

AC centrifugal module - RadiCal

backward-curved, single-intake

with housing

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Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

| Type | K2E220-RA38-09 | | | |
|-----------------------------|-------------------|---------|---------|---------|
| Motor | M2E068-BF | | | |
| Phase | | 1~ | 1~ | 1~ |
| Nominal voltage | VAC | 230 | 230 | 230 |
| Frequency | Hz | 50 | 60 | 60 |
| Method of obtaining data | | ml | ml | ml |
| Valid for approval/standard | | CE | CE | UL 2111 |
| Speed (rpm) | min ⁻¹ | 2100 | 2050 | 2050 |
| Power consumption | W | 88 | 107 | 116 |
| Current draw | A | 0.39 | 0.47 | 0.49 |
| Capacitor | µF | 2 | 2 | 2 |
| Capacitor voltage | VDB | 450 | 450 | 450 |
| Capacitor standard | | S0 (CE) | S0 (CE) | UL |
| Min. back pressure | Pa | 0 | 0 | 0 |
| Min. back pressure | in. wg | 0 | 0 | 0 |
| Min. ambient temperature | °C | -25 | -25 | -25 |
| Max. ambient temperature | °C | 50 | 60 | 60 |
| Starting current | A | 0.51 | 0.52 | |

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



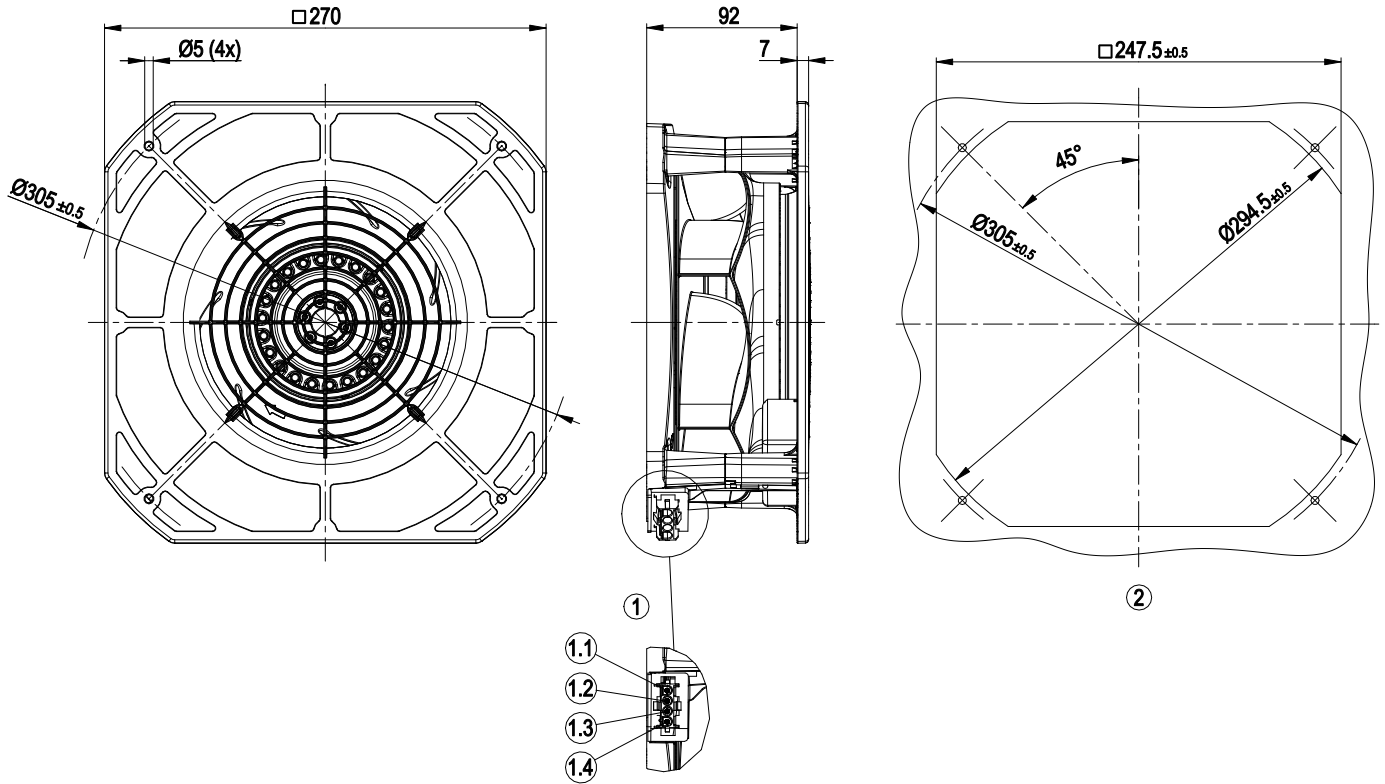
Technical description

| | |
|--|---|
| Weight | 2.02 kg |
| Size | 220 mm |
| Motor size | 68 |
| Rotor surface | Painted black |
| Impeller material | PA plastic |
| Housing material | PA plastic |
| Guard grille material | PA plastic |
| Number of blades | 7 |
| Direction of rotation | Clockwise, viewed toward rotor |
| Degree of protection | IP44; installation- and position-dependent |
| Insulation class | "F" |
| 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 |
| Mode | S1 |
| Motor bearing | Ball bearing |
| Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system) | < 0.75 mA |
| Electrical hookup | Plug |
| Motor protection | Thermal overload protector (TOP) internally connected |
| With cable | Variable |
| Protection class | I (with customer connection of protective earth) |
| Motor capacitor according to EN 60252-1 in safety protection class | S0 |
| Conformity with standards | EN 60335-1; CE |
| Approval | EAC; UL 1004-3; CCC; GSA C22.2 No. 77 |

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Product drawing

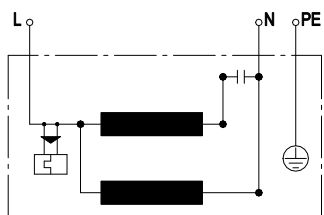


| | |
|-----|---|
| 1 | tyco coded plug system |
| | 4-pole connector housing tyco 926305-7 |
| | 4x plug pin tyco 926 885-1 |
| | Mating connector (not included in scope of delivery): |
| | 4-pole connector housing tyco 926298-6 |
| | 4x socket Tyco 926 884-1 |
| 1.1 | PE |
| 1.2 | L |
| 1.3 | N + capacitor |
| 1.4 | Capacitor |
| | (capacitor wired internally) |
| 2 | Mounting dimensions |

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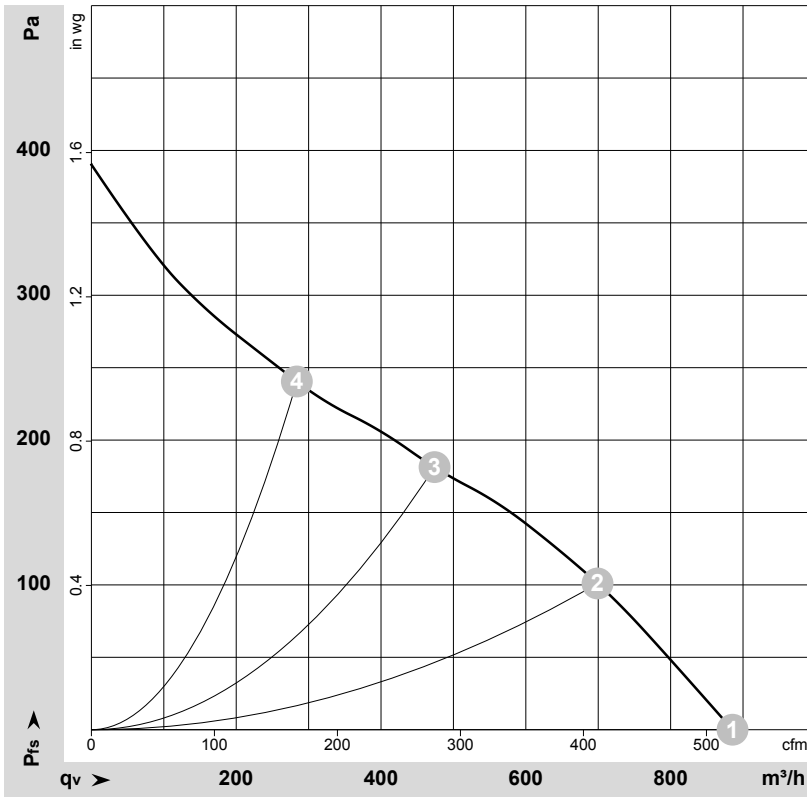
Connection diagram



| | | | | | |
|---|------|---|-------|----|--------------|
| L | blue | N | black | PE | green/yellow |
|---|------|---|-------|----|--------------|



Curves: Air performance 50 Hz



$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-130008-1

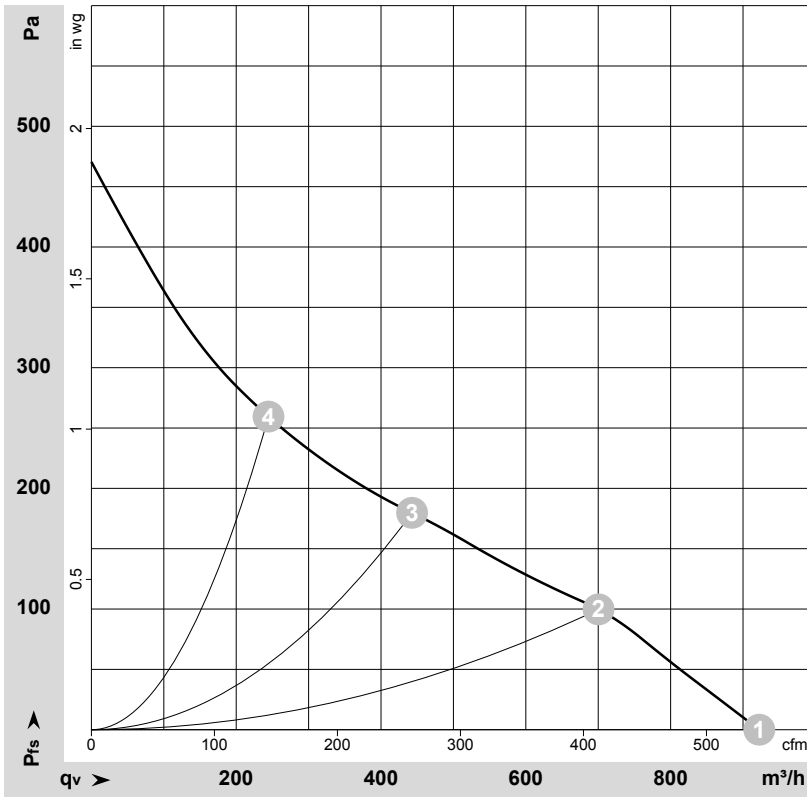
Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebmpapst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the 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 _e | 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 | 2350 | 80 | 0.36 | 59 | 68 | 885 | 0 | 520 | 0.00 |
| 2 | 230 | 50 | 2230 | 86 | 0.38 | 54 | 62 | 700 | 100 | 410 | 0.40 |
| 3 | 230 | 50 | 2100 | 88 | 0.39 | 52 | 60 | 475 | 180 | 280 | 0.72 |
| 4 | 230 | 50 | 2205 | 86 | 0.38 | 55 | 64 | 285 | 240 | 165 | 0.96 |

U = Voltage · f = Frequency · n = Speed (rpm) · P_e = 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

Curves: Air performance 60 Hz



$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-130009-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebmpapst. 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 _e | 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 | 60 | 2450 | 102 | 0.46 | 60 | 69 | 920 | 0 | 545 | 0.00 |
| 2 | 230 | 60 | 2210 | 106 | 0.46 | 54 | 62 | 700 | 100 | 410 | 0.40 |
| 3 | 230 | 60 | 2050 | 107 | 0.47 | 51 | 60 | 445 | 180 | 260 | 0.72 |
| 4 | 230 | 60 | 2235 | 105 | 0.45 | 56 | 65 | 245 | 260 | 145 | 1.04 |

U = Voltage · f = Frequency · n = Speed (rpm) · P_e = 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

