

**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 590344General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen  
County court Stuttgart · HRB 590142**Nominal data**

|                          |                       |            |
|--------------------------|-----------------------|------------|
| <b>Type</b>              | <b>R3G310-RB01-03</b> |            |
| <b>Motor</b>             | <b>M3G074-CF</b>      |            |
| Phase                    |                       | 1~         |
| Nominal voltage          | VAC                   | 230        |
| Nominal voltage range    | VAC                   | 200 .. 240 |
| Frequency                | Hz                    | 50/60      |
| Type of data definition  |                       | ml         |
| Speed                    | min <sup>-1</sup>     | 1525       |
| Power input              | W                     | 150        |
| Current draw             | A                     | 1.2        |
| 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

**Data according to ErP directive**

|                                |                   | Actual | Request 2013 | Request 2015 |
|--------------------------------|-------------------|--------|--------------|--------------|
| Installation category          | A                 |        |              |              |
| Efficiency category            | Static            |        |              |              |
| Variable speed drive           | Yes               |        |              |              |
| Specific ratio*                | 1.00              |        |              |              |
| Overall efficiency $\eta_{es}$ | %                 | 65.9   | 38.5         | 42.5         |
| Efficiency grade N             |                   | 85.4   | 58           | 62           |
| Power input $P_{ed}$           | kW                | 0.14   |              |              |
| Air flow $q_v$                 | m <sup>3</sup> /h | 1355   |              |              |
| Pressure increase $p_{fs}$     | Pa                | 229    |              |              |
| Speed n                        | min <sup>-1</sup> | 1520   |              |              |

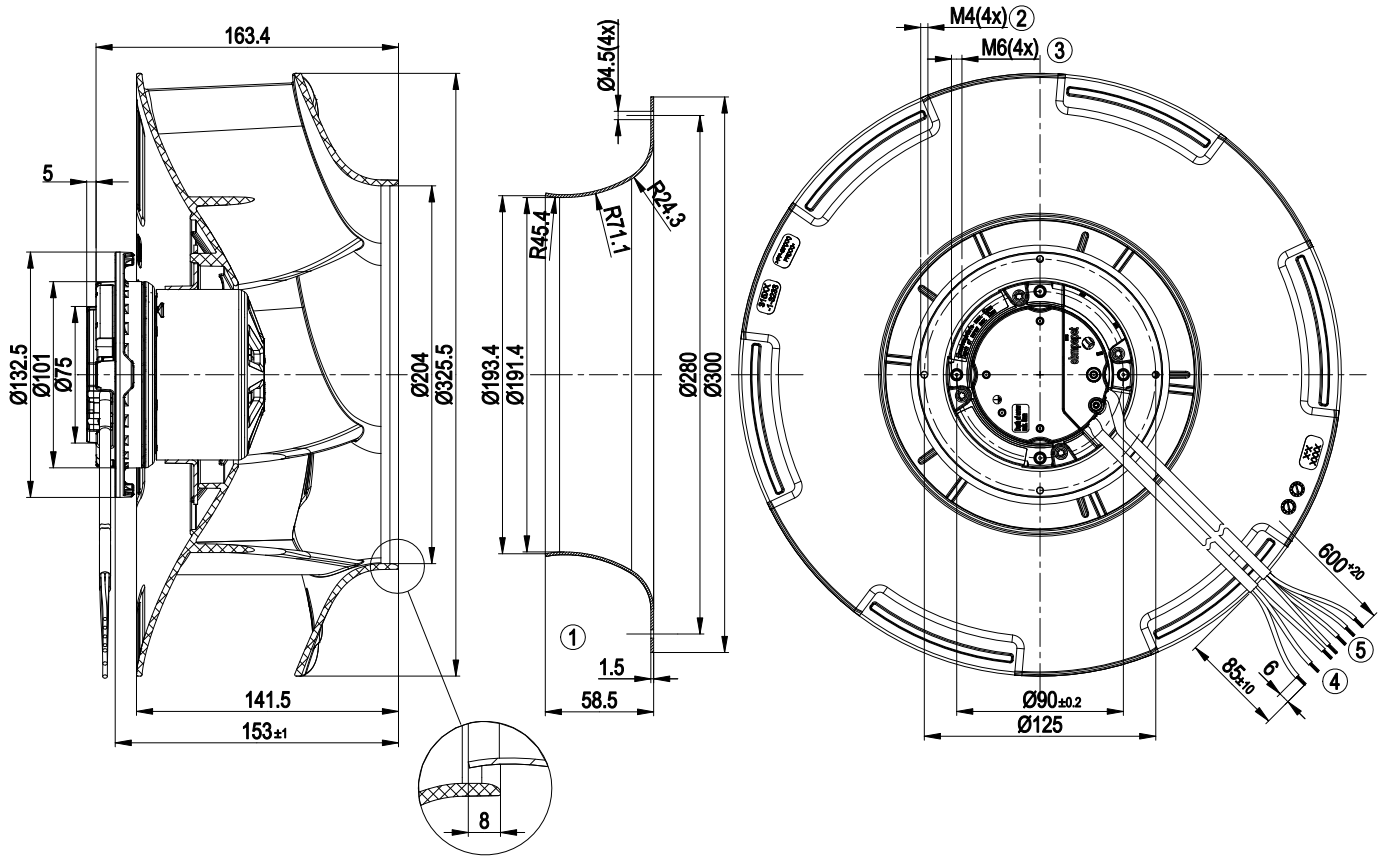
Data definition with optimum efficiency. LU-137969  
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.



## Technical features

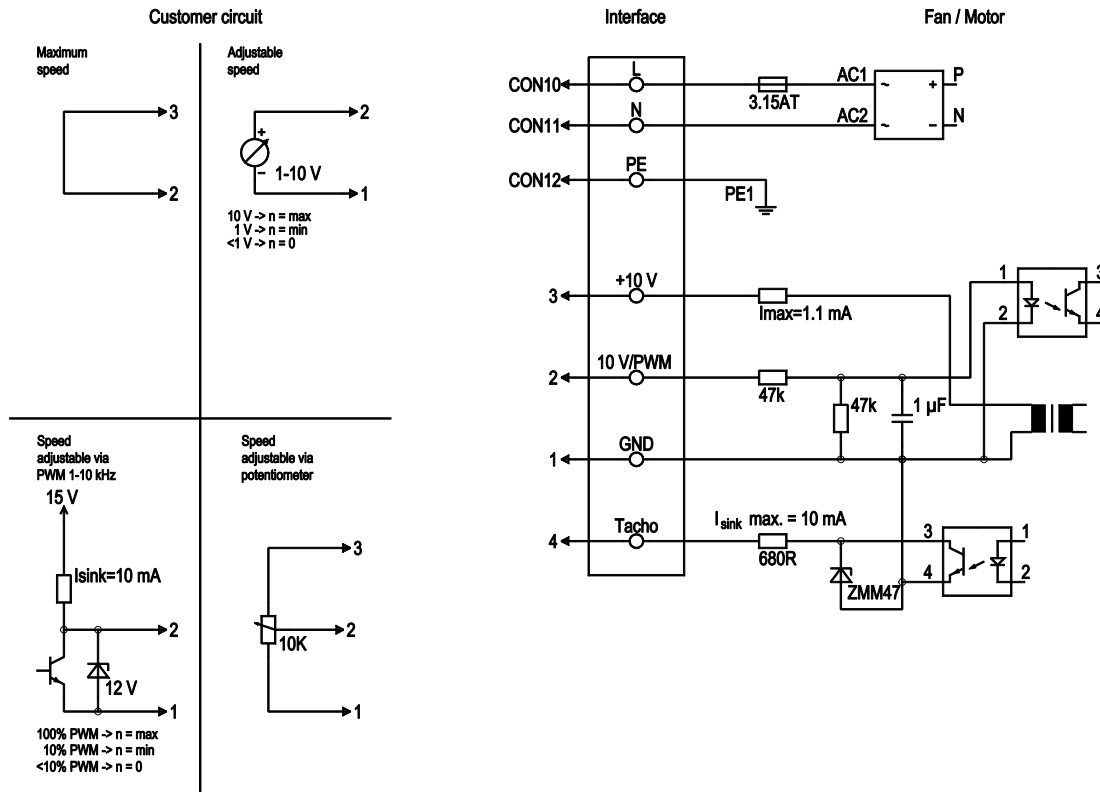
|  |  |
|--|--|
| Size   | 310 mm   |
| Material of impeller   | PP-GF40 plastic  |
| Number of blades   | 6  |
| Direction of rotation  | Clockwise, seen on rotor   |
| Type of protection   | IP 54  |
| Insulation class   | "B"  |
| Humidity class   | F3-1   |
| Max. permissible ambient motor temp. (transp./ storage)            | + 80 °C  |
| Min. permissible ambient motor temp. (transp./storage)             | - 40 °C  |
| Mounting position  | Any  |
| Condensate discharge holes   | Rotor-side   |
| Cooling bore / aperture  | Rotor-side   |
| Operation mode   | S1   |
| Motor bearing  | Ball bearing   |
| Technical features   | <ul style="list-style-type: none"> <li>- Output 10 VDC, max. 1.1 mA</li> <li>- Tach output</li> <li>- Motor current limit</li> <li>- Soft start</li> <li>- Control input 0-10 VDC / PWM</li> <li>- Over-temperature protected electronics / motor</li> </ul> |
| Touch current acc. IEC 60990 (measuring network Fig. 4, TN system) | <= 3.5 mA  |
| Motor protection   | PTC resistor   |
| Cable exit   | Variable   |
| Protection class   | I (if protective earth is connected by customer)   |
| Approval   | CCC; EAC   |

Product drawing



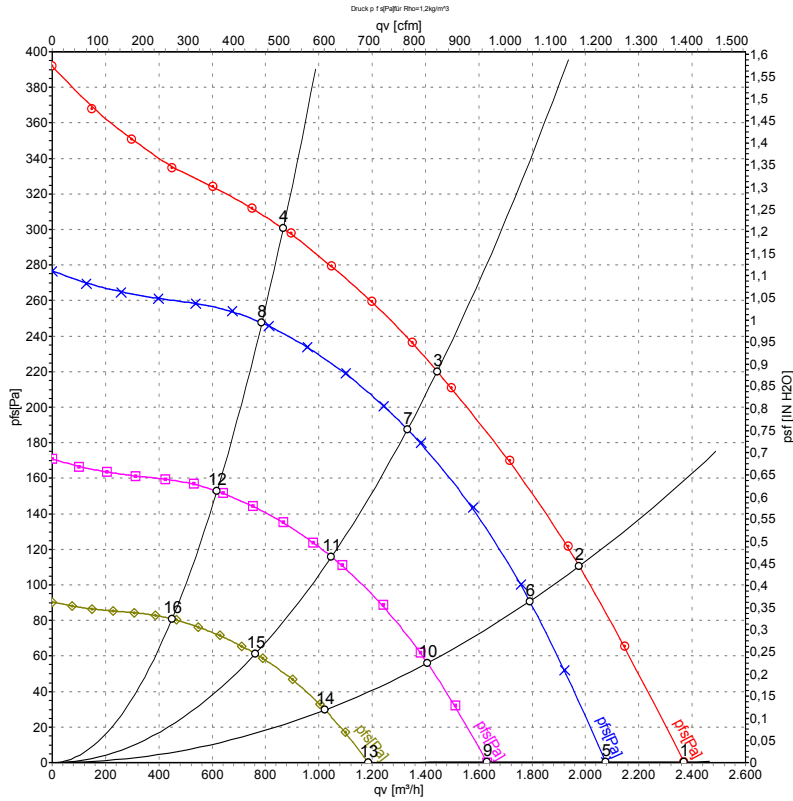
|   |  |
|---|--|
| 1 | Accessory part: inlet nozzle 31000-2-4013 not included in the standard scope of delivery; other inlet nozzles on request |
| 2 | Depth of screw max. 10 mm  |
| 3 | Depth of screw max. 10 mm  |
| 4 | Connection line AWG20, 3 x crimped core-end sleeves  |
| 5 | Connection line AWG22, 4 x crimped core-end sleeves  |

## 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, Isink = 10 mA   |
|     | 4     | Tach           | white        | Tach output: open collector, 1 pulse per revolution, electrically isolated, Isink max = 10 mA |

## Charts: Air flow 50 Hz



Measurement: LU-137969

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: 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   | f  | n                 | P <sub>ed</sub> | I    | L <sub>pA<sub>in</sub></sub> | L <sub>wA<sub>in</sub></sub> | qv   | p <sub>s</sub> |
|----|-----|----|-------------------|-----------------|------|------------------------------|------------------------------|------|----------------|
|    | V   | Hz | min <sup>-1</sup> | W               | A    | dB(A)                        | dB(A)                        | m³/h | Pa             |
| 1  | 230 | 50 | 1600              | 115             | 0.95 | 62                           | 69                           | 2370 | 0              |
| 2  | 230 | 50 | 1545              | 137             | 1.12 | 57                           | 65                           | 1975 | 110            |
| 3  | 230 | 50 | 1525              | 150             | 1.20 | 52                           | 59                           | 1445 | 220            |
| 4  | 230 | 50 | 1545              | 137             | 1.13 | 55                           | 62                           | 865  | 300            |
| 5  | 230 | 50 | 1400              | 77              | 0.64 | 59                           | 66                           | 2075 | 0              |
| 6  | 230 | 50 | 1400              | 102             | 0.84 | 55                           | 63                           | 1790 | 91             |
| 7  | 230 | 50 | 1400              | 118             | 0.97 | 50                           | 57                           | 1335 | 188            |
| 8  | 230 | 50 | 1400              | 102             | 0.84 | 53                           | 60                           | 785  | 248            |
| 9  | 230 | 50 | 1100              | 37              | 0.31 | 54                           | 61                           | 1630 | 0              |
| 10 | 230 | 50 | 1100              | 50              | 0.41 | 50                           | 57                           | 1405 | 56             |
| 11 | 230 | 50 | 1100              | 57              | 0.47 | 45                           | 52                           | 1045 | 116            |
| 12 | 230 | 50 | 1100              | 50              | 0.41 | 47                           | 55                           | 620  | 153            |
| 13 | 230 | 50 | 800               | 14              | 0.12 | 47                           | 54                           | 1185 | 0              |
| 14 | 230 | 50 | 800               | 19              | 0.16 | 43                           | 50                           | 1025 | 30             |
| 15 | 230 | 50 | 800               | 22              | 0.18 | 38                           | 45                           | 760  | 61             |
| 16 | 230 | 50 | 800               | 19              | 0.16 | 40                           | 48                           | 450  | 81             |

U = Supply voltage · f = Frequency · n = Speed · P<sub>ed</sub> = Power input · I = Current draw · L<sub>pA<sub>in</sub></sub> = Sound pressure level inlet side · L<sub>wA<sub>in</sub></sub> = Sound power level inlet side · qv = Air flow  
 p<sub>s</sub> = Pressure increase

