# EC axial fan

sickled blades (S series)

with full square nozzle

W3G500-CE33-01 ebmpapst Datasheet
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## Nominal data

| | |
|---|---|
| Type | W3G500-CE33-01 |
| Motor | M3G112-GA |

| | | |
|---|---|---|
| Phase | | 3~ |
| Nominal voltage | [VAC] | 400 |
| Nominal voltage range | [VAC] | 380 .. 480 |
| Frequency | [Hz] | 50/60 |
| Type of data definition | | ml |
| Speed | [min$^{-1}$] | 1440 |
| Power input | [W] | 1050 |
| Current draw | [A] | 1.9 |
| Max. back pressure | [Pa] | 180 |
| Max. ambient temperature | [°C] | 60 |

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

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## Technical features

| | |
|---|---|
| Leackage current | <= 3,5 mA |
| General description | Integrated electronics |
| Size | 500 mm |
| Operation mode | Continuous operation (S1) |
| Direction of rotation | "V" |
| Mounting position | Shaft horizontal or rotor on bottom; rotor on top on request |
| Electrical leads | Via terminal box |
| Insulation class | "B" |
| Bearing motor | Ball bearing |
| Mass | 16.2 kg |
| Material of electronics housing | Cast in PA plastic |
| Housing material | Die-cast aluminum, coated in black |
| Material of impeller | PA plastic |
| Motor protection | Thermal overload protector (TOP) wired internally |
| Number of blades | 5 |
| Type of protection | IP 54 |
| Protection class | I (acc. to EN 61800-5-1) |
| Technical features | PFC (passive), integrated PID controller, control input 0-10 VDC / PWM, input for sensor 0-10V and 4-20 mA, output for slave 0-10 V max. 3 mA, output 20 VDC (+/- 20 %) max. 50 mA, output 10 VDC (+ 10 %) max. 10 mA, RS-485 ebmBUS, fault signal relay, under-voltage protection / phase failure detection, motor current limit, over-temperature protected electronics / motor, locked rotor protection, soft start |

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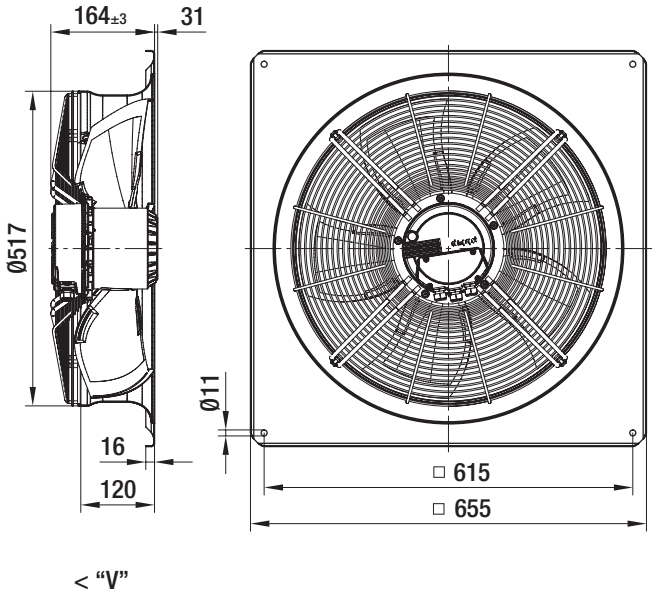
## Product drawing




< "V"

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## Connection screen


| Connector | Connection | Assignment / function |
|---|---|---|
| PE | PE | Protective earth |
| KL1 | L3 | Mains; L3 |
| | L2 | Mains; L2 |
| | L1 | Mains; L1 |
| KL2 | NC | Alarm relay, break for failure |
| | COM | Alarm relay, COMMON (2A, 250 VAC, AC1) |
| | NO | Alarm relay, make for failure |

| Connector | Connection | Assignment / function |
|---|---|---|
| KL3 | OUT | Master output 0-10 V max. 3 mA |
| | GND | GND |
| | 0-10 V / PWM | Control / Actual value input (Impedance 100 kΩ) |
| | +10 V | Supply for external potentiometer, 10 VDC (+10 %) @ 10 mA |
| | +20 V | Supply for external sensor, 20 VDC (±20 %) @ 50 mA |
| | 4-20 mA | Control / Actual value input |
| | 0-10 V / PWM | Control / Actual value input |
| | GND | GND |
| | RSB | RS485 interface for ebmBUS; RS B |
| | RSA | RS485 interface for ebmBUS; RS A |
| | RSB | RS485 interface for ebmBUS; RS B |
| | RSA | RS485 interface for ebmBUS; RS A |

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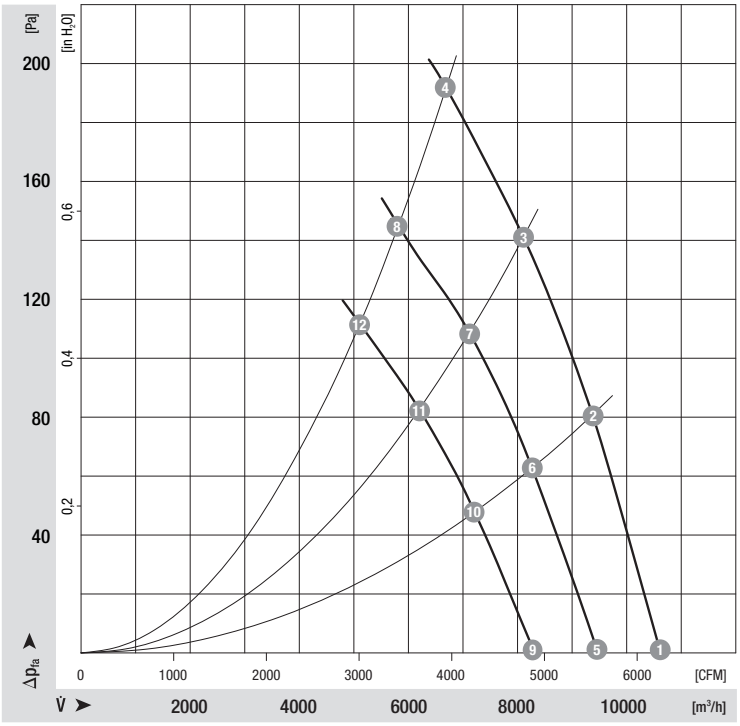
## Charts: Air flow




## Measured values

| | n | $P_1$ | I | $LwA_{ss}$ | $\eta_{TL}$ |
|---|---|---|---|---|---|
| | [min-1] | [W] | [A] | [dB(A)] | [%] |
| 1 | | 1210 | 1.90 | 97 | |
| 2 | | 1000 | 1.60 | 79 | 77 |
| 3 | | 1050 | 1.70 | 81 | 68 |
| 4 | 1450 | 1040 | 1.70 | 82 | 60 |
| 5 | 1220 | 700 | 1.20 | 87 | |
| 6 | 1270 | 660 | 1.10 | 76 | 81 |
| 7 | 1260 | 670 | 1.20 | 77 | 73 |
| 8 | 1260 | 660 | 1.10 | 79 | 62 |
| 9 | 1080 | 470 | 0.90 | 83 | |
| 10 | 1110 | 440 | 0.90 | 73 | 81 |
| 11 | 1110 | 460 | 0.90 | 74 | 72 |
| 12 | 1100 | 0.45 | 0.90 | 75 | 63 |