**R2D250-RA10-18**

# AC centrifugal fan - RadiCal

backward curved, single inlet

for railway applications

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## Nominal data

| | | |
|---|---|---|
| **Type** | **R2D250-RA10-18** | |
| **Motor** | **M2D068-EC** | |
| Phase | | 3~ |
| Nominal voltage | VAC | 400 |
| Connection | | Y |
| Frequency | Hz | 50 |
| Type of data definition | | ml |
| Valid for approval / standard | | CE |
| Speed (rpm) | $min^{-1}$ | 2500 |
| Power input | W | 200 |
| Current draw | A | 0.33 |
| Min. back pressure | Pa | 0 |
| Min. ambient temperature | °C | -25 |
| Max. ambient temperature | °C | 80 |
| Starting current | A | 0.95 |

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

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## Technical features

| | |
|---|---|
| **Mass** | 2.9 kg |
| **Size** | 250 mm |
| **Surface of rotor** | Coated in black |
| **Material of impeller** | Plastic PA, round sheet-metal plate coated in black |
| **Number of blades** | 7 |
| **Direction of rotation** | Clockwise, seen on rotor |
| **Type of protection** | IP 44; Depending on installation and position |
| **Insulation class** | "F" |
| **Humidity (F)/environmental protection class (H)** | F2-2 |
| **Max. permissible ambient motor temp. (transp./ storage)** | + 80 °C |
| **Min. permissible ambient motor temp. (transp./storage)** | - 40 °C |
| **Mounting position** | Rotor on bottom |
| **Condensate discharge holes** | Rotor-side |
| **Operation mode** | S1 |
| **Motor bearing** | Ball bearing |
| **Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)** | < 0.75 mA |
| **Motor protection** | Thermal overload protector (TOP) brought out, basic insulation |
| **Cable exit** | Lateral |
| **Protection class** | I (if protective earth is connected by customer) |
| **Product conforming to standard** | EN 45545-2, R22/R23, HL3: 2013; IEC 61373: 2010 |



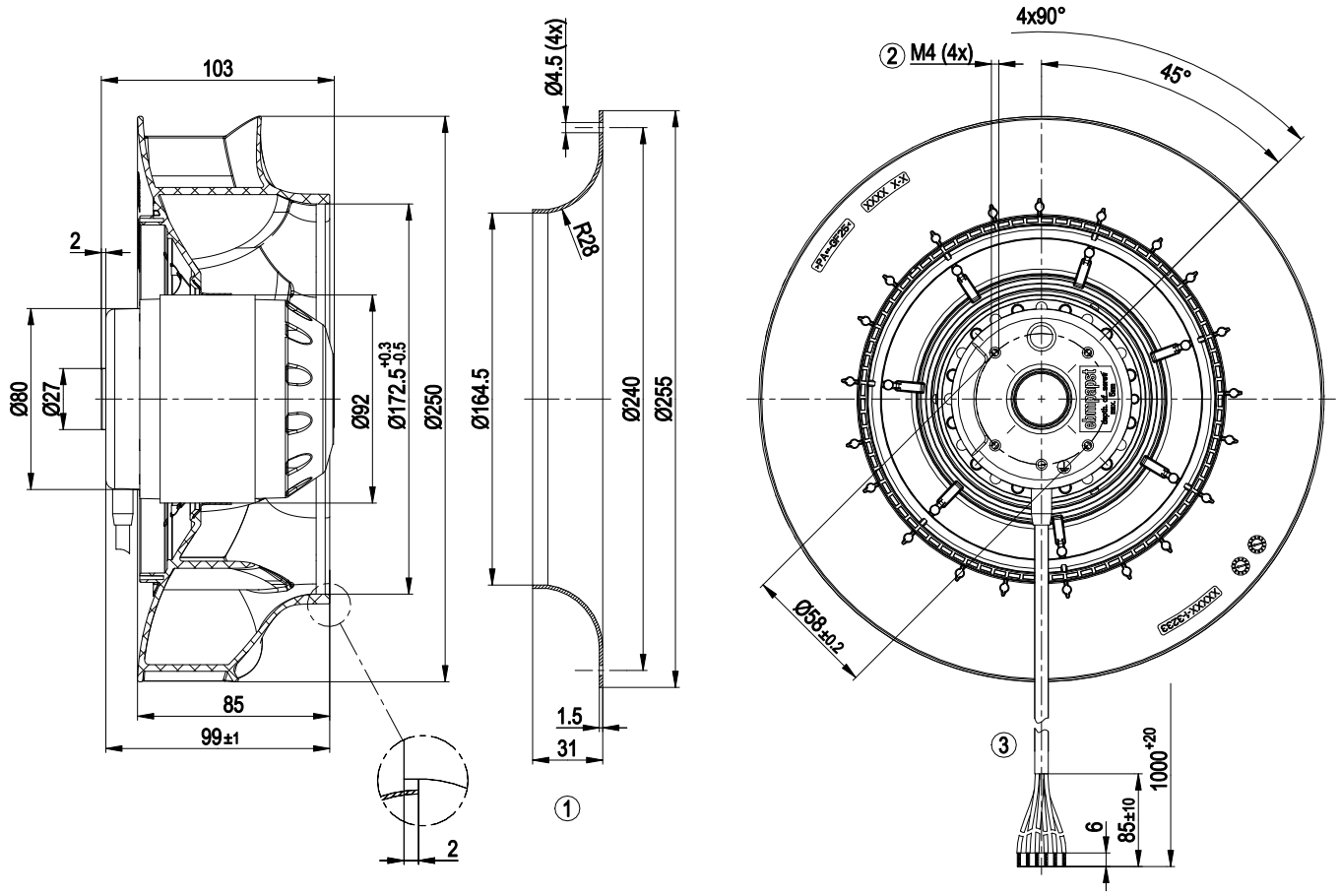
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## Product drawing




| | |
|---|---|
| 1 | Accessory part: Inlet nozzle 96359-2-4013, not included in scope of delivery |
| 2 | Thread reach max. 5 mm |
| 3 | Connection line halogen-free, BETAtrans® 3 GKW flex, black 6G 0.5 mm², 6x lead tips crimped |



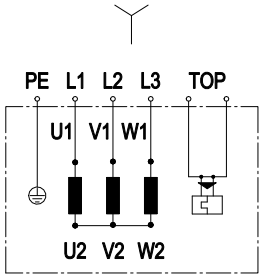
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## Connection screen




Note: Direction of rotation changes when two phases are reversed

| | | | | | |
|---|---|---|---|---|---|
| Y | Star connection | L1 | = U1 = black | L2 | = V1 = blue |
| L3 | = W1 = brown | PE | green/yellow | TOP | 2x grey |



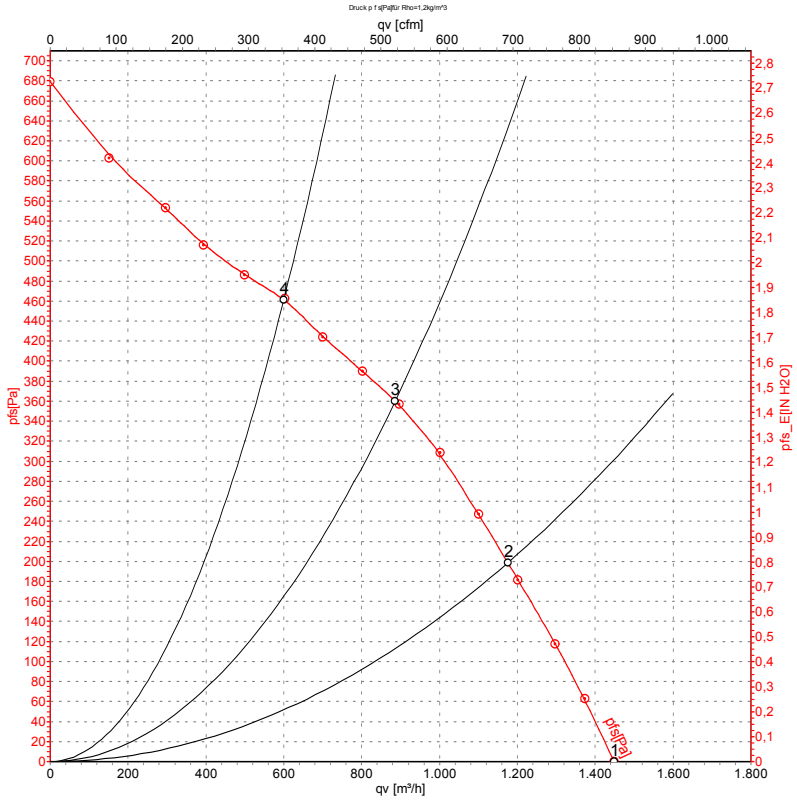
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## Charts: Air flow 50 Hz




Measurement: LU-132665-1

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 | $P_e$ | I | $q_V$ | $p_{fs}$ | $q_V$ | $p_{fs}$ |
|---|---|---|---|---|---|---|---|---|---|
| | V | Hz | $min^{-1}$ | W | A | $m^3/h$ | Pa | cfm | inH2O |
| 1 | 400 | 50 | 2625 | 159 | 0.27 | 1450 | 0 | 855 | 0.00 |
| 2 | 400 | 50 | 2515 | 194 | 0.32 | 1175 | 200 | 690 | 0.80 |
| 3 | 400 | 50 | 2500 | 200 | 0.33 | 885 | 360 | 520 | 1.45 |
| 4 | 400 | 50 | 2535 | 182 | 0.30 | 600 | 460 | 355 | 1.85 |

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



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