**W3G250-HH07-16**

# EC axial compact fan

sickle-shaped blades (S series)

**ebm-papst Mulfingen GmbH & Co. KG**
Bachmühle 2 · D-74673 Mulfingen
Phone +49 7938 81-0
Fax +49 7938 81-110
info1@de.ebmpapst.com
www.ebmpapst.com

Limited partnership · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRB 590142

## Nominal data

| | |
|---|---|
| **Type** | **W3G250-HH07-16** |
| **Motor** | **M3G055-CF** |

| | | |
|---|---|---|
| Phase | | 1~ |
| Nominal voltage | VAC | 230 |
| Nominal voltage range | VAC | 200 .. 240 |
| Frequency | Hz | 50/60 |
| Method of obtaining data | | ml |
| Speed (rpm) | $min^{-1}$ | 2330 |
| Power consumption | W | 83 |
| Current draw | A | 0.72 |
| Max. back pressure | Pa | 100 |
| Max. back pressure | in. wg | 0.4 |
| 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 compact fan

sickle-shaped blades (S series)

## Technical description

| | |
|---|---|
| **Weight** | 2.1 kg |
| **Size** | 250 mm |
| **Motor size** | 55 |
| **Rotor surface** | Thick-film passivated |
| **Blade material** | Press-fitted sheet steel blank, sprayed with PP plastic |
| **Fan housing material** | Die-cast aluminum |
| **Number of blades** | 7 |
| **Airflow direction** | V |
| **Direction of rotation** | Counterclockwise, viewed toward rotor |
| **Degree of protection** | IP54 |
| **Insulation class** | "B" |
| **Moisture (F) / Environmental (H) protection class** | H1 |
| **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 |
| **Technical features** | - Output 10 VDC, max. 1.1 mA<br>- Tach output<br>- Power limiter<br>- Motor current limitation<br>- Soft start<br>- Control input 0-10 VDC / PWM<br>- Control interface with SELV potential safely disconnected from the mains<br>- Overvoltage detection<br>- Thermal overload protection for electronics/motor<br>- Line undervoltage detection |
| **Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)** | <= 3.5 mA |
| **Motor protection** | Electronic motor protection |
| **With cable** | Variable |
| **Protection class** | I (with customer connection of protective earth) |
| **Conformity with standards** | EN 60335-1; CE |
| **Approval** | CSA C22.2 No. 77 + CAN/CSA-E60730-1; UL 1004-7 + 60730 |
| **Comment** | Start-up time: 6 s |

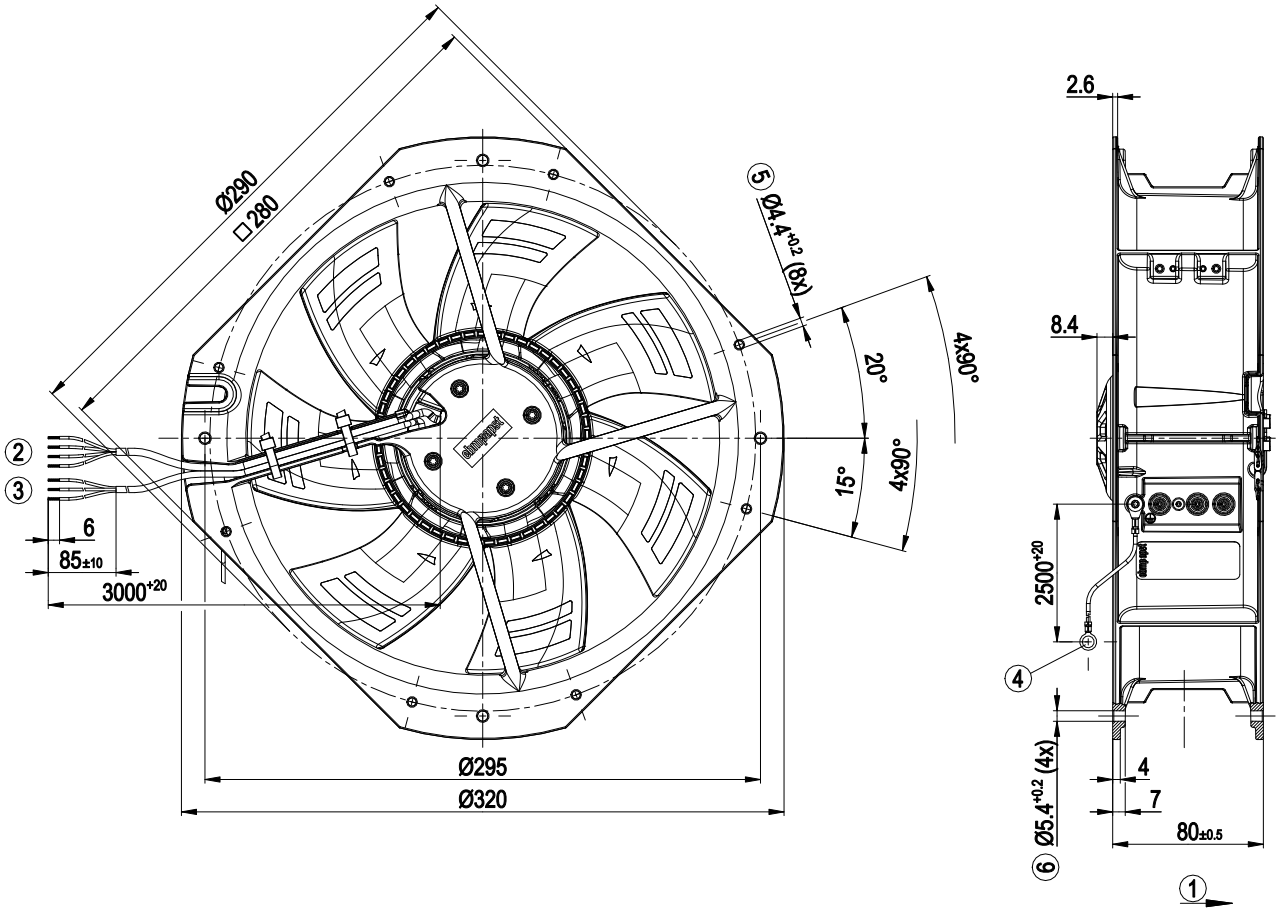


ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

# EC axial compact fan

sickle-shaped blades (S series)

## Product drawing




| | |
|---|---|
| 1 | Airflow direction "V" |
| 2 | Cable PVC AWG22 |
| | 4x splice |
| 3 | Cable PVC AWG20 |
| | 3x splice |
| 4 | PE (green/yellow), ring terminal dia. 6.3 |
| 5 | For self-tapping M5 screws |
| 6 | For self-tapping M6 screws |

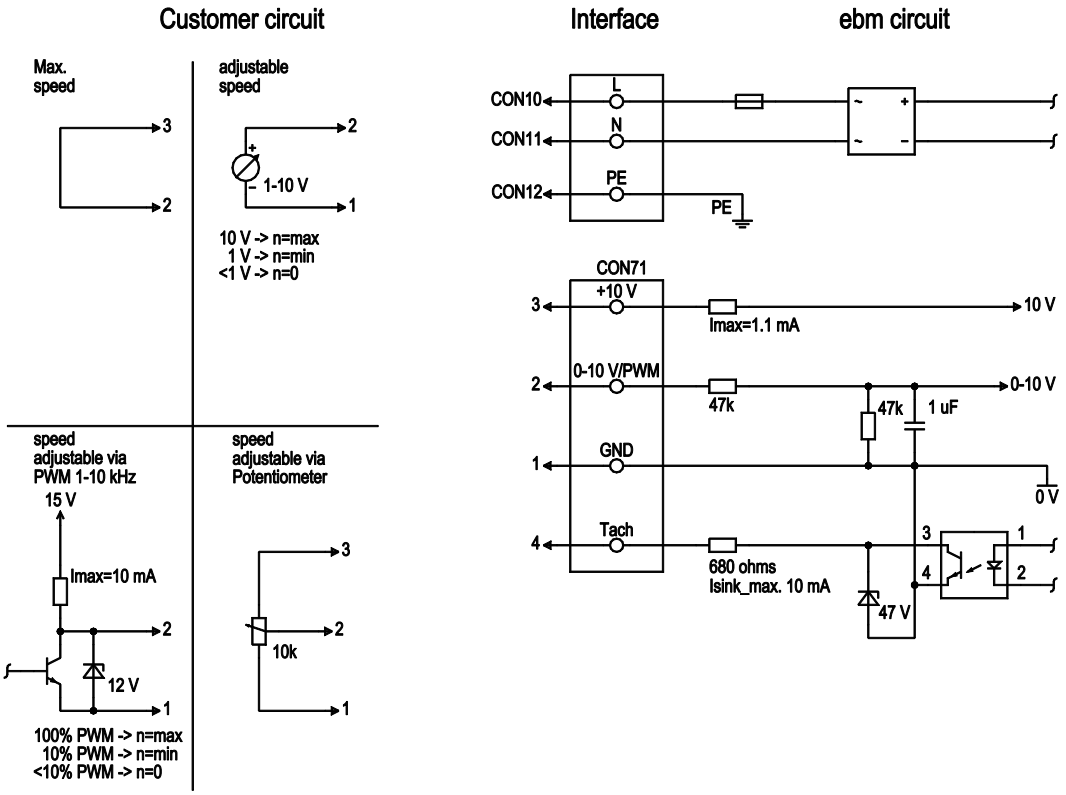


ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

# EC axial compact fan

sickle-shaped blades (S series)

## Connection diagram




| No. | Conn. | Designation | Color | Function/assignment |
|---|---|---|---|---|
| | CON10 | L | black | Power supply, phase, see nameplate for voltage range |
| | CON11 | N | blue | Power supply, neutral conductor, see nameplate for voltage range |
| | CON12 | PE | green/yellow | Protective earth |
| CON71 | 2 | 0-10 V / PWM | yellow | Control input 0-10 V or PWM, impedance 100 kΩ, SELV, adjustable curve |
| CON71 | 4 | Tacho | white | Tach output: open collector, 1 pulse per revolution, SELV |
| CON71 | 3 | 10 V / max. 1,1 mA | red | Voltage output, power supply for external devices (e.g. potentiometers), SELV |
| CON71 | 1 | GND | blue | Reference ground for control interface, SELV |

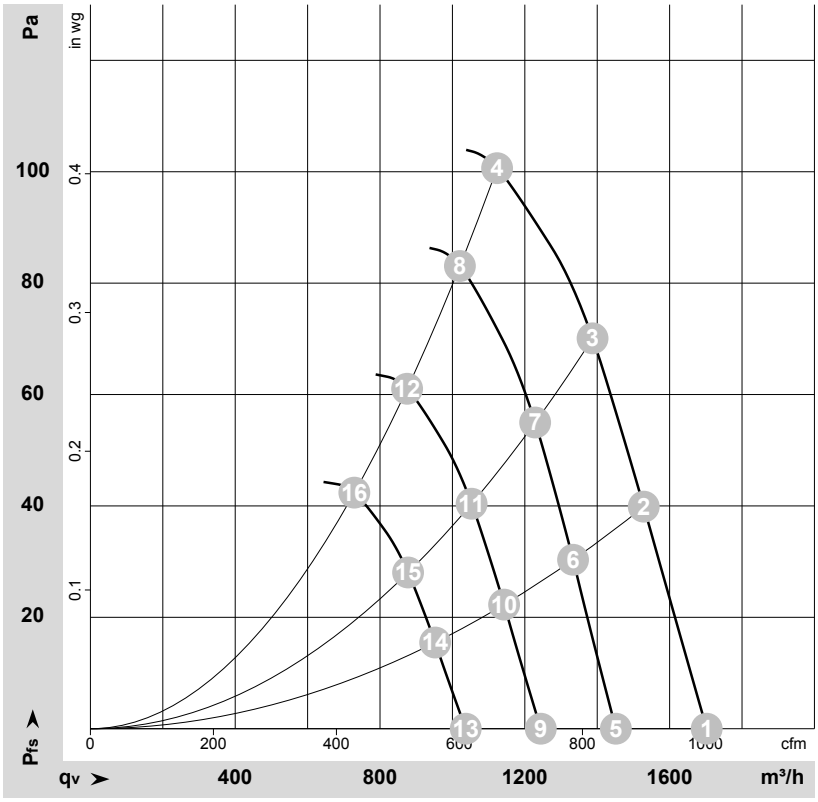


ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

# EC axial compact fan

sickle-shaped blades (S series)

## Curves: Air performance 50 Hz




ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-140462-1

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 | $P_{ed}$ | I | $LpA_{in}$ | $LwA_{in}$ | $q_V$ | $p_{fs}$ | $q_V$ | $p_{fs}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | V | Hz | $min^{-1}$ | W | A | dB(A) | dB(A) | $m^3/h$ | Pa | cfm | in. wg |
| 1 | 230 | 50 | 2465 | 67 | 0.59 | 62 | 69 | 1700 | 0 | 1000 | 0.00 |
| 2 | 230 | 50 | 2410 | 75 | 0.65 | 61 | 69 | 1530 | 40 | 900 | 0.16 |
| 3 | 230 | 50 | 2370 | 81 | 0.68 | 61 | 68 | 1385 | 70 | 815 | 0.28 |
| 4 | 230 | 50 | 2330 | 83 | 0.72 | 62 | 69 | 1125 | 100 | 660 | 0.40 |
| 5 | 230 | 50 | 2100 | 42 | 0.36 | 58 | 65 | 1450 | 0 | 855 | 0.00 |
| 6 | 230 | 50 | 2100 | 50 | 0.43 | 58 | 65 | 1335 | 30 | 785 | 0.12 |
| 7 | 230 | 50 | 2100 | 56 | 0.47 | 58 | 65 | 1230 | 55 | 725 | 0.22 |
| 8 | 230 | 50 | 2100 | 62 | 0.52 | 59 | 66 | 1020 | 83 | 600 | 0.33 |
| 9 | 230 | 50 | 1800 | 26 | 0.23 | 54 | 61 | 1245 | 0 | 730 | 0.00 |
| 10 | 230 | 50 | 1800 | 31 | 0.27 | 54 | 61 | 1145 | 22 | 675 | 0.09 |
| 11 | 230 | 50 | 1800 | 35 | 0.30 | 54 | 61 | 1055 | 41 | 620 | 0.16 |
| 12 | 230 | 50 | 1800 | 39 | 0.33 | 55 | 62 | 875 | 61 | 515 | 0.24 |
| 13 | 230 | 50 | 1500 | 15 | 0.13 | 49 | 57 | 1035 | 0 | 610 | 0.00 |
| 14 | 230 | 50 | 1500 | 18 | 0.16 | 50 | 57 | 950 | 16 | 560 | 0.06 |
| 15 | 230 | 50 | 1500 | 20 | 0.17 | 49 | 57 | 880 | 28 | 515 | 0.11 |
| 16 | 230 | 50 | 1500 | 23 | 0.19 | 50 | 58 | 730 | 43 | 430 | 0.17 |

U = Voltage · f = Frequency · n = Speed (rpm) · $P_{ed}$ = Power consumption · I = Current draw · $LpA_{in}$ = Sound pressure level intake side · $LwA_{in}$ = Sound power level intake side
$q_V$ = Air flow · $p_{fs}$ = Pressure increase



ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com