**K1G250-AA21-02**

# EC diagonal module - ESM

with support bracket

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## Nominal data

| | |
|---|---|
| **Type** | **K1G250-AA21-02** |
| **Motor** | **M1G055-BI** |

| | | | |
|---|---|---|---|
| Phase | | 1~ | 1~ |
| Nominal voltage | VAC | 115 | 115 |
| Frequency | Hz | 50/60 | 50/60 |
| Method of obtaining data | | ml | |
| Speed (rpm) | $min^{-1}$ | 1700 | 1200 |
| Power consumption | W | 30 | |
| Current draw | A | 0.43 | |
| Max. back pressure | Pa | 110 | |
| Max. back pressure | in. wg | 0.44 | |
| Min. ambient temperature | °C | -30 | -30 |
| Max. ambient temperature | °C | 50 | 50 |

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** | 1.1 kg |
| **Size** | 250 mm |
| **Motor size** | 55 |
| **Rotor surface** | Thick-film passivated |
| **Impeller material** | PA plastic |
| **Support bracket material** | PA plastic |
| **Number of blades** | 5 |
| **Direction of rotation** | Clockwise, viewed toward rotor |
| **Degree of protection** | IP55 |
| **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** | On rotor side |
| **Mode** | S1 |
| **Motor bearing** | Ball bearing |
| **Technical features** | - Speed selection max./min.<br>- ESM+ expandable with plug-in module<br>- Soft start<br>- Thermal overload protection for motor |
| **Speed levels** | 2 |
| **EMC immunity to interference** | According to EN 61000-6-2 (industrial environment) |
| **EMC interference emission** | According to EN 61000-6-3 (household environment) |
| **Motor protection** | Thermal overload protector (TOP) internally connected |
| **Protection class** | II |
| **Conformity with standards** | CE |
| **Approval** | UL 1004-3; VDE; EAC; CSA C22.2 No. 77 |

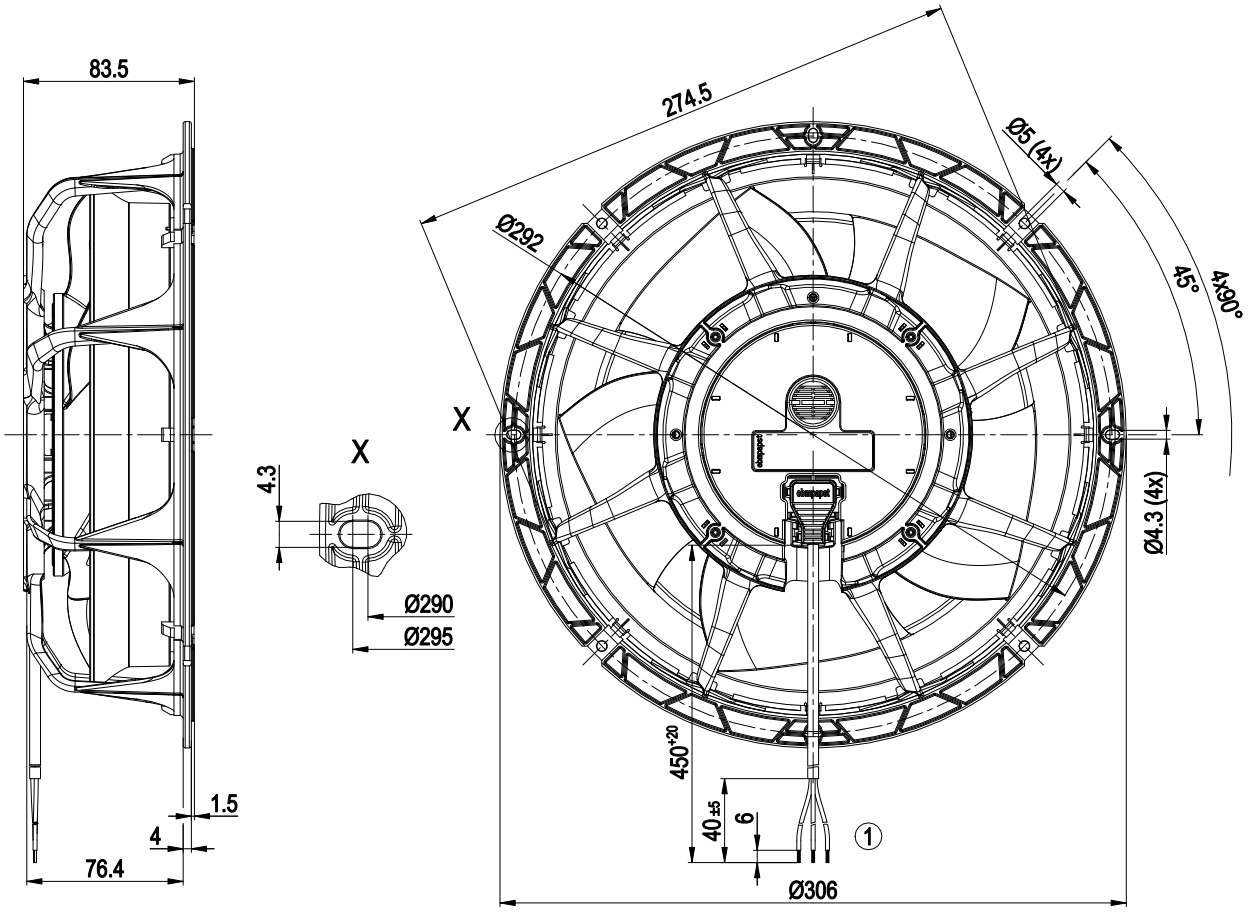


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## Product drawing




| | | | |
|---|---|---|---|
| 1 | Cable PVC AWG20 | | 3x splice |

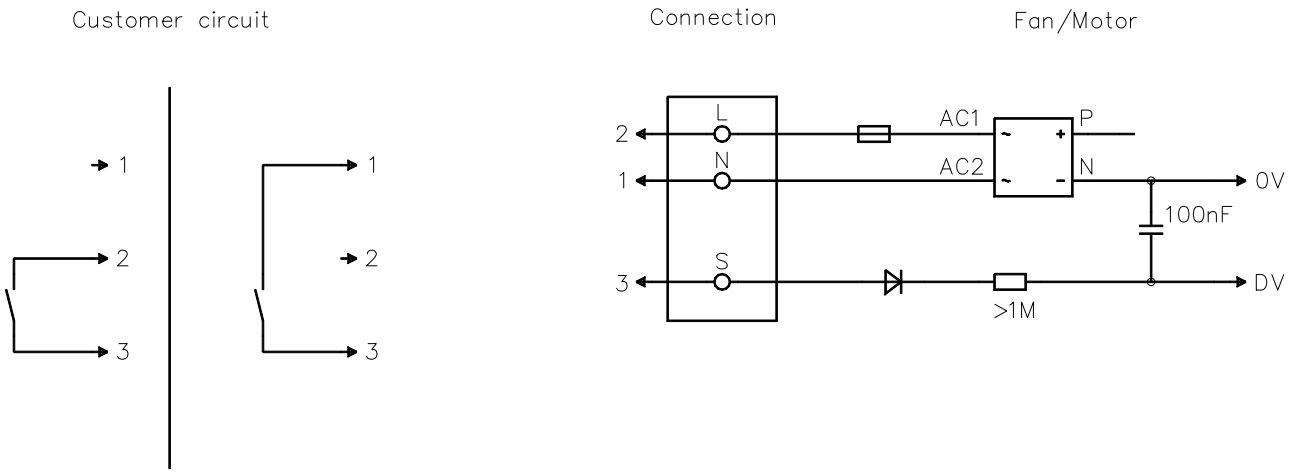


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## Connection diagram




| No. | Conn. | Designation | Color | Function/assignment |
|---|---|---|---|---|
| 1 | N | | blue | Neutral conductor |
| 2 | L | | black | Power supply 115 VAC, 50-60 Hz, see nameplate for voltage range |
| 3 | S | | brown | Speed selection: switch open speed 1 (fast), switch closed speed 2 (slow) |

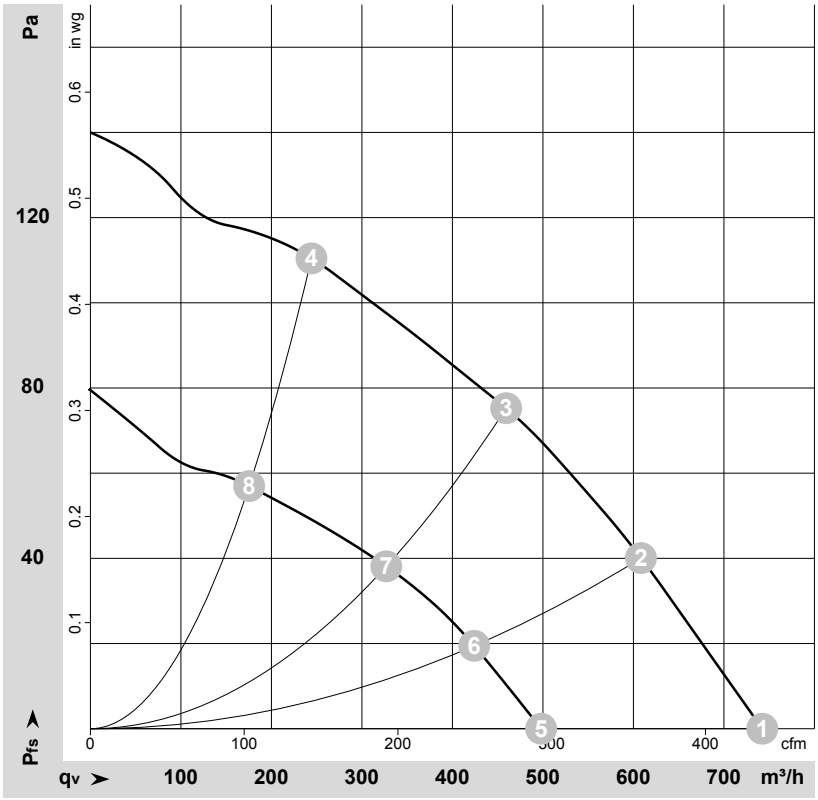


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## Curves: Air performance 50 Hz




ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-179695-1
Measurement: LU-177821-1

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

| | Stage | 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 | 1 | 115 | 50 | 1700 | 19 | 0.29 | 53 | 60 | 740 | 0 | 435 | 0.00 |
| 2 | 1 | 115 | 50 | 1700 | 23 | 0.35 | 50 | 58 | 610 | 40 | 360 | 0.16 |
| 3 | 1 | 115 | 50 | 1700 | 28 | 0.41 | 50 | 58 | 460 | 75 | 270 | 0.30 |
| 4 | 1 | 115 | 50 | 1700 | 30 | 0.43 | 53 | 61 | 245 | 110 | 145 | 0.44 |
| 5 | 2 | 115 | 50 | 1200 | 9.0 | 0.14 | 44 | 52 | 500 | 0 | 295 | 0.00 |
| 6 | 2 | 115 | 50 | 1200 | 10.0 | 0.17 | 42 | 49 | 425 | 19 | 250 | 0.08 |
| 7 | 2 | 115 | 50 | 1200 | 12 | 0.19 | 42 | 50 | 325 | 38 | 190 | 0.15 |
| 8 | 2 | 115 | 50 | 1200 | 13 | 0.21 | 45 | 53 | 175 | 57 | 105 | 0.23 |

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



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