# EC axial panel compact fan

sickle-shaped blades (S series), single-intake

W3G200-HD23-10 ebmpapst Datesheet

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## Nominal data

| | |
|---|---|
| **Type** | **W3G200-HD23-10** |
| **Motor** | **M3G055-BD** |

| | | |
|---|---|---|
| Phase | | 1~ |
| Nominal voltage | VAC | 115 |
| Nominal voltage range | VAC | 100 .. 130 |
| Frequency | Hz | 50/60 |
| Method of obtaining data | | ml |
| Speed (rpm) | $min^{-1}$ | 2900 |
| Power consumption | W | 65 |
| Current draw | A | 1.0 |
| Max. back pressure | Pa | 94 |
| Max. back pressure | in. wg | 0.38 |
| 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

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## Technical description

| | |
|---|---|
| **Weight** | 1.58 kg |
| **Size** | 200 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>- Thermal overload protection for motor |
| **EMC immunity to interference** | According to EN 61000-6-2 (industrial environment) |
| **EMC interference emission** | According to EN 61000-6-4 (industrial environment) |
| **Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)** | <= 3.5 mA |
| **Electrical hookup** | Terminal strip |
| **Motor protection** | Electronic motor protection |
| **With cable** | Variable |
| **Protection class assignment** | I; If a protective earth is connected.<br>The built-in component has several local protection class assignments.<br>The final protection class is determined by the intended installation. |
| **Conformity with standards** | EN 60335-1; CE |
| **Comment on CE** | Ecodesign Directive 2009/125/EC + Fan Directive (EC) No. 327/2011 does not apply, as power consumption <125W. |
| **Approval** | CSA C22.2 No. 77 + CAN/CSA-E60730-1; UL 1004-7 + 60730-1; CCC |

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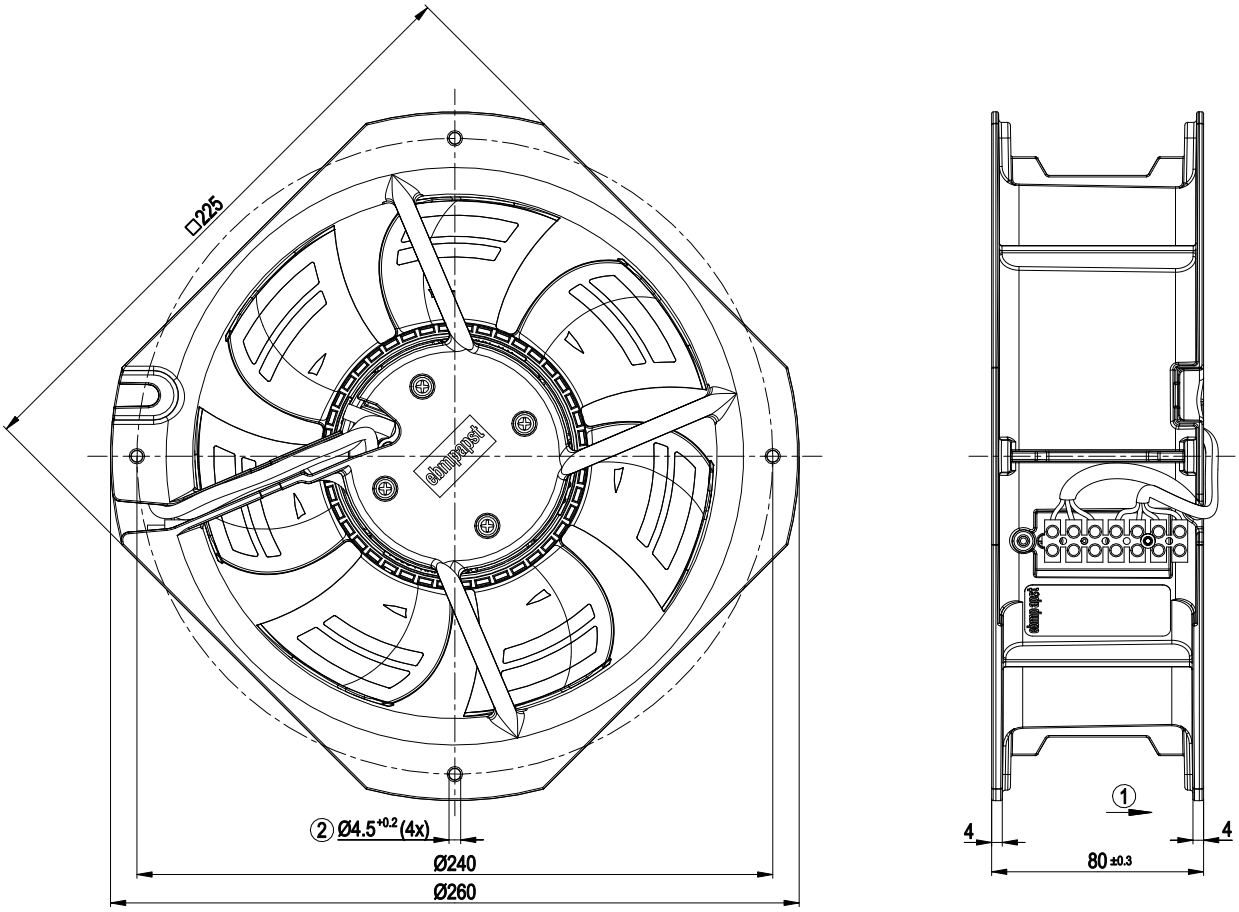
## Product drawing




| | |
|---|---|
| 1 | Direction of air flow "V" |
| 2 | For self-tapping M5 screws |

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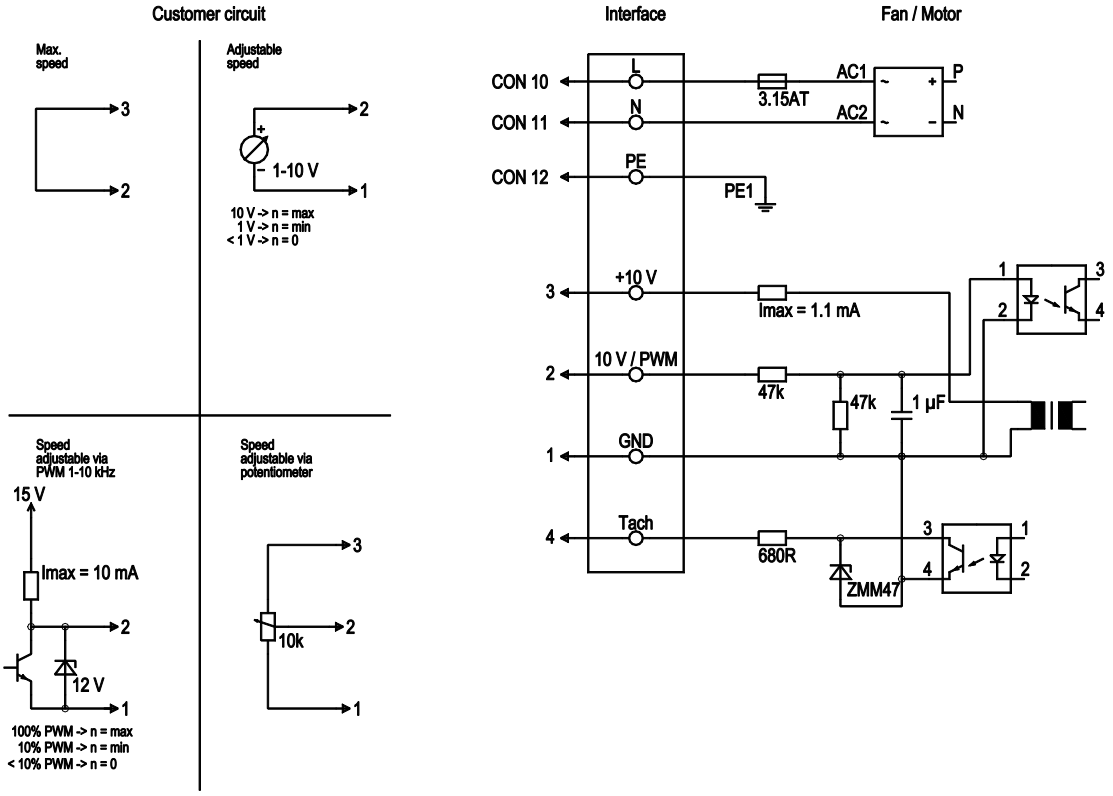
## Connection diagram




| No. | Conn. | Designation | Color | Function/assignment |
|---|---|---|---|---|
| | CON10 | L | black | Power supply 115 VAC, 50-60 Hz, see nameplate for voltage range |
| | CON11 | N | blue | Neutral conductor |
| | CON12 | PE | green/yellow | Protective earth |
| | 3 | 10V/ max 1.1mA | red | Voltage output 10 V / 1.1 mA, electrically isolated, not short-circuit-proof. |
| | 2 | 0- 10V PWM | yellow | Control input 0-10 V or PWM, electrically isolated |
| | 1 | GND | blue | GND connection for control interface |
| | 4 | Tacho | white | Tach output: open collector, 1 pulse per revolution, electrically isolated |

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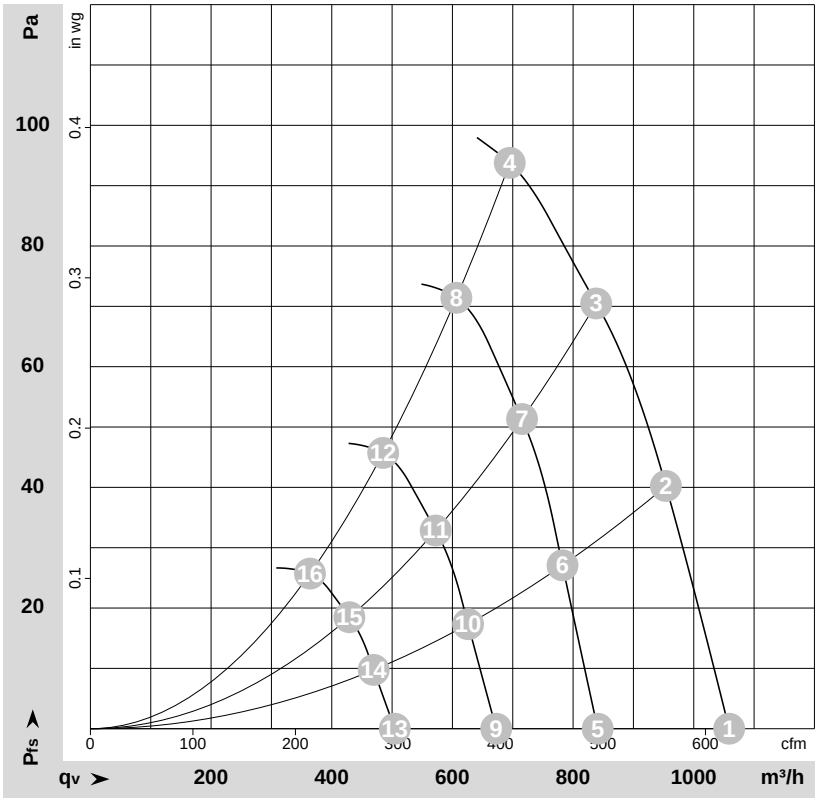
## Curves: Air performance 50 Hz




ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-155164-1
Date: 2013-04-30
Housing: 77227-2-2515

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 | 115 | 50 | 3150 | 62 | 1.00 | 59 | 66 | 1060 | 0 | 625 | 0.00 |
| 2 | 115 | 50 | 3050 | 65 | 1.00 | 58 | 66 | 955 | 40 | 560 | 0.16 |
| 3 | 115 | 50 | 2930 | 65 | 1.00 | 65 | 72 | 840 | 70 | 495 | 0.28 |
| 4 | 115 | 50 | 2900 | 65 | 1.00 | 66 | 74 | 695 | 94 | 410 | 0.38 |
| 5 | 115 | 50 | 2500 | 31 | 0.51 | | | 840 | 0 | 495 | 0.00 |
| 6 | 115 | 50 | 2500 | 36 | 0.59 | | | 780 | 27 | 460 | 0.11 |
| 7 | 115 | 50 | 2500 | 41 | 0.67 | | | 715 | 51 | 420 | 0.20 |
| 8 | 115 | 50 | 2500 | 43 | 0.72 | | | 605 | 72 | 355 | 0.29 |
| 9 | 115 | 50 | 2000 | 16 | 0.26 | | | 675 | 0 | 395 | 0.00 |
| 10 | 115 | 50 | 2000 | 18 | 0.30 | | | 625 | 17 | 370 | 0.07 |
| 11 | 115 | 50 | 2000 | 21 | 0.34 | | | 570 | 33 | 335 | 0.13 |
| 12 | 115 | 50 | 2000 | 22 | 0.37 | | | 485 | 46 | 285 | 0.18 |
| 13 | 115 | 50 | 1500 | 7.0 | 0.11 | | | 505 | 0 | 295 | 0.00 |
| 14 | 115 | 50 | 1500 | 8.0 | 0.13 | | | 470 | 10 | 275 | 0.04 |
| 15 | 115 | 50 | 1500 | 9.0 | 0.14 | | | 430 | 18 | 250 | 0.07 |
| 16 | 115 | 50 | 1500 | 9.0 | 0.15 | | | 365 | 26 | 215 | 0.10 |

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