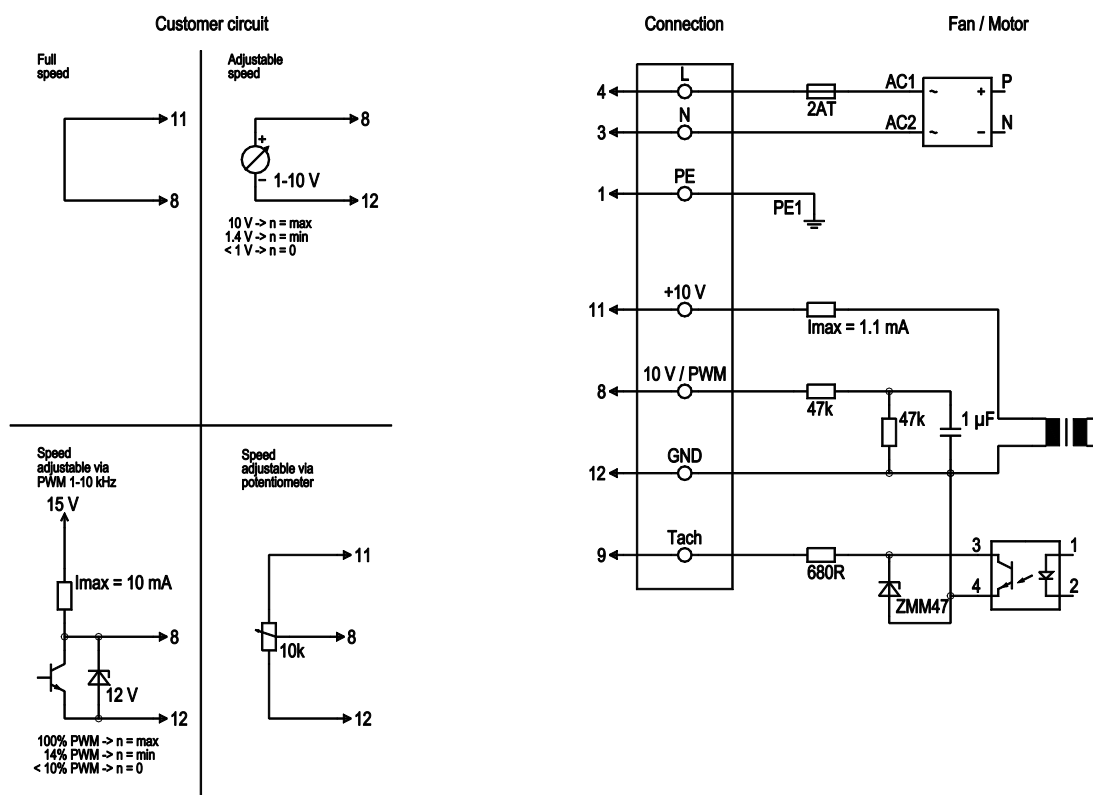


# EC axial fan

sickle-shaped blades (S series)

with round full nozzle

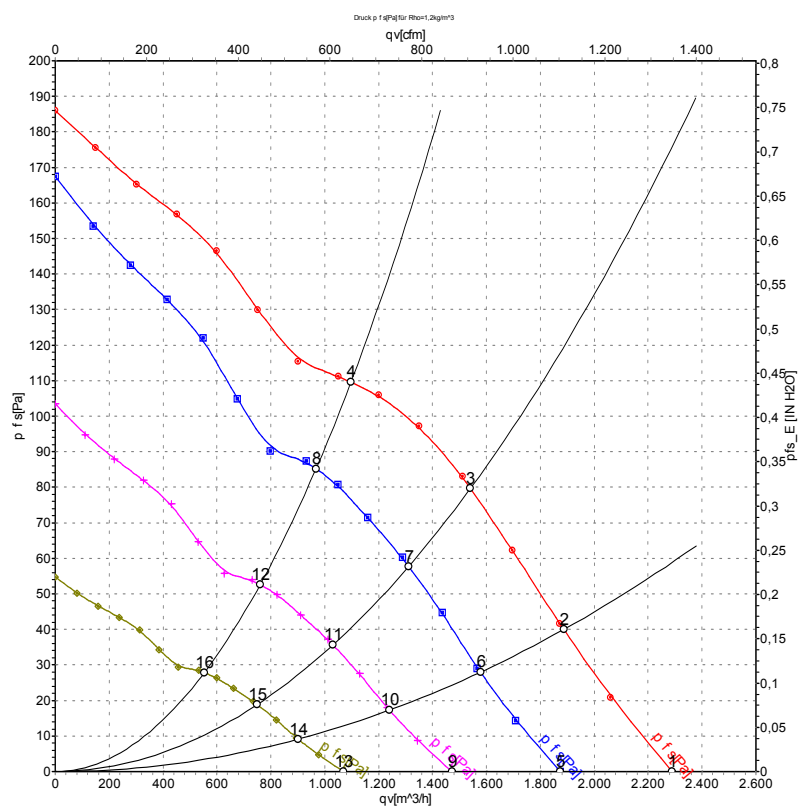
## Connection diagram



| No. | Conn. | Designation      | Color        | Function/assignment                                                        |
|-----|-------|------------------|--------------|----------------------------------------------------------------------------|
|     | 4     | L                | black        | Power supply 230 VAC, 50-60 Hz, see nameplate for voltage range            |
|     | 3     | N                | blue         | Neutral conductor                                                          |
|     | 1     | PE               | green/yellow | Protective earth                                                           |
|     | 8     | 0-10 V PWM       | yellow       | Control input 0-10 V or PWM, electrically isolated                         |
|     | 9     | Tach             | white        | Tach output: open collector, 1 pulse per revolution, electrically isolated |
|     | 11    | 10V / max 1.1 mA | red          | Voltage output 10 V/max. 1.1 mA, electrically isolated                     |
|     | 12    | GND              | blue         | GND connection for control interface                                       |



## Curves: Air performance 50 Hz



Measurement: LU-72521-1

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>ed</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            | in. wg          |
| 1  | 230 | 50 | 1710              | 76              | 0.55 | 2290           | 0               | 1350           | 0.00            |
| 2  | 230 | 50 | 1675              | 84              | 0.61 | 1885           | 40              | 1110           | 0.16            |
| 3  | 230 | 50 | 1645              | 89              | 0.65 | 1540           | 80              | 905            | 0.32            |
| 4  | 230 | 50 | 1580              | 103             | 0.76 | 1095           | 110             | 645            | 0.44            |
| 5  | 230 | 50 | 1400              | 42              | 0.30 | 1875           | 0               | 1100           | 0.00            |
| 6  | 230 | 50 | 1400              | 49              | 0.36 | 1580           | 28              | 930            | 0.11            |
| 7  | 230 | 50 | 1400              | 55              | 0.40 | 1310           | 58              | 770            | 0.23            |
| 8  | 230 | 50 | 1400              | 70              | 0.51 | 970            | 85              | 570            | 0.34            |
| 9  | 230 | 50 | 1100              | 20              | 0.15 | 1470           | 0               | 865            | 0.00            |
| 10 | 230 | 50 | 1100              | 24              | 0.17 | 1240           | 17              | 730            | 0.07            |
| 11 | 230 | 50 | 1100              | 27              | 0.19 | 1030           | 36              | 605            | 0.14            |
| 12 | 230 | 50 | 1100              | 34              | 0.25 | 760            | 53              | 445            | 0.21            |
| 13 | 230 | 50 | 800               | 7.8             | 0.06 | 1070           | 0               | 630            | 0.00            |
| 14 | 230 | 50 | 800               | 9.1             | 0.07 | 900            | 9               | 530            | 0.04            |
| 15 | 230 | 50 | 800               | 10              | 0.08 | 750            | 19              | 440            | 0.08            |
| 16 | 230 | 50 | 800               | 13              | 0.10 | 555            | 28              | 325            | 0.11            |

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

