**R3G190-RC05-03**

# EC centrifugal fan - RadiCal®

backward curved, single inlet



**ebm-papst Mulfingen GmbH & Co. KG**
Bachmühle 2 · D-74673 Mulfingen
Phone +49 7938 81-0
Fax +49 7938 81-110
info1@de.ebmpapst.com
www.ebmpapst.com

Limited partnership · Headquarters Mulfingen
County court Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
County court Stuttgart · HRB 590142

## Nominal data

| | |
|---|---|
| **Type** | **R3G190-RC05-03** |
| **Motor** | **M3G055-BI** |

| | | |
|---|---|---|
| Phase | | 1~ |
| Nominal voltage | VAC | 230 |
| Nominal voltage range | VAC | 200 .. 240 |
| Frequency | Hz | 50/60 |
| Type of data definition | | ml |
| Speed | $min^{-1}$ | 3200 |
| Power input | W | 83 |
| Current draw | A | 0.75 |
| Min. ambient temperature | °C | -25 |
| Max. ambient temperature | °C | 60 |

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** | 1.1 kg |
| **Size** | 190 mm |
| **Surface of rotor** | Thick layer passivated |
| **Material of electronics housing** | Die-cast aluminium |
| **Material of impeller** | PA plastic |
| **Number of blades** | 7 |
| **Direction of rotation** | Clockwise, seen on rotor |
| **Type of protection** | IP 54 |
| **Insulation class** | "B" |
| **Max. permissible ambient motor temp. (transp./ storage)** | + 80 °C |
| **Min. permissible ambient motor temp. (transp./storage)** | - 40 °C |
| **Mounting position** | Any |
| **Condensate discharge holes** | None, open rotor |
| **Operation mode** | S1 |
| **Motor bearing** | Ball bearing |
| **Technical features** | - Output 10 VDC, max. 1.1 mA<br>- Tach output<br>- Motor current limit<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 |
| **EMC interference immunity** | Acc. to EN 61000-6-2 (industrial environment) |
| **EMC harmonics** | Acc. to EN 61000-3-2/3 |
| **EMC interference emission** | Acc. to EN 55022 (Class B, household environment), on account of the installation conditions, ferritic damping in the connection line may be required for the application. |
| **Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)** | <= 3.5 mA |
| **Motor protection** | Locked-rotor protection |
| **Cable exit** | Variable |
| **Protection class** | I (if protective earth is connected by customer) |
| **Product conforming to standard** | EN 60335-1; CE |
| **Approval** | CCC |

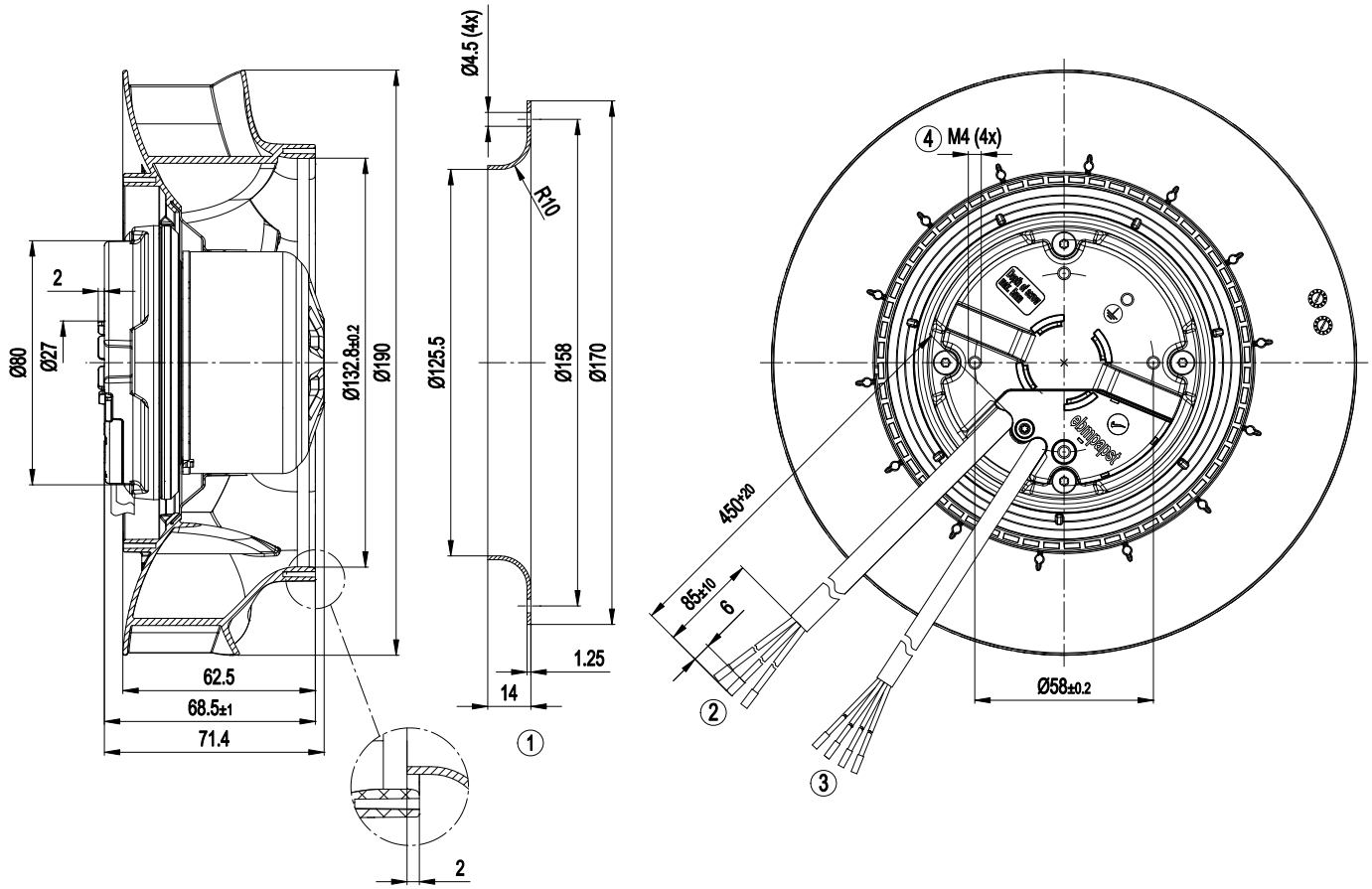


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## Product drawing




| | |
|---|---|
| 1 | Accessory part: Inlet nozzle 09576-2-4013, not included in the standard scope of delivery |
| 2 | Connection line PVC AWG20, 3x brass lead tips crimped |
| 3 | Connection line PVC AWG22, 4 x brass lead tips crimped |
| 4 | Depth of screw max. 5 mm |

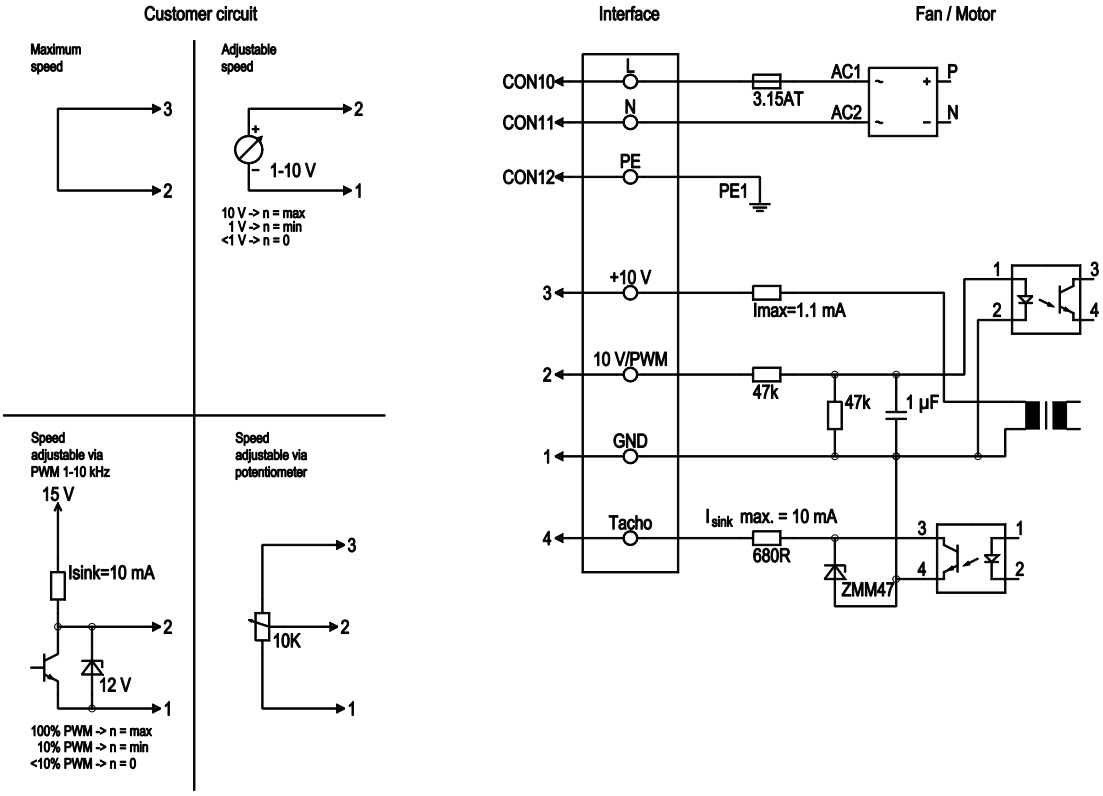


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## Connection screen




| No. | Conn. | Designation | Colour | Function / assignment |
|---|---|---|---|---|
| | CON10 | L | black | Power supply 230 VAC, 50-60 Hz, for voltage range refer to rating plate |
| | CON11 | N | blue | Neutral conductor |
| | CON12 | PE | green/yellow | Protective earth |
| | 1 | GND | blue | GND - Connection for control interface |
| | 2 | 0- 10V PWM | yellow | Control input 0 - 10 V or PWM, electrically isolated |
| | 3 | 10V/ max 1.1mA | red | Voltage output 10 V / 1.1 mA, electrically isolated, not short-circuit-proof |
| | 4 | Tach | white | Tach output: open collector, 1 pulse per revolution, electrically isolated, Isink max = 10 mA |

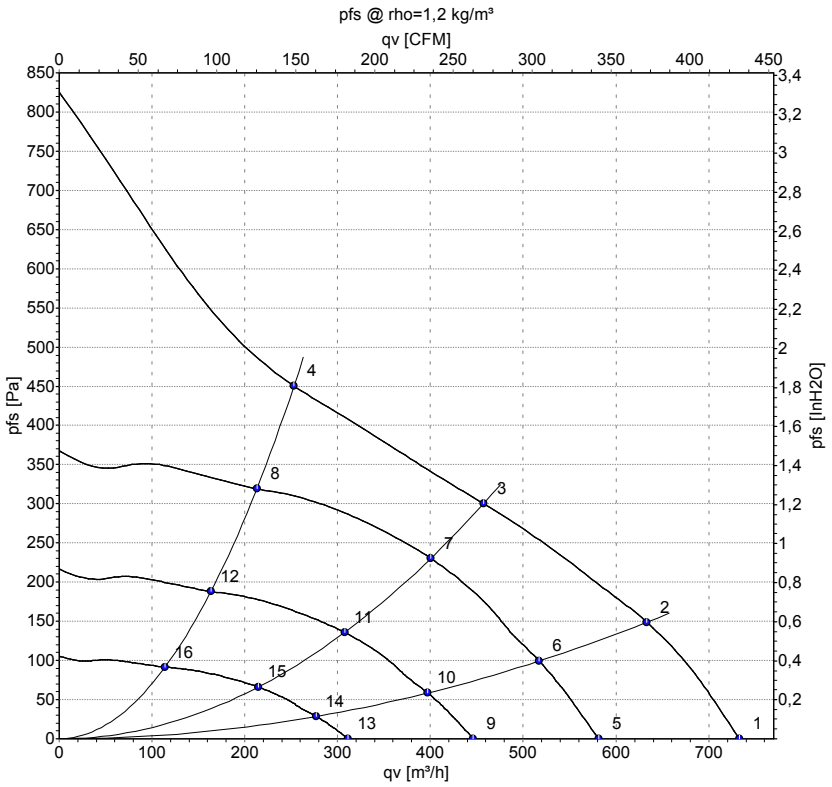


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## Charts: Air flow 50 Hz




Measurement: LU-152954

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 | qv | $p_{fs}$ |
|---|---|---|---|---|---|---|---|
| | V | Hz | $min^{-1}$ | W | A | $m^3/h$ | Pa |
| 1 | 230 | 50 | 3530 | 83 | 0.75 | 735 | 0 |
| 2 | 230 | 50 | 3430 | 83 | 0.75 | 635 | 150 |
| 3 | 230 | 50 | 3200 | 83 | 0.75 | 455 | 300 |
| 4 | 230 | 50 | 3325 | 83 | 0.75 | 255 | 450 |
| 5 | 230 | 50 | 2800 | 49 | 0.45 | 580 | 0 |
| 6 | 230 | 50 | 2800 | 52 | 0.47 | 515 | 100 |
| 7 | 230 | 50 | 2800 | 57 | 0.52 | 400 | 230 |
| 8 | 230 | 50 | 2800 | 53 | 0.49 | 215 | 319 |
| 9 | 230 | 50 | 2150 | 24 | 0.25 | 445 | 0 |
| 10 | 230 | 50 | 2150 | 26 | 0.25 | 395 | 59 |
| 11 | 230 | 50 | 2150 | 28 | 0.28 | 310 | 136 |
| 12 | 230 | 50 | 2150 | 26 | 0.27 | 165 | 188 |
| 13 | 230 | 50 | 1500 | 10.0 | 0.10 | 310 | 0 |
| 14 | 230 | 50 | 1500 | 11 | 0.11 | 275 | 29 |
| 15 | 230 | 50 | 1500 | 12 | 0.12 | 215 | 66 |
| 16 | 230 | 50 | 1500 | 11 | 0.12 | 115 | 91 |

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



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