

# EC centrifugal fan

backward curved, single inlet

R1G190-AC37-18 ebmpapst Datasheet

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## Nominal data

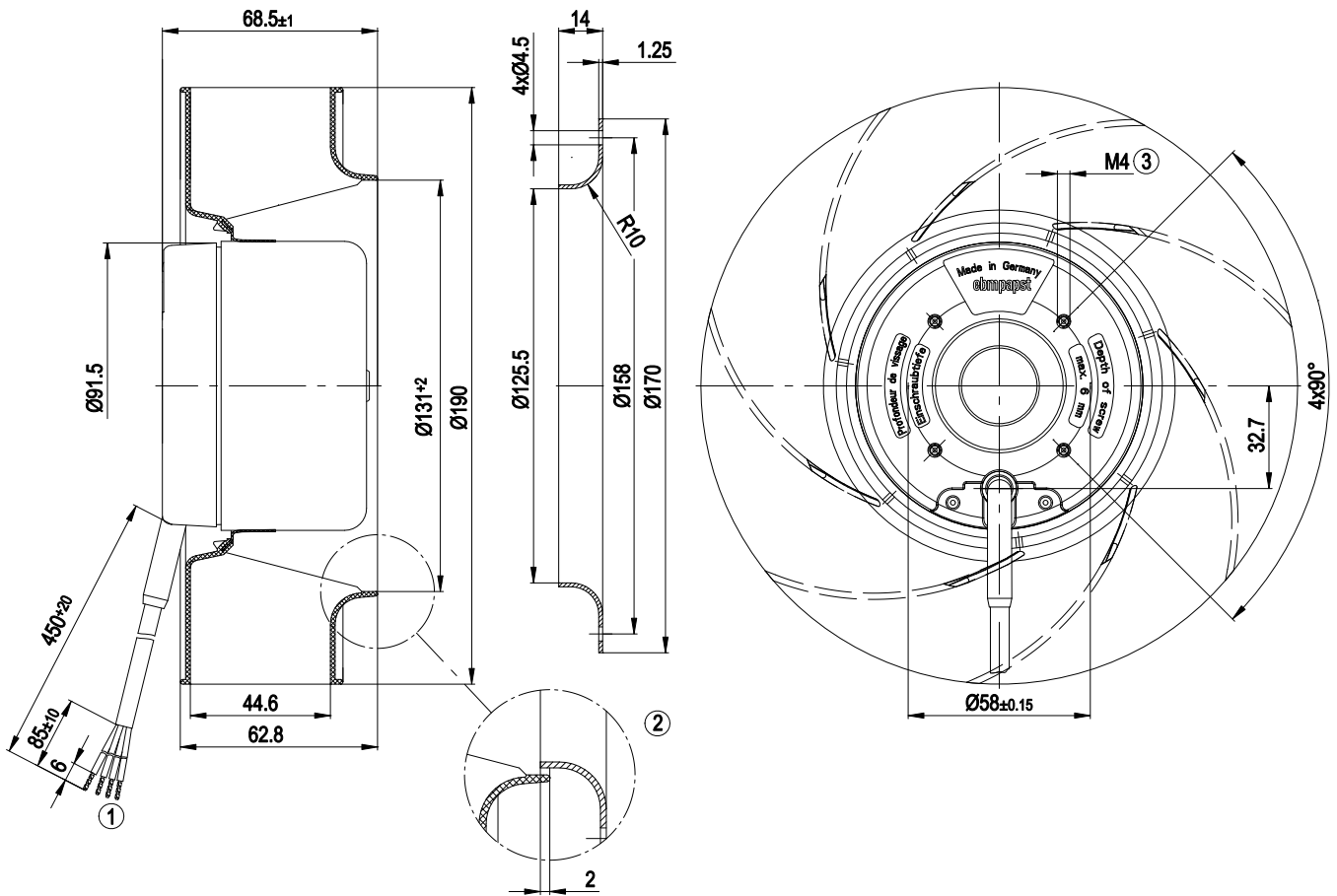
|                          |                   |          |
|--------------------------|-------------------|----------|
| Type                     | R1G190-AC37-18    |          |
| Motor                    | M1G074-BF         |          |
| Nominal voltage          | VDC               | 24       |
| Nominal voltage range    | VDC               | 16 .. 28 |
| Type of data definition  |                   | fa       |
| Speed                    | min <sup>-1</sup> | 3250     |
| Power input              | W                 | 80       |
| Current draw             | A                 | 3.7      |
| 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

## Technical features

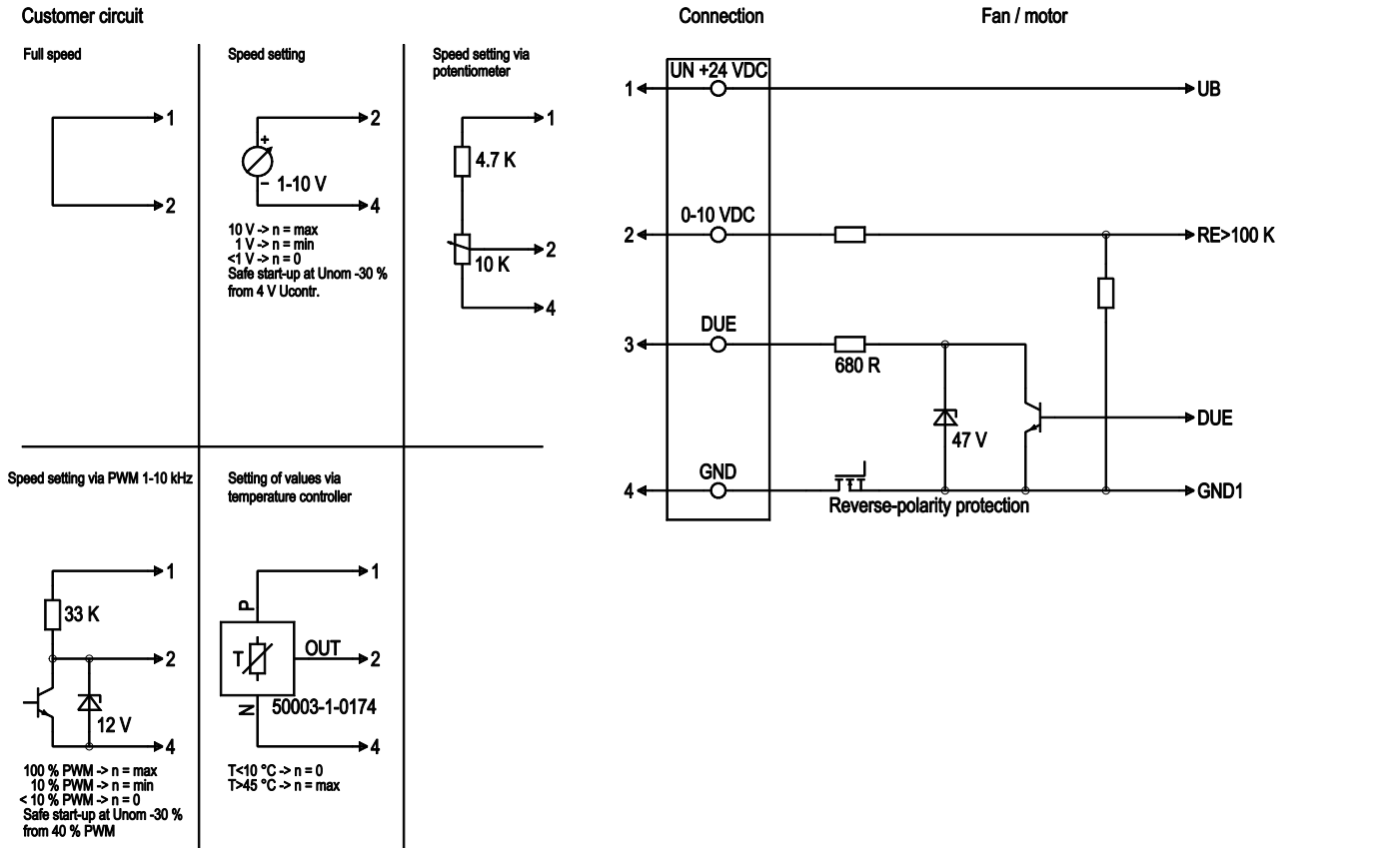
|  |  |
|--|--|
| <b>Mass</b>  | 1.3 kg   |
| <b>Size</b>  | 190 mm   |
| <b>Surface of rotor</b>  | Coated in black  |
| <b>Material of impeller</b>                                    | PA plastic   |
| <b>Number of blades</b>  | 7  |
| <b>Direction of rotation</b>                                   | Clockwise, seen on rotor   |
| <b>Type of protection</b>                                      | IP 42  |
| <b>Insulation class</b>  | "B"  |
| <b>Humidity class</b>  | F0   |
| <b>Max. permissible ambient motor temp. (transp./ storage)</b> | +80 °C   |
| <b>Min. permissible ambient motor temp. (transp./storage)</b>  | -40 °C   |
| <b>Mounting position</b>                                       | Any  |
| <b>Condensate discharge holes</b>                              | None   |
| <b>Operation mode</b>  | S1   |
| <b>Motor bearing</b>   | Ball bearing   |
| <b>Technical features</b>                                      | <ul style="list-style-type: none"> <li>- Tach output</li> <li>- Motor current limit</li> <li>- Soft start</li> <li>- Control input 0-10 VDC / PWM</li> </ul> |
| <b>EMC interference immunity</b>                               | Acc. to EN 61000-6-2 (industrial environment)  |
| <b>EMC interference emission</b>                               | Acc. to EN 55022 (Class B)   |
| <b>Motor protection</b>  | Reverse polarity and locked-rotor protection   |
| <b>Cable exit</b>  | Variable   |
| <b>Product conforming to standard</b>                          | EN 60950-1   |

Product drawing



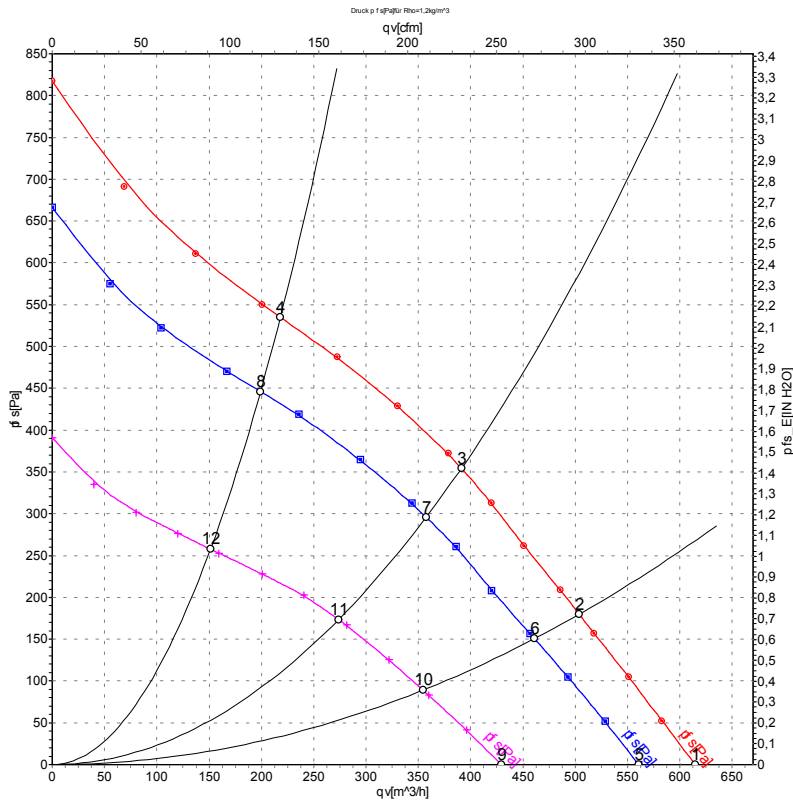
|   |   |
|---|---|
| 1 | Connection line XLPO 4x 0.5 mm <sup>2</sup> , 4x brass lead tips crimped                  |
| 2 | Accessory part: Inlet nozzle 09576-2-4013, not included in the standard scope of delivery |
| 3 | Depth of screw max. 6 mm  |

## Connection screen



| Line | No. | Signal     | Colour | Function / assignment   |
|------|-----|------------|--------|---|
| 1    | 1   | Un +24 VDC | red    | Power supply 24 VDC, residual ripple 3.5 %                        |
| 1    | 2   | 0-10 VDC   | yellow | Control input Re > 100 K  |
| 1    | 3   | Tach       | white  | Speed monitoring output, 3 pulses per rotation, Isink max = 10 mA |
| 1    | 4   | GND        | blue   | Reference mass  |

## Charts: Air flow



Measurement: LU-75809  
 Measurement: LU-75808  
 Measurement: LU-75807

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebmpapst. Suction-side noise levels: L<sub>WA</sub> measured as per ISO 13347 / L<sub>pA</sub> 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  | n                 | P <sub>ed</sub> | I    | qv                | p <sub>fs</sub> |
|----|----|-------------------|-----------------|------|-------------------|-----------------|
|    | V  | min <sup>-1</sup> | W               | A    | m <sup>3</sup> /h | Pa              |
| 1  | 28 | 3630              | 103             | 4.14 | 615               | 0               |
| 2  | 28 | 3540              | 107             | 4.30 | 505               | 180             |
| 3  | 28 | 3600              | 104             | 4.19 | 390               | 354             |
| 4  | 28 | 3705              | 100             | 4.01 | 220               | 535             |
| 5  | 24 | 3250              | 80              | 3.70 | 560               | 0               |
| 6  | 24 | 3230              | 82              | 3.82 | 460               | 150             |
| 7  | 24 | 3290              | 80              | 3.71 | 360               | 300             |
| 8  | 24 | 3380              | 76              | 3.53 | 200               | 450             |
| 9  | 16 | 2515              | 38              | 2.72 | 430               | 0               |
| 10 | 16 | 2470              | 39              | 2.80 | 355               | 89              |
| 11 | 16 | 2515              | 38              | 2.70 | 275               | 174             |
| 12 | 16 | 2560              | 36              | 2.61 | 150               | 258             |

U = Supply voltage · n = Speed · P<sub>ed</sub> = Power input · I = Current draw · qv = Air flow · p<sub>fs</sub> = Pressure increase

