**R3G355-AM14-61**

# EC centrifugal fan

backward-curved, single-intake

R3G355-AM14-61 ebmpapst Datasheet
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## Nominal data

| | |
|---|---|
| **Type** | **R3G355-AM14-61** |
| **Motor** | **M3G084-FA** |

| | | |
|---|---|---|
| Phase | | 1~ |
| Nominal voltage | VAC | 230 |
| Nominal voltage range | VAC | 200 .. 277 |
| Frequency | Hz | 50/60 |
| Method of obtaining data | | fa |
| Speed (rpm) | $min^{-1}$ | 1900 |
| Power consumption | W | 350 |
| Current draw | A | 1.5 |
| Min. ambient temperature | °C | -25 |
| Max. ambient temperature | °C | 40 |

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 (EN 17166)

| | | Actual | Req. 2015 |
|---|---|---|---|
| 01 Overall efficiency $\eta_{es}$ | % | 59.9 | 47.6 |
| 02 Measurement category | | A | |
| 03 Efficiency category | | Static | |
| 04 Efficiency grade N | | 74.3 | 62 |
| 05 Variable speed drive | | Yes | |

| | | |
|---|---|---|
| 09 Power consumption $P_{ed}$ | kW | 0.42 |
| 09 Air flow $q_v$ | $m^3/h$ | 2050 |
| 09 Pressure increase $p_{fs}$ | Pa | 400 |
| 10 Speed (rpm) n | $min^{-1}$ | 1770 |
| 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 Pa

LU-64229

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## Technical description

| | |
|---|---|
| **Weight** | 5.4 kg |
| **Size** | 355 mm |
| **Motor size** | 84 |
| **Rotor surface** | Painted black |
| **Electronics housing material** | Die-cast aluminum |
| **Impeller material** | Sheet aluminum |
| **Number of blades** | 6 |
| **Direction of rotation** | Clockwise, viewed toward rotor |
| **Degree of protection** | IP20 |
| **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** | Shaft horizontal or rotor on top; rotor on bottom on request |
| **Condensation drainage holes** | None |
| **Mode** | S1 |
| **Motor bearing** | Ball bearing |
| **Technical features** | - Operation and alarm display: reversible voltage output 0 V / +15 V<br>- Integrated PID controller<br>- Motor current limitation<br>- PFC, active<br>- RS-485 ebmBUS<br>- Soft start<br>- Control interface with SELV potential safely disconnected from supply<br>- Thermal overload protection for electronics/motor<br>- Line undervoltage / phase failure detection |
| **EMC immunity to interference** | According to EN 61000-6-2 (industrial environment) |
| **EMC circuit feedback** | According to EN 61000-3-2/3 |
| **EMC interference emission** | According to EN 61000-6-4 (industrial environment) |
| **Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)** | <= 3.5 mA |
| **Electrical hookup** | Plug |
| **Motor protection** | Thermal overload protector (TOP) internally connected |
| **Protection class** | I (with customer connection of protective earth) |
| **Conformity with standards** | EN 61800-5-1; CE |
| **Approval** | CSA C22.2 No. 113; CCC; EAC; UL 507 |

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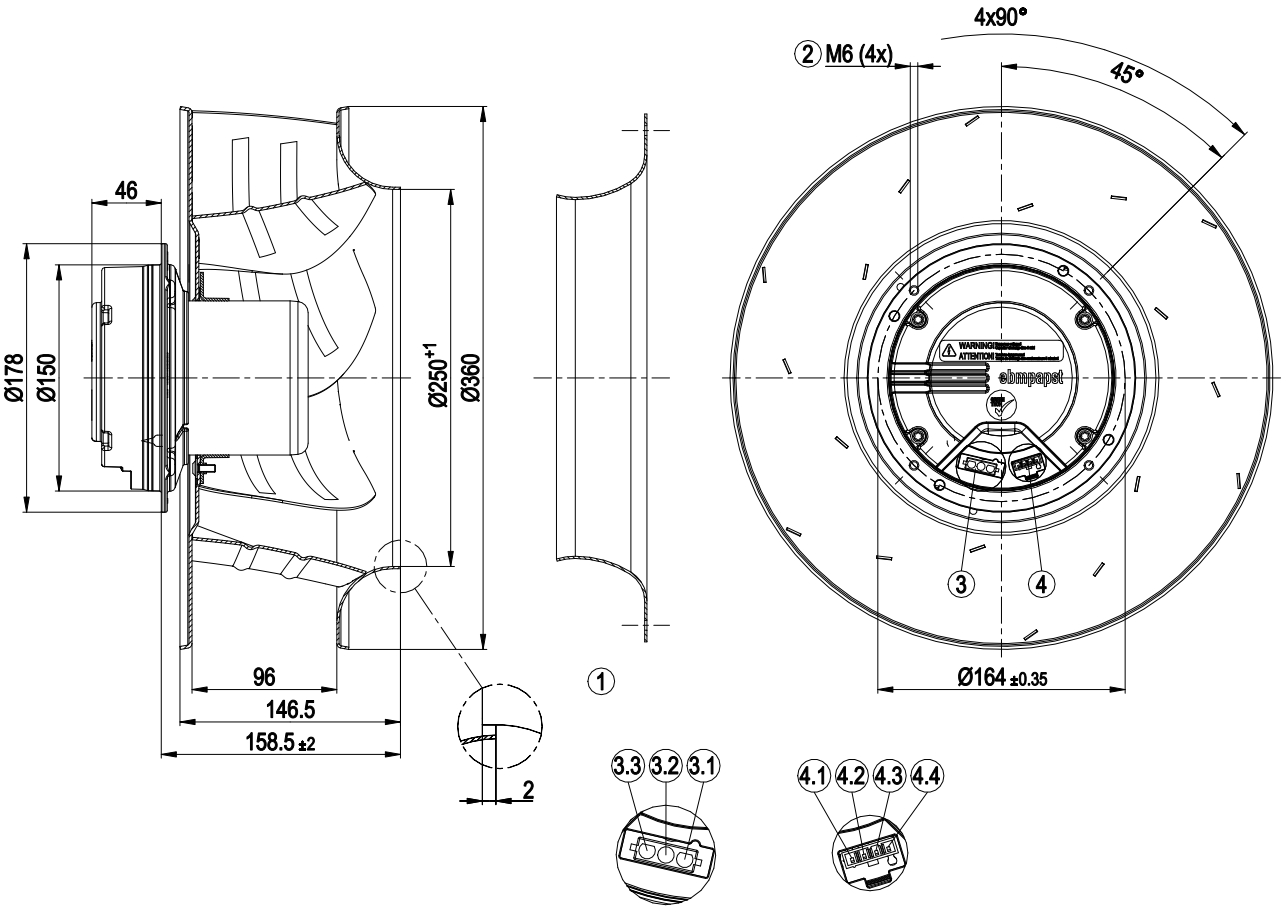
## Product drawing




| | |
|---|---|
| 1 | Accessory part: inlet ring 35560-2-4013 not included in scope of delivery |
| 2 | Max. clearance for screw 10 mm |
| 3 | 3-pole header Lonco C63502-3A, mating connector with sockets not included in scope of delivery |
| 3.1 | L |
| 3.2 | N |
| 3.3 | PE |
| 4 | 4-pole header Molex 39-30-2040, mating connector with sockets not included in scope of delivery |
| 4.1 | RSB |
| 4.2 | RSA |
| 4.3 | +15 V; in case of fault: 0 V |
| 4.4 | 0 V; in case of fault: +15 V |

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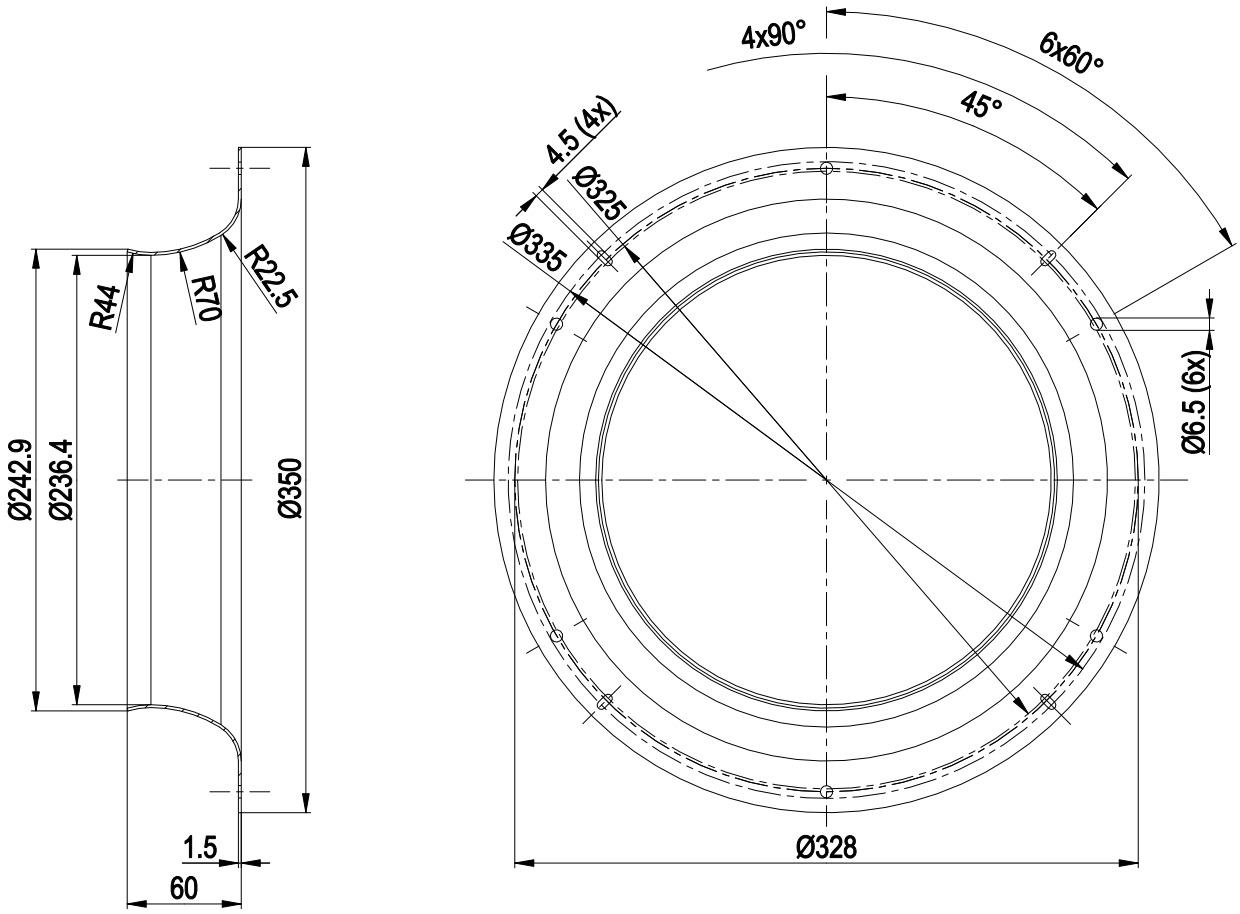
## Accessory part




Inlet ring 35560-2-4013

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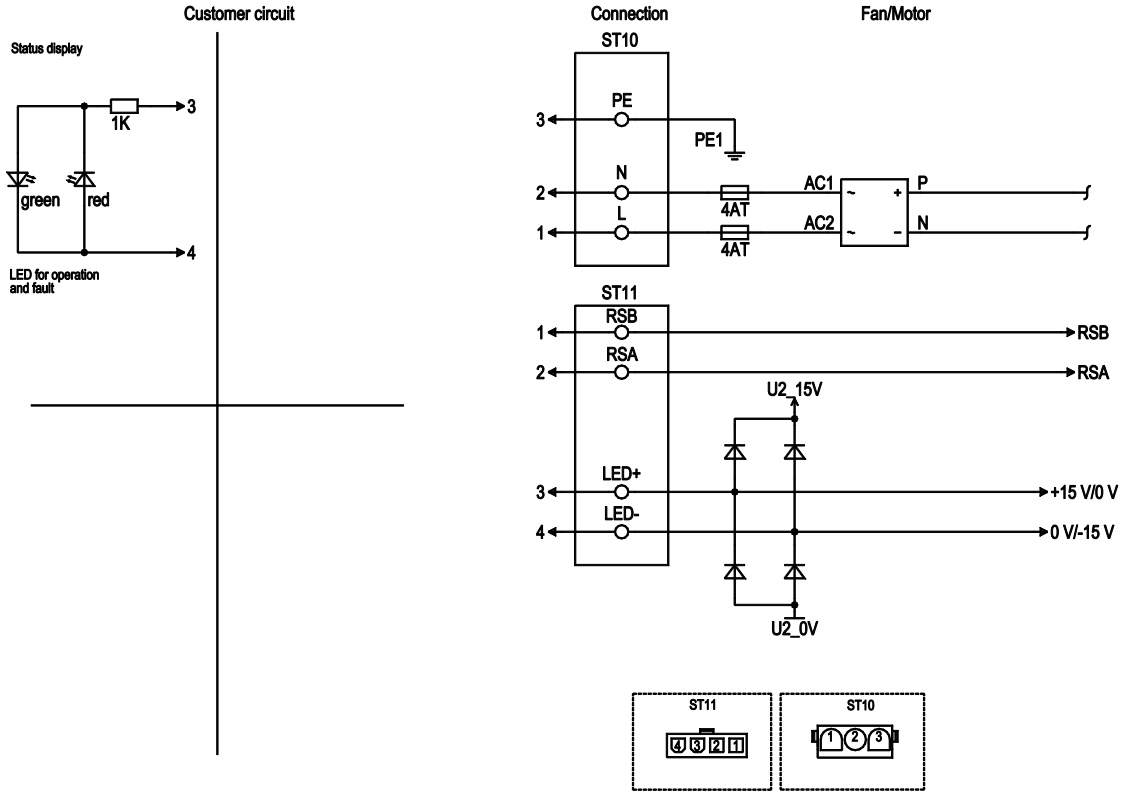
## Connection diagram




| No. | Conn. | Designation | Color | Function/assignment |
|---|---|---|---|---|
| 10 | 1 | L | | Power supply, phase, 50/60 Hz |
| 10 | 2 | N | | Power supply, neutral conductor, 50/60 Hz |
| 10 | 3 | PE | | Protective earth |
| 11 | 1 | RSB | | RS-485 interface for ebmBus, RSB; SELV |
| 11 | 2 | RSA | | RS-485 interface for ebmBus, RSA; SELV |
| 11 | 3 | LED + | | Voltage output 15 V (+15%/-10%), max. 30 mA,<br>power supply for external devices (e.g. status display for LED), SELV |
| 11 | 4 | LED - | | Reference ground for control interface, SELV |

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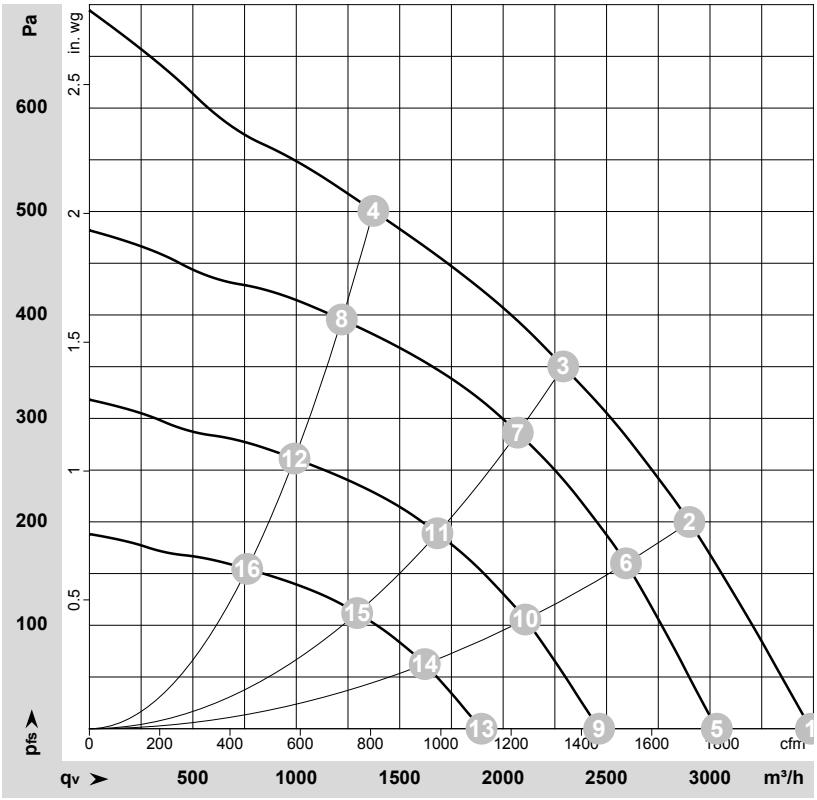
## Curves: Air performance 50 Hz




ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-64229-1

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 | $P_{ed}$ | 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 | 1900 | 350 | 1.50 | 3490 | 0 | 2055 | 0.00 |
| 2 | 1~ | 230 | 50 | 1790 | 401 | 1.76 | 2900 | 200 | 1705 | 0.80 |
| 3 | 1~ | 230 | 50 | 1770 | 427 | 1.88 | 2290 | 350 | 1350 | 1.41 |
| 4 | 1~ | 230 | 50 | 1800 | 393 | 1.72 | 1375 | 500 | 810 | 2.01 |
| 5 | 1~ | 230 | 50 | 1600 | 219 | 0.97 | 3035 | 0 | 1785 | 0.00 |
| 6 | 1~ | 230 | 50 | 1600 | 287 | 1.26 | 2595 | 162 | 1525 | 0.65 |
| 7 | 1~ | 230 | 50 | 1600 | 316 | 1.39 | 2070 | 287 | 1220 | 1.15 |
| 8 | 1~ | 230 | 50 | 1600 | 276 | 1.21 | 1220 | 396 | 720 | 1.59 |
| 9 | 1~ | 230 | 50 | 1300 | 117 | 0.52 | 2465 | 0 | 1450 | 0.00 |
| 10 | 1~ | 230 | 50 | 1300 | 154 | 0.68 | 2110 | 107 | 1240 | 0.43 |
| 11 | 1~ | 230 | 50 | 1300 | 169 | 0.74 | 1685 | 189 | 990 | 0.76 |
| 12 | 1~ | 230 | 50 | 1300 | 148 | 0.65 | 990 | 262 | 585 | 1.05 |
| 13 | 1~ | 230 | 50 | 1000 | 53 | 0.24 | 1895 | 0 | 1115 | 0.00 |
| 14 | 1~ | 230 | 50 | 1000 | 70 | 0.31 | 1620 | 63 | 955 | 0.25 |
| 15 | 1~ | 230 | 50 | 1000 | 77 | 0.34 | 1295 | 112 | 760 | 0.45 |
| 16 | 1~ | 230 | 50 | 1000 | 67 | 0.30 | 765 | 155 | 450 | 0.62 |

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