

**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

Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen

Amtsgericht (court of registration) Stuttgart · HRB 590142

**Nominal data**

|                          |                   |          |
|--------------------------|-------------------|----------|
| Type                     | R1G280-AE45-52    |          |
| Motor                    | M1G074-CF         |          |
| Nominal voltage          | VDC               | 24       |
| Nominal voltage range    | VDC               | 16 .. 28 |
| Method of obtaining data |                   | fa       |
| Speed (rpm)              | min <sup>-1</sup> | 1710     |
| Power consumption        | W                 | 95       |
| Current draw             | A                 | 4.6      |
| Min. ambient temperature | °C                | -25      |
| Max. ambient temperature | °C                | 60       |

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment  
Subject to change



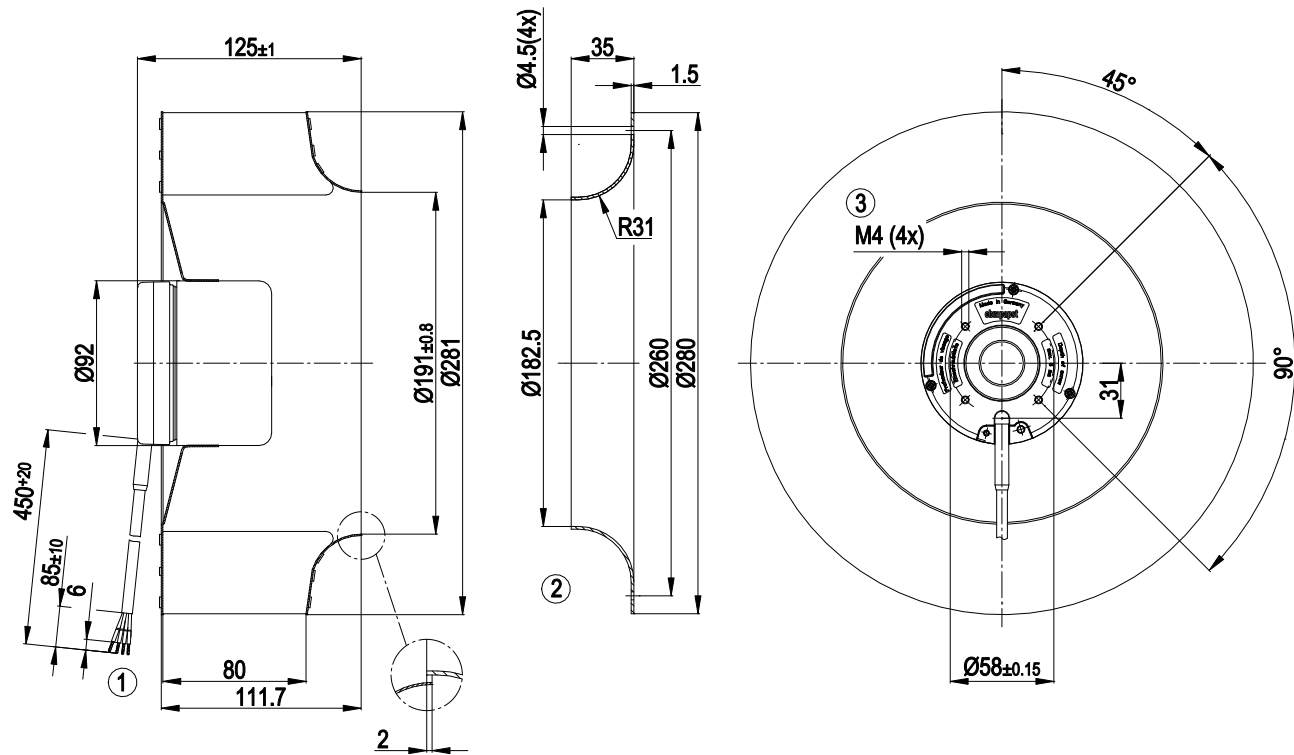
## Technical description

|                                                            |                                                                                                                                                                   |
|------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Weight                                                     | 2.8 kg                                                                                                                                                            |
| Fan size                                                   | 280 mm                                                                                                                                                            |
| Rotor surface                                              | Painted black                                                                                                                                                     |
| Electronics housing material                               | Die-cast aluminum                                                                                                                                                 |
| Impeller material                                          | Sheet steel, hot-dip galvanized                                                                                                                                   |
| Number of blades                                           | 11                                                                                                                                                                |
| Direction of rotation                                      | Clockwise, viewed toward rotor                                                                                                                                    |
| Degree of protection                                       | IP42                                                                                                                                                              |
| Insulation class                                           | "B"                                                                                                                                                               |
| Moisture (F) / Environmental (H) protection class          | F0                                                                                                                                                                |
| Max. permitted ambient temp. for motor (transport/storage) | +80 °C                                                                                                                                                            |
| Min. permitted ambient temp. for motor (transport/storage) | -40 °C                                                                                                                                                            |
| Installation position                                      | Any                                                                                                                                                               |
| Condensation drainage holes                                | None                                                                                                                                                              |
| Mode                                                       | S1                                                                                                                                                                |
| Motor bearing                                              | Ball bearing                                                                                                                                                      |
| Technical features                                         | <ul style="list-style-type: none"> <li>- Tach output</li> <li>- Motor current limitation</li> <li>- Soft start</li> <li>- Control input 0-10 VDC / PWM</li> </ul> |
| EMC immunity to interference                               | According to EN 61000-6-2 (industrial environment)                                                                                                                |
| EMC interference emission                                  | According to EN 55022 (Class B)                                                                                                                                   |
| Motor protection                                           | Reverse polarity and locked-rotor protection                                                                                                                      |
| With cable                                                 | Variable                                                                                                                                                          |
| Protection class                                           | I (with customer connection of protective earth)                                                                                                                  |
| Conformity with standards                                  | EN 60950-1                                                                                                                                                        |
| Approval                                                   | EAC; UL 1004-1; CSA C22.2 No. 77                                                                                                                                  |

## EC centrifugal fan

backward-curved, single-intake

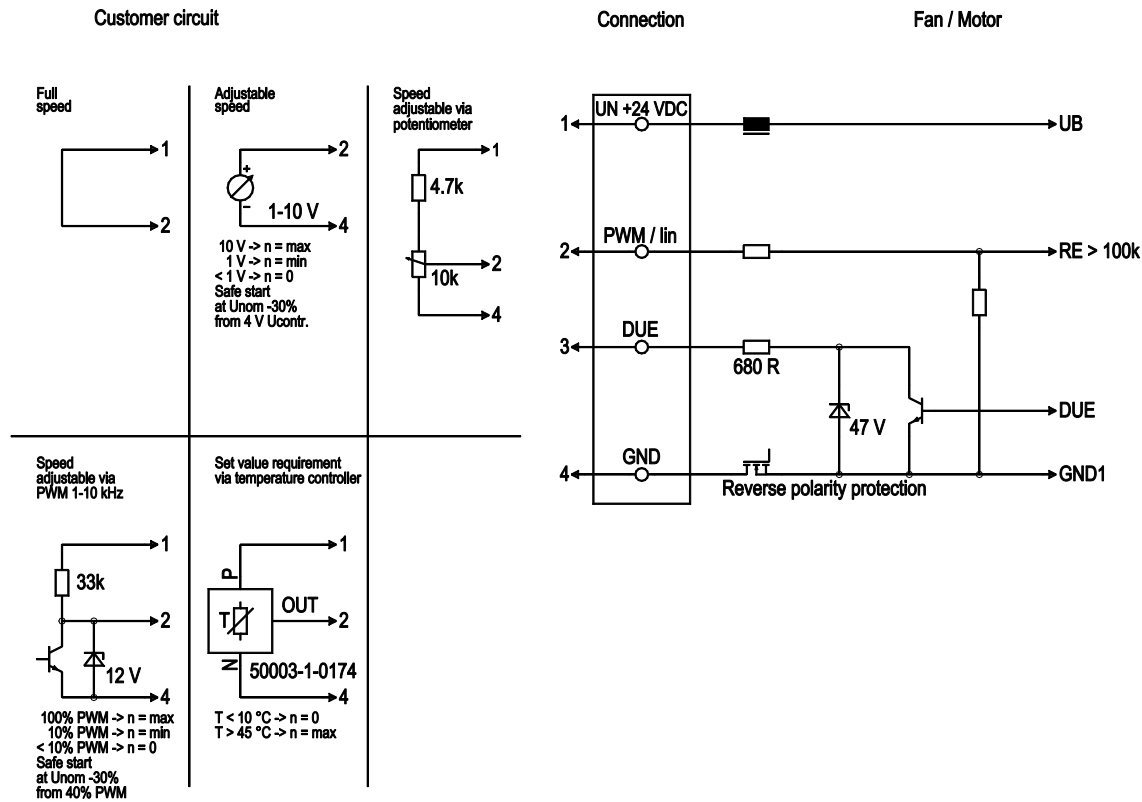
## Product drawing



|   |                                                                           |
|---|---------------------------------------------------------------------------|
| 1 | Cable PVC AWG 20, 4x crimped splices                                      |
| 2 | Accessory part: inlet ring 96360-2-4013 not included in scope of delivery |
| 3 | Max. clearance for screw 6 mm                                             |

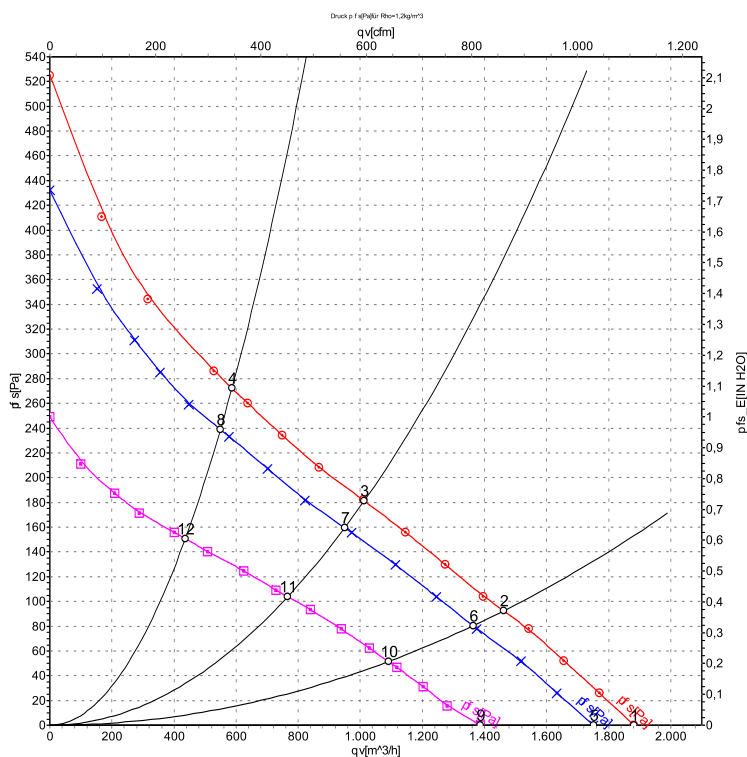


## Connection diagram



| No. | Conn. | Designation | Color  | Function/assignment                                     |
|-----|-------|-------------|--------|---------------------------------------------------------|
| 1   | 1     | Un +24V     | red    | Power supply 24 VDC, maximum ripple 3.5%                |
| 1   | 2     | PWM / lin   | yellow | PWM / lin., control input, 0-10 V                       |
| 1   | 3     | Tach        | white  | Tach output, 3 pulses per revolution, Isink max = 10 mA |
| 1   | 4     | GND         | blue   | Reference ground                                        |

## Curves: Air performance



Measurement: LU-54786-1  
 Measurement: LU-54783-1  
 Measurement: LU-54785-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

## Measured values

|    | U  | n                 | P <sub>ed</sub> | I    | qv   | p <sub>fs</sub> | qv   | p <sub>fs</sub> |
|----|----|-------------------|-----------------|------|------|-----------------|------|-----------------|
|    | V  | min <sup>-1</sup> | W               | A    | m³/h | Pa              | CFM  | inH2O           |
| 1  | 28 | 1835              | 118             | 4.90 | 1880 | 0               | 1105 | 0.00            |
| 2  | 28 | 1680              | 125             | 5.33 | 1460 | 92              | 860  | 0.37            |
| 3  | 28 | 1610              | 129             | 5.56 | 1015 | 181             | 595  | 0.73            |
| 4  | 28 | 1740              | 122             | 5.13 | 585  | 272             | 345  | 1.09            |
| 5  | 24 | 1710              | 95              | 4.60 | 1750 | 0               | 1030 | 0.00            |
| 6  | 24 | 1575              | 102             | 4.87 | 1365 | 80              | 800  | 0.32            |
| 7  | 24 | 1515              | 104             | 5.05 | 950  | 160             | 560  | 0.64            |
| 8  | 24 | 1630              | 99              | 4.69 | 550  | 240             | 325  | 0.96            |
| 9  | 16 | 1355              | 47              | 3.27 | 1385 | 0               | 815  | 0.00            |
| 10 | 16 | 1270              | 52              | 3.64 | 1090 | 52              | 640  | 0.21            |
| 11 | 16 | 1230              | 55              | 3.84 | 765  | 104             | 450  | 0.42            |
| 12 | 16 | 1300              | 51              | 3.52 | 435  | 151             | 255  | 0.61            |

U = Power supply · n = Speed (rpm) · P<sub>ed</sub> = Power consumption · I = Current draw · qv = Air flow · p<sub>fs</sub> = Pressure increase

