**R3G250-AT39-73**

# EC centrifugal fan - RadiPac

backward curved, single inlet



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## Nominal data

| | |
|---|---|
| **Type** | **R3G250-AT39-73** |
| **Motor** | **M3G084-DF** |

| | | |
|---|---|---|
| Phase | | 1~ |
| Nominal voltage | VAC | 230 |
| Nominal voltage range | VAC | 200 .. 277 |
| Frequency | Hz | 50/60 |
| Type of data definition | | ml |
| Speed (rpm) | $min^{-1}$ | 3000 |
| Power input | W | 448 |
| Current draw | A | 2.8 |
| Min. ambient temperature | °C | -25 |
| Max. ambient temperature | °C | 40 |

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

## Data according to ErP directive

| | | Actual | Request 2015 |
|---|---|---|---|
| 01 Overall efficiency $\eta_{es}$ | % | 63.1 | 47.9 |
| 02 Measurement category | | A | |
| 03 Efficiency category | | Static | |
| 04 Efficiency grade N | | 77.2 | 62 |
| 05 Variable speed drive | | Yes | |

| | | |
|---|---|---|
| 09 Power input $P_{ed}$ | kW | 0.45 |
| 09 Air flow $q_v$ | $m^3/h$ | 1550 |
| 09 Pressure increase $p_{fs}$ | Pa | 601 |
| 10 Speed (rpm) n | $min^{-1}$ | 2940 |
| 11 Specific ratio* | | 1.01 |

Data definition with optimum efficiency.
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

* Specific ratio = 1 + $p_{fs}$ / 100 000 Pa

LU-108683

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## Technical features

| | |
|---|---|
| **Mass** | 4.5 kg |
| **Size** | 250 mm |
| **Surface of rotor** | Coated in black |
| **Material of electronics housing** | Die-cast aluminium |
| **Material of impeller** | Aluminium sheet |
| **Number of blades** | 7 |
| **Direction of rotation** | Clockwise, seen on rotor |
| **Type of protection** | IP 54 |
| **Insulation class** | "B" |
| **Humidity (F)/environmental protection class (H)** | H1 |
| **Mounting position** | Shaft horizontal or rotor on bottom; rotor on top on request |
| **Condensate discharge holes** | Rotor-side |
| **Operation mode** | S1 |
| **Motor bearing** | Ball bearing |
| **Technical features** | - Output 10 VDC, max. 1.1 mA<br>- Alarm relay<br>- Motor current limit<br>- PFC, passive<br>- Soft start<br>- Control input 0-10 VDC / PWM<br>- Control interface with SELV potential safely disconnected from the mains<br>- Over-temperature protected electronics / motor<br>- Line undervoltage detection |
| **Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)** | <= 3.5 mA |
| **Motor protection** | Thermal overload protector (TOP) wired internally |
| **Cable exit** | Variable |
| **Protection class** | I (if protective earth is connected by customer) |
| **Product conforming to standard** | EN 61800-5-1; CE |
| **Approval** | EAC |

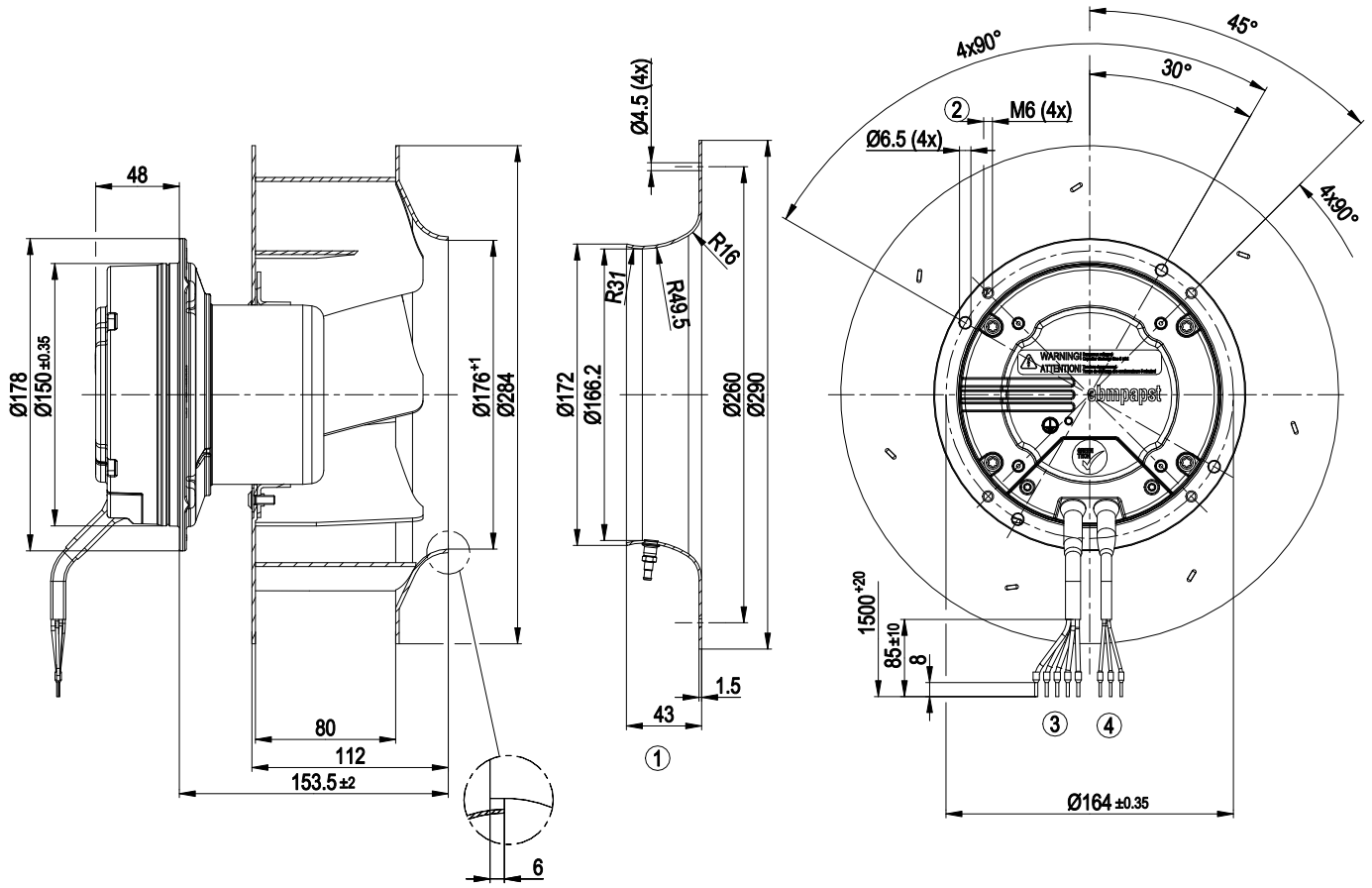


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## Product drawing




| | |
|---|---|
| 1 | Accessory part: Inlet nozzle 25075-2-4013 (k-factor: 70) not included in scope of delivery |
| 2 | Thread reach max. 10 mm |
| 3 | Connection line PVC AWG18, 5x crimped core-end sleeves |
| 4 | Connection line PVC AWG22, 3x crimped core-end sleeves |

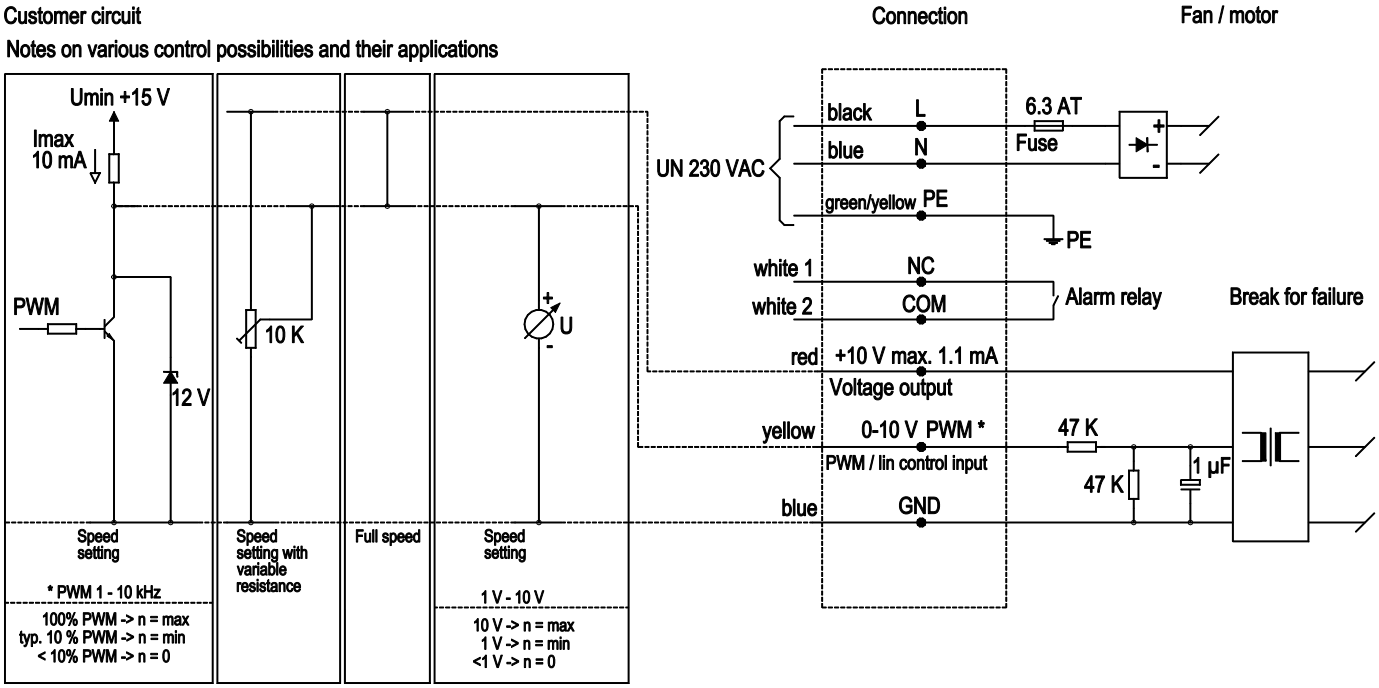


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## Connection screen



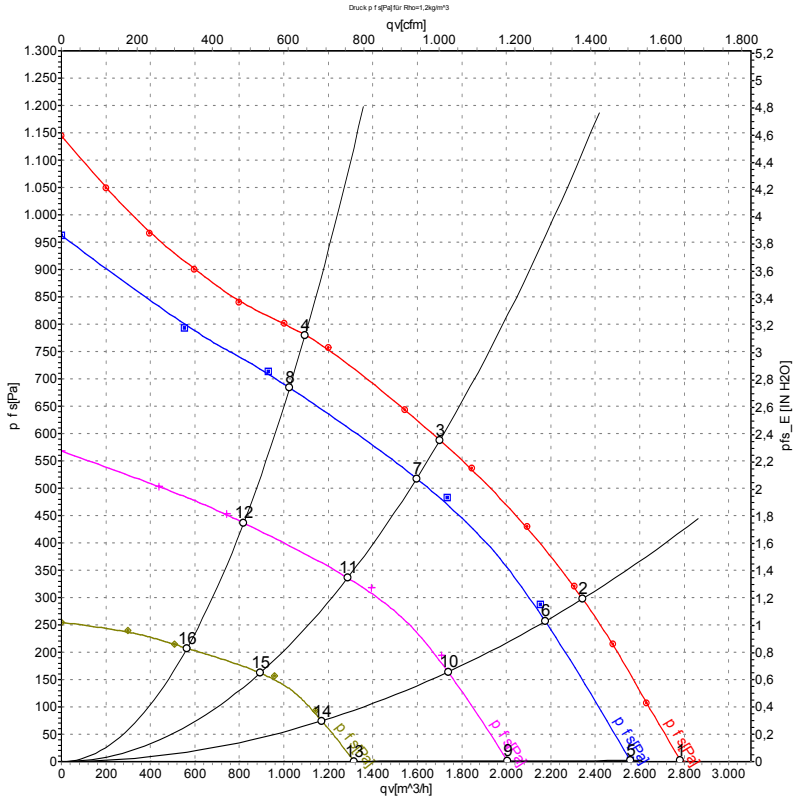



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## Charts: Air flow 50 Hz




Measurement: LU-108683-1
Measurement: LU-124170-1
Measurement: LU-124171-1
Measurement: LU-124172-1

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

## Measured values

| | 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 | inH2O |
| 1 | 230 | 50 | 3175 | 380 | 2.48 | 2785 | 0 | 1640 | 0.00 |
| 2 | 230 | 50 | 3045 | 436 | 2.72 | 2345 | 300 | 1380 | 1.20 |
| 3 | 230 | 50 | 3000 | 448 | 2.80 | 1700 | 590 | 1000 | 2.37 |
| 4 | 230 | 50 | 3020 | 436 | 2.72 | 1095 | 780 | 645 | 3.13 |
| 5 | 230 | 50 | 2925 | 294 | 1.90 | 2555 | 0 | 1505 | 0.00 |
| 6 | 230 | 50 | 2845 | 335 | 2.16 | 2175 | 271 | 1280 | 1.09 |
| 7 | 230 | 50 | 2790 | 341 | 2.25 | 1595 | 522 | 940 | 2.10 |
| 8 | 230 | 50 | 2835 | 326 | 2.14 | 1025 | 686 | 605 | 2.75 |
| 9 | 230 | 50 | 2300 | 142 | 0.97 | 2005 | 0 | 1180 | 0.00 |
| 10 | 230 | 50 | 2265 | 166 | 1.12 | 1740 | 174 | 1025 | 0.70 |
| 11 | 230 | 50 | 2240 | 174 | 1.19 | 1285 | 340 | 755 | 1.36 |
| 12 | 230 | 50 | 2270 | 163 | 1.13 | 820 | 438 | 485 | 1.76 |
| 13 | 230 | 50 | 1510 | 44 | 0.34 | 1315 | 0 | 775 | 0.00 |
| 14 | 230 | 50 | 1520 | 53 | 0.40 | 1170 | 78 | 690 | 0.31 |
| 15 | 230 | 50 | 1555 | 58 | 0.45 | 895 | 165 | 525 | 0.66 |
| 16 | 230 | 50 | 1555 | 55 | 0.43 | 565 | 208 | 335 | 0.84 |

U = Supply voltage · f = Frequency · n = Speed (rpm) · $P_{ed}$ = Power input · I = Current draw · $q_V$ = Air flow · $p_{fs}$ = Pressure increase



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