

R3G250-AL54-11 ebmpapst Datasheet
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Nominal data

| | | |
|--------------------------|-------------------|------------|
| Type | R3G250-AL54-11 | |
| Motor | M3G074-CF | |
| Phase | | 1~ |
| Nominal voltage | VAC | 230 |
| Nominal voltage range | VAC | 200 .. 277 |
| Frequency | Hz | 50/60 |
| Method of obtaining data | | ml |
| Speed (rpm) | min ⁻¹ | 2530 |
| Power consumption | W | 165 |
| Current draw | A | 1.25 |
| 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

Data according to Commission Regulation (EU) 327/2011

| | | Actual | Req. 2015 | | | |
|-----------------------------------|---|--------|-----------|--------------------------------|-------------------|------|
| 01 Overall efficiency η_{es} | % | 49.8 | 43.1 | 09 Power consumption P_{ed} | kW | 0.16 |
| 02 Measurement category | | A | | 09 Air flow q_v | m ³ /h | 720 |
| 03 Efficiency category | | Static | | 09 Pressure increase p_{fs} | Pa | 359 |
| 04 Efficiency grade N | | 68.7 | 62 | 10 Speed (rpm) n | min ⁻¹ | 2555 |
| 05 Variable speed drive | | Yes | | 11 Specific ratio [*] | | 1.00 |

Data obtained at optimum efficiency level.
 The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

^{*} Specific ratio = $1 + p_{fs} / 100\,000\text{ Pa}$

LU-77198

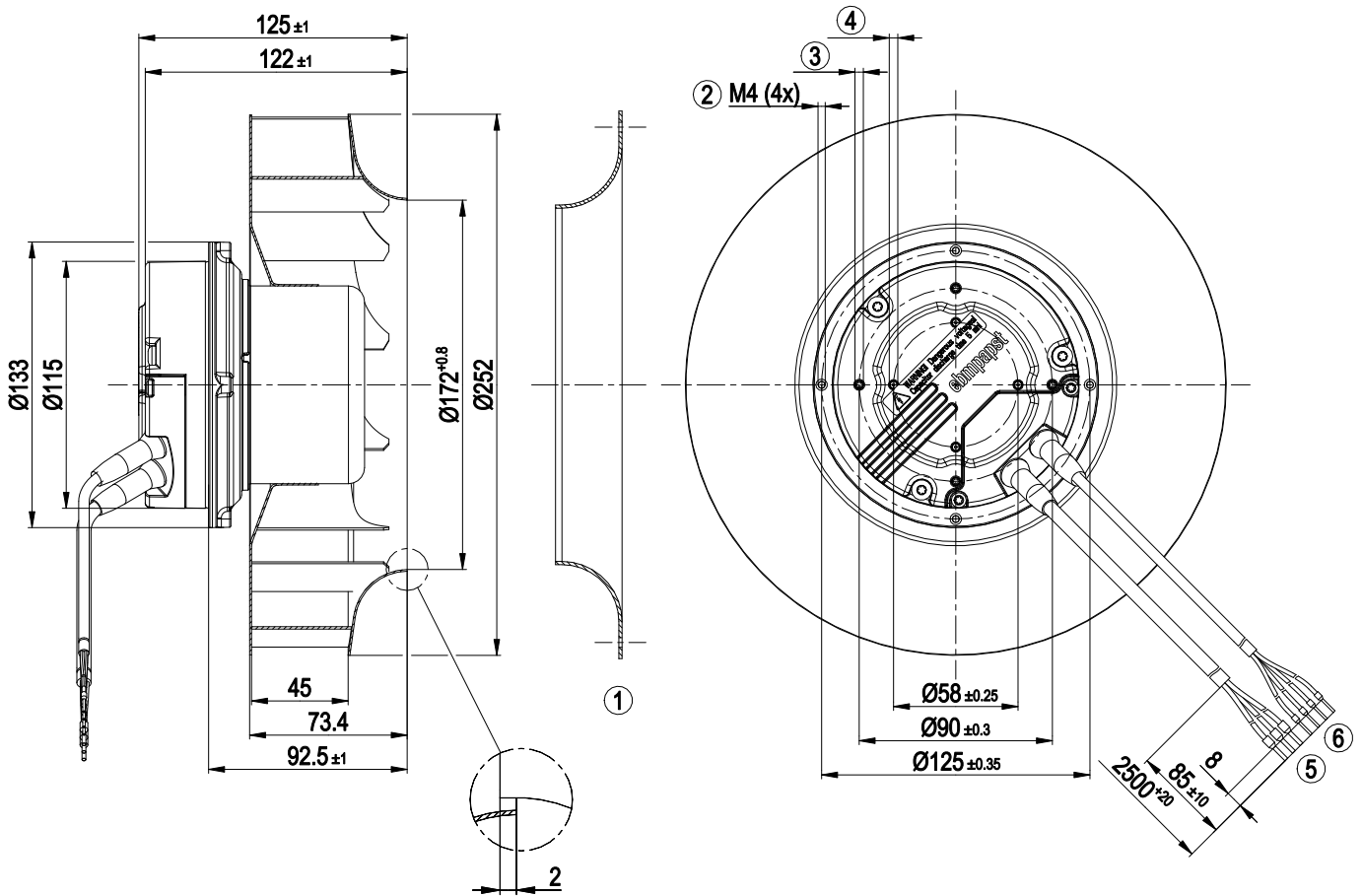


Technical description

| | |
|--|---|
| Weight | 3 kg |
| Size | 250 mm |
| Motor size | 74 |
| Rotor surface | Thick-film passivated |
| Electronics housing material | Die-cast aluminum |
| Impeller material | Sheet steel, galvanized |
| Number of blades | 11 |
| Direction of rotation | Clockwise, viewed toward rotor |
| Degree of protection | IP44; installation- and position-dependent |
| Insulation class | "B" |
| Moisture (F) / Environmental (H) protection class | F3-1 |
| Max. permitted ambient temp. for motor (transport/storage) | + 80 °C |
| Min. permitted ambient temp. for motor (transport/storage) | - 40 °C |
| Installation position | Shaft horizontal or rotor on top; rotor on bottom on request |
| Condensation drainage holes | None |
| Mode | S1 |
| Motor bearing | Ball bearing |
| Technical features | <ul style="list-style-type: none"> - Output 10 VDC, max. 1.1 mA - Tach output - Power limiter - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Thermal overload protection for motor |
| Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system) | <= 3.5 mA |
| Motor protection | Thermal overload protector (TOP) internally connected |
| With cable | Variable |
| Protection class | I (with customer connection of protective earth) |
| Conformity with standards | EN 60335-1; EN 61800-5-1; EN 60950-1 |
| Approval | CSA C22.2 No. 77 + CAN/CSA-E60730-1; UL 1004-3 + 60730-1 |



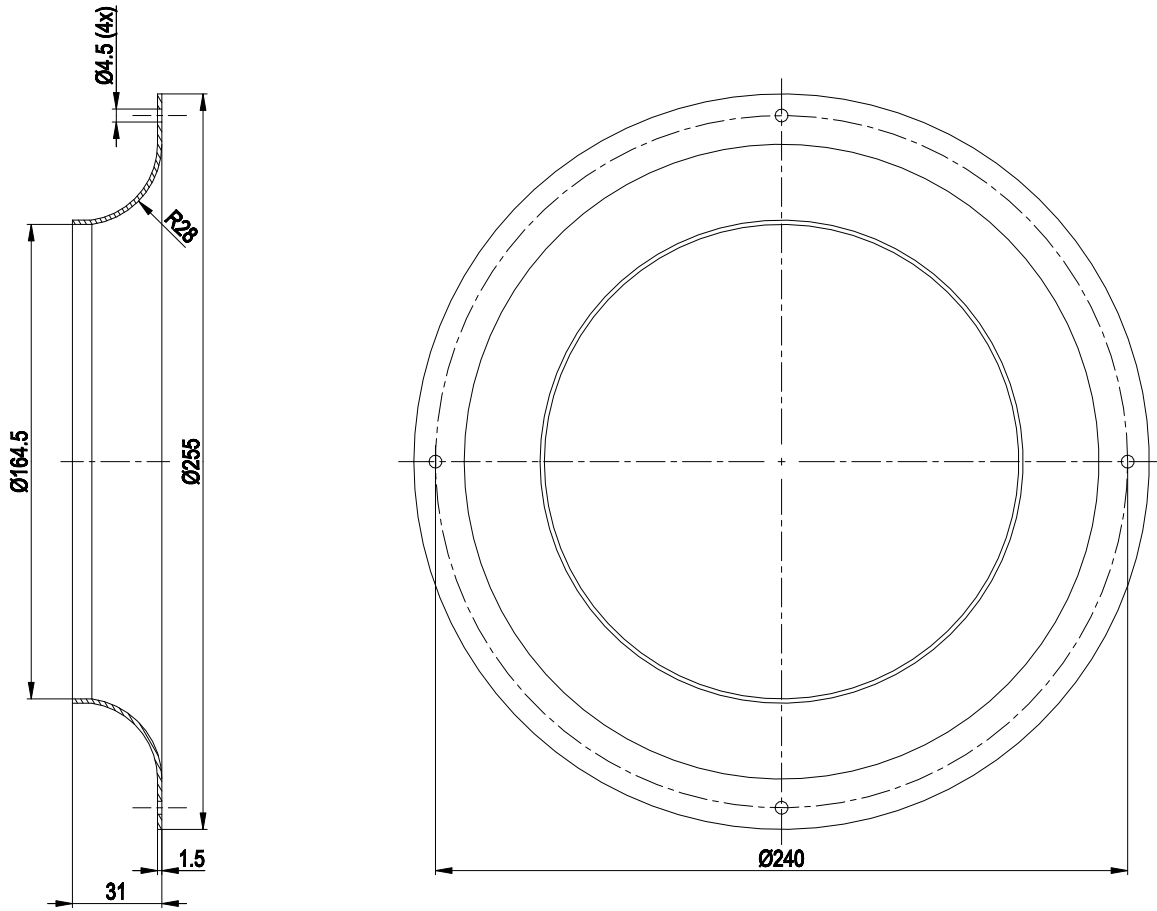
Product drawing



| | |
|---|--|
| 1 | Accessory part: inlet ring 96359-2-4013 not included in scope of delivery |
| 2 | Clearance for screw 8-10 mm |
| 3 | Tapping hole prepared for self-tapping M4 screw, max. clearance for screw 6 mm |
| 4 | Tapping hole prepared for self-tapping M4 screw, max. clearance for screw 8 mm |
| 5 | Cable PVC AWG18 3x wire-end ferrule |
| 6 | Cable PVC AWG22 4x wire-end ferrule |



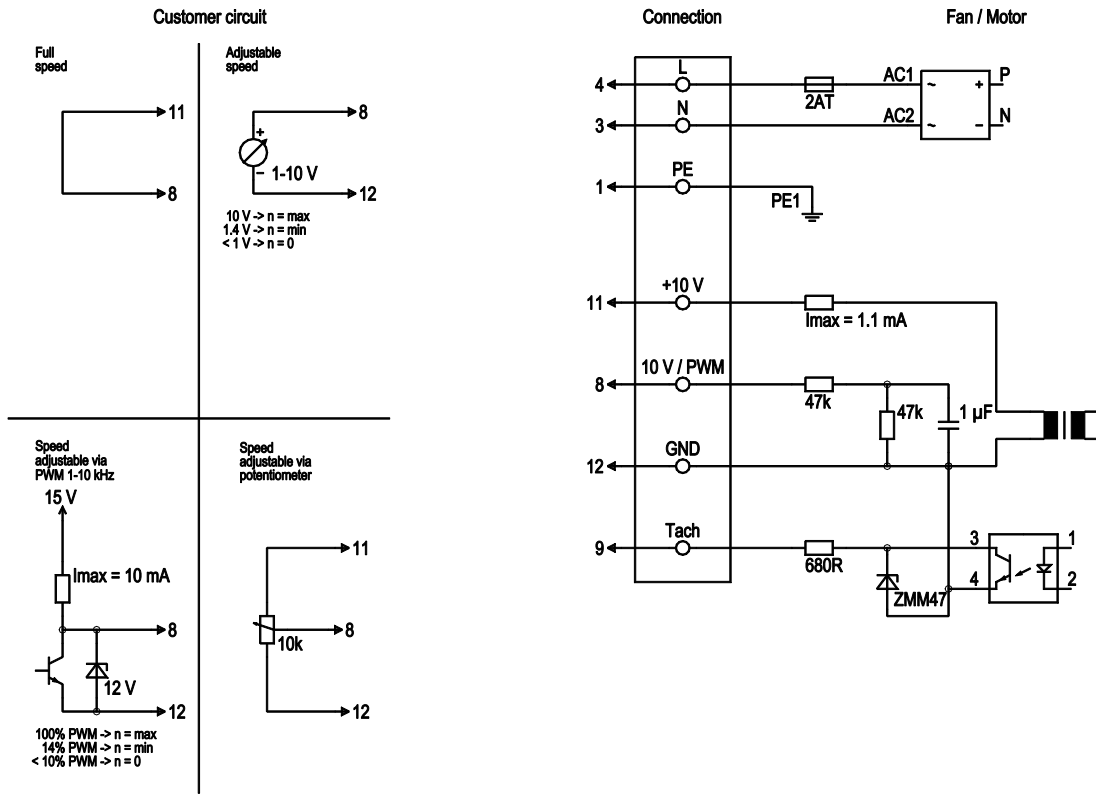
Accessory part



Accessory part: inlet ring 96359-2-4013 not included in scope of delivery



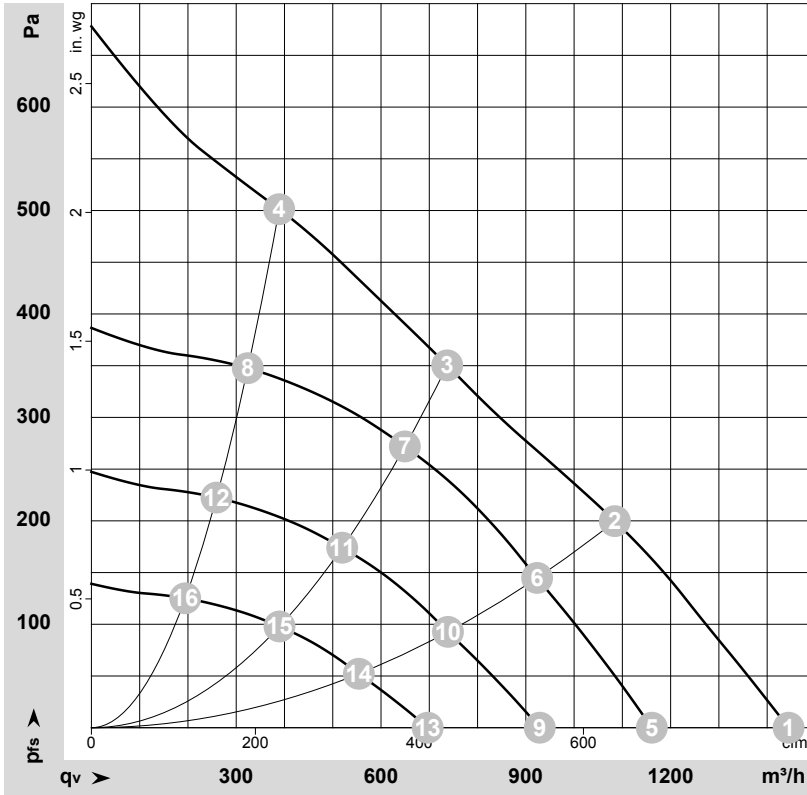
Connection diagram



| No. | Conn. | Designation | Color | Function/assignment |
|-----|-------|------------------|--------------|--|
| | 4 | L | black | Power supply 230 VAC, 50-60 Hz, see nameplate for voltage range |
| | 3 | N | blue | Neutral conductor |
| | 1 | PE | green/yellow | Protective earth |
| | 8 | 0-10 V PWM | yellow | Control input 0-10 V or PWM, electrically isolated |
| | 9 | Tach | white | Tach output: open collector, 1 pulse per revolution, electrically isolated |
| | 11 | 10V / max 1.1 mA | red | Voltage output 10 V/max. 1.1 mA, electrically isolated |
| | 12 | GND | blue | GND connection for control interface |



Curves: Air performance 50 Hz



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

Measurement: LU-77198-1

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

| | Wired | U | f | n | P _{ed} | I | q _v | P _{fs} | q _v | P _{fs} |
|----|-------|-----|----|-------------------|-----------------|------|-------------------|-----------------|----------------|-----------------|
| | | V | Hz | min ⁻¹ | W | A | m ³ /h | Pa | cfm | in. wg |
| 1 | 1~ | 230 | 50 | 2800 | 142 | 1.09 | 1445 | 0 | 850 | 0.00 |
| 2 | 1~ | 230 | 50 | 2645 | 165 | 1.25 | 1085 | 200 | 640 | 0.80 |
| 3 | 1~ | 230 | 50 | 2530 | 165 | 1.25 | 735 | 350 | 435 | 1.41 |
| 4 | 1~ | 230 | 50 | 2700 | 157 | 1.19 | 390 | 500 | 230 | 2.01 |
| 5 | 1~ | 230 | 50 | 2250 | 74 | 0.56 | 1160 | 0 | 685 | 0.00 |
| 6 | 1~ | 230 | 50 | 2250 | 101 | 0.76 | 925 | 145 | 545 | 0.58 |
| 7 | 1~ | 230 | 50 | 2250 | 113 | 0.85 | 650 | 272 | 380 | 1.09 |
| 8 | 1~ | 230 | 50 | 2250 | 91 | 0.69 | 325 | 348 | 190 | 1.40 |
| 9 | 1~ | 230 | 50 | 1800 | 38 | 0.29 | 930 | 0 | 545 | 0.00 |
| 10 | 1~ | 230 | 50 | 1800 | 52 | 0.39 | 740 | 93 | 435 | 0.37 |
| 11 | 1~ | 230 | 50 | 1800 | 58 | 0.43 | 520 | 174 | 305 | 0.70 |
| 12 | 1~ | 230 | 50 | 1800 | 46 | 0.35 | 260 | 222 | 150 | 0.89 |
| 13 | 1~ | 230 | 50 | 1350 | 16 | 0.12 | 695 | 0 | 410 | 0.00 |
| 14 | 1~ | 230 | 50 | 1350 | 22 | 0.16 | 555 | 52 | 325 | 0.21 |
| 15 | 1~ | 230 | 50 | 1350 | 24 | 0.18 | 390 | 98 | 230 | 0.39 |
| 16 | 1~ | 230 | 50 | 1350 | 20 | 0.15 | 195 | 125 | 115 | 0.50 |

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · q_v = Air flow · p_{fs} = Pressure increase

