

# EC centrifugal module - RadiCal

backward-curved, single-intake  
with housing

K1G250-RG04-11 ebmpapst Datasheet  
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## Nominal data

|                          |                   |              |              |              |
|--------------------------|-------------------|--------------|--------------|--------------|
| Type                     | K1G250-RG04-11    |              |              |              |
| Motor                    | M1G055-DF         |              |              |              |
| Nominal voltage          | VAC               | 0            | 0            | 0            |
| DC-link voltage          | V                 | 400          | 400          | 400          |
| Method of obtaining data |                   | ml           | ml           | ml           |
| External electronics     |                   | 61791-1-1320 | 61791-1-1320 | 61791-1-1320 |
| Speed (rpm)              | min <sup>-1</sup> | 2550         | 2220         | 2400         |
| Power consumption        | W                 | 165          | 130          | 163          |
| Current draw             | A                 | 0.9 (230V)   | 0.77 (230V)  | 0.9 (230V)   |
| Min. ambient temperature | °C                | -20          | -20          | -20          |
| Max. ambient temperature | °C                | 50           | 60           | 60           |

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

Connection condition: inverter operated

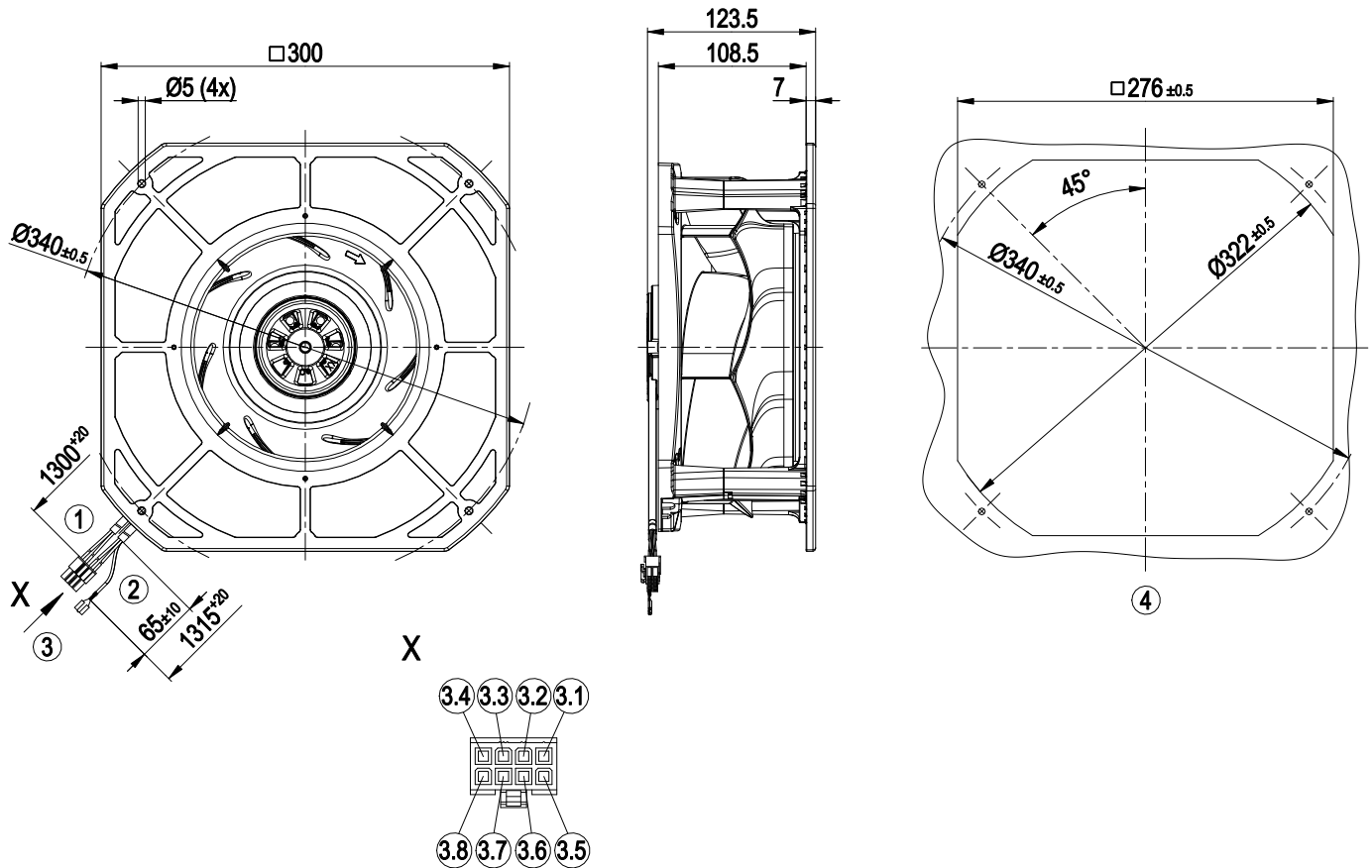
Operation only with external electronics CCC180AA0101



## Technical description

|                                                                            |                                                        |
|----------------------------------------------------------------------------|--------------------------------------------------------|
| Weight                                                                     | 2.5 kg                                                 |
| Size                                                                       | 250 mm                                                 |
| Motor size                                                                 | 55                                                     |
| Rotor surface                                                              | Thick-film passivated                                  |
| Impeller material                                                          | PA plastic                                             |
| Housing material                                                           | PA plastic                                             |
| Number of blades                                                           | 7                                                      |
| Direction of rotation                                                      | Clockwise, viewed toward rotor                         |
| Degree of protection                                                       | IP54                                                   |
| Insulation class                                                           | "B"                                                    |
| Moisture (F) / Environmental (H) protection class                          | H0 - dry environment                                   |
| 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                                           |
| Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system) | <= 3.5 mA                                              |
| Electrical hookup                                                          | Connector with cable                                   |
| Motor protection                                                           | Thermal overload protector (TOP) with basic insulation |
| With cable                                                                 | Variable                                               |
| Protection class                                                           | I (with customer connection of protective earth)       |
| Conformity with standards                                                  | EN 60335-1; CE                                         |
| Approval                                                                   | UL 507; CSA C22.2 No. 113                              |

## Product drawing

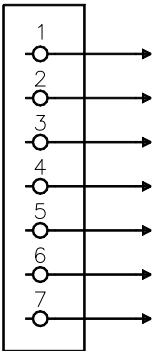


|     |                                         |
|-----|-----------------------------------------|
| 1   | Cable PVC AWG22                         |
|     | 4x socket TE 794958-1                   |
| 2   | Cable PFA AWG20                         |
|     | 2x socket TE 794956-1                   |
|     | 1x flat push-on receptacle 6.3x0.8 (PE) |
| 3   | 8-pole connector housing TE 1586765-8   |
| 3.1 | not used                                |
| 3.2 | not used                                |
| 3.3 | Contact 1 (red)                         |
| 3.4 | Contact 2 (yellow)                      |
| 3.5 | Contact 3 (blue)                        |
| 3.6 | Contact 4 (brown)                       |
| 3.7 | Contact 5 (blue)                        |
| 3.8 | Contact 6 (white)                       |
| 4   | Mounting dimensions                     |

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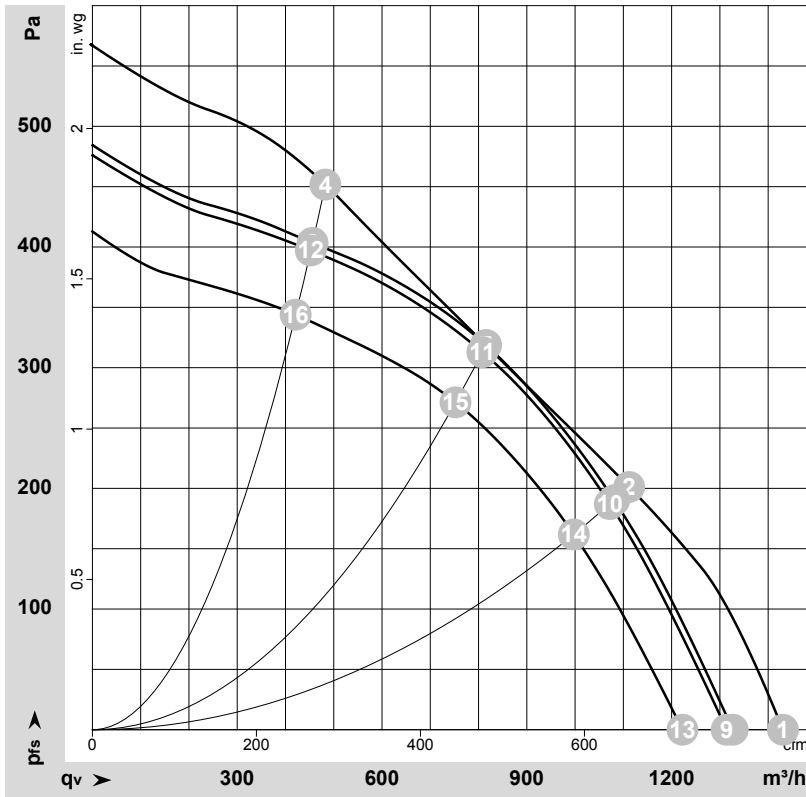
## Connection diagram



| No. | Conn. | Designation | Color        | Function/assignment |
|-----|-------|-------------|--------------|---------------------|
| 1   |       |             | red          | Contact 1           |
| 2   |       |             | yellow       | Contact 2           |
| 3   |       |             | blue         | Contact 3           |
| 4   |       |             | brown        | Contact 4           |
| 5   |       |             | blue         | Contact 5           |
| 6   |       |             | white        | Contact 6           |
| 7   |       |             | green/yellow | PE                  |



## Curves: Air performance 50 Hz



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

Measurement: LU-194064-1  
 Measurement: LU-194063-1  
 Measurement: LU-194062-1  
 Measurement: LU-193663-1

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

|    | Wired | U   | f  | n                 | P <sub>ed</sub> | I    | q <sub>v</sub>    | p <sub>fs</sub> | q <sub>v</sub> | p <sub>fs</sub> |
|----|-------|-----|----|-------------------|-----------------|------|-------------------|-----------------|----------------|-----------------|
|    |       | V   | Hz | min <sup>-1</sup> | W               | A    | m <sup>3</sup> /h | Pa              | cfm            | in. wg          |
| 1  | 1~    | 230 | 50 | 2550              | 133             | 0.79 | 1430              | 0               | 840            | 0.00            |
| 2  | 1~    | 230 | 50 | 2465              | 165             | 0.90 | 1110              | 200             | 655            | 0.80            |
| 3  | 1~    | 230 | 50 | 2410              | 165             | 0.90 | 815               | 320             | 480            | 1.28            |
| 4  | 1~    | 230 | 50 | 2535              | 165             | 0.90 | 485               | 450             | 285            | 1.81            |
| 5  | 1~    | 230 | 50 | 2400              | 106             | 0.70 | 1325              | 0               | 780            | 0.00            |
| 6  | 1~    | 230 | 50 | 2400              | 150             | 0.85 | 1080              | 192             | 635            | 0.77            |
| 7  | 1~    | 230 | 50 | 2400              | 163             | 0.90 | 815               | 319             | 480            | 1.28            |
| 8  | 1~    | 230 | 50 | 2400              | 138             | 0.80 | 455               | 403             | 270            | 1.62            |
| 9  | 1~    | 230 | 50 | 2380              | 104             | 0.69 | 1315              | 0               | 775            | 0.00            |
| 10 | 1~    | 230 | 50 | 2380              | 145             | 0.83 | 1070              | 189             | 630            | 0.76            |
| 11 | 1~    | 230 | 50 | 2380              | 158             | 0.87 | 810               | 313             | 475            | 1.26            |
| 12 | 1~    | 230 | 50 | 2380              | 134             | 0.79 | 455               | 398             | 265            | 1.60            |
| 13 | 1~    | 230 | 50 | 2220              | 86              | 0.64 | 1220              | 0               | 720            | 0.00            |
| 14 | 1~    | 230 | 50 | 2220              | 118             | 0.74 | 995               | 164             | 585            | 0.66            |
| 15 | 1~    | 230 | 50 | 2220              | 130             | 0.77 | 750               | 271             | 445            | 1.09            |
| 16 | 1~    | 230 | 50 | 2220              | 108             | 0.71 | 420               | 344             | 250            | 1.38            |

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P<sub>ed</sub> = Power consumption · I = Current draw · q<sub>v</sub> = Air flow · p<sub>fs</sub> = Pressure increase

