**R1G280-AE47-16**

# EC centrifugal fan

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** | **R1G280-AE47-16** | |
| **Motor** | **M1G074-CF** | |
| Nominal voltage | VDC | 48 |
| Nominal voltage range | VDC | 36 .. 58 |
| Type of data definition | | fa |
| Speed | min-1 | 1710 |
| Power input | W | 95 |
| Current draw | A | 2.3 |
| 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** | 2.8 kg |
| **Size** | 280 mm |
| **Surface of rotor** | Coated in black |
| **Material of electronics housing** | Die-cast aluminium |
| **Material of impeller** | Sheet steel, hot-galvanised |
| **Number of blades** | 11 |
| **Direction of rotation** | Clockwise, seen on rotor |
| **Type of protection** | IP 42 |
| **Insulation class** | "B" |
| **Humidity class** | F0 |
| **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 |
| **Operation mode** | S1 |
| **Motor bearing** | Ball bearing |
| **Technical features** | - Tach output<br>- Motor current limit<br>- Soft start<br>- Control input 0-10 VDC / PWM |
| **EMC interference immunity** | Acc. to EN 61000-6-2 (industrial environment) |
| **EMC interference emission** | Acc. to EN 55022 (Class B) |
| **Electrical leads** | With plug |
| **Motor protection** | Reverse polarity and locked-rotor protection |
| **Cable exit** | Variable |
| **Protection class** | I (if protective earth is connected by customer) |
| **Approval** | CSA C22.2 Nr.77; UL 1004-1 |

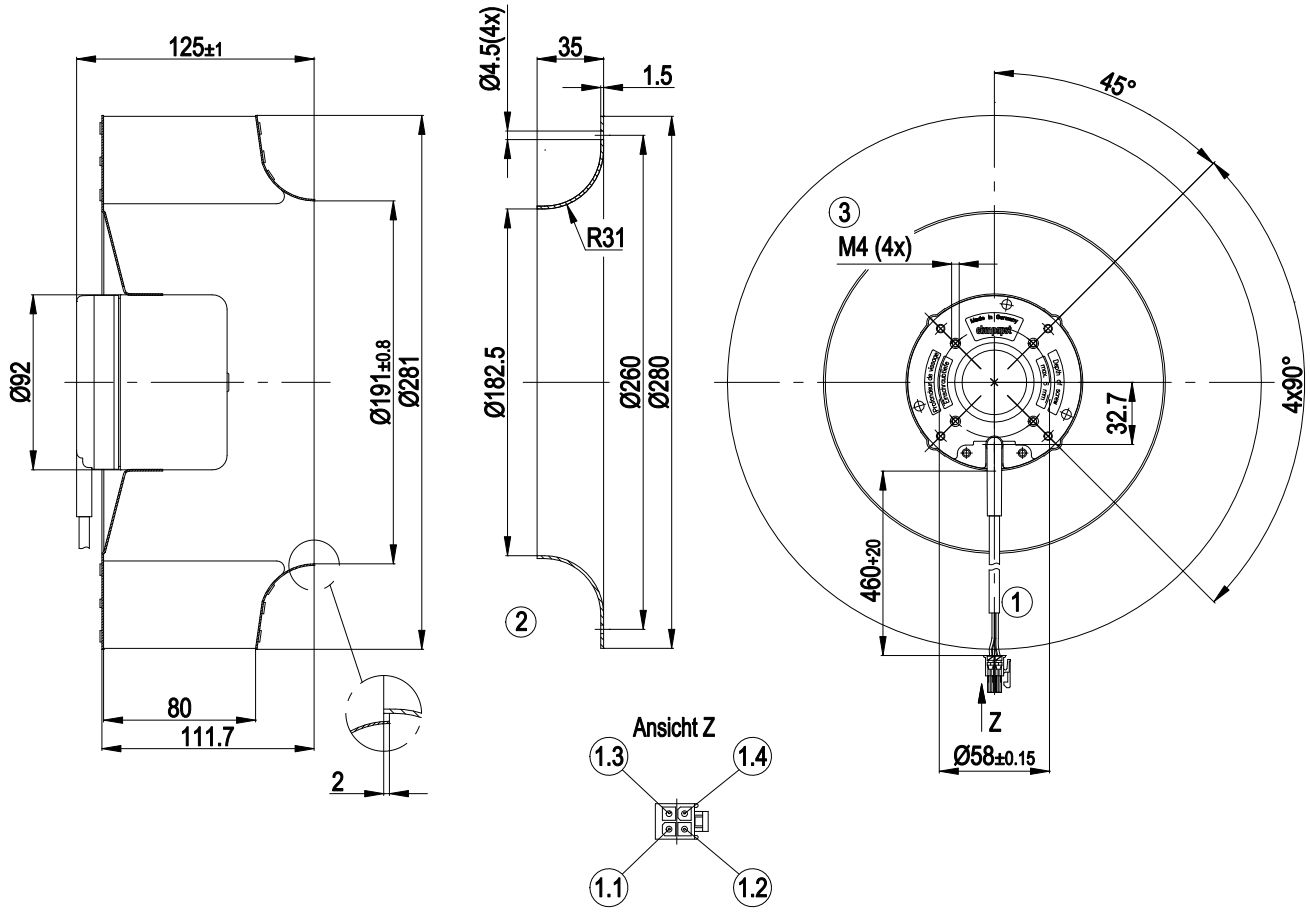


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## Product drawing




| | |
|---|---|
| 1 | Connector housing (Molex 39-01-2040), connection line AWG20 with 4x connector socket (Molex 39-00-0059) |
| 1.1 | Control input (yellow) |
| 1.2 | S (white) |
| 1.3 | (blue) |
| 1.4 | + (red) |
| 2 | Accessory part: Inlet nozzle 96360-2-4013, not included in the standard scope of delivery |
| 3 | Depth of screw max. 6 mm |

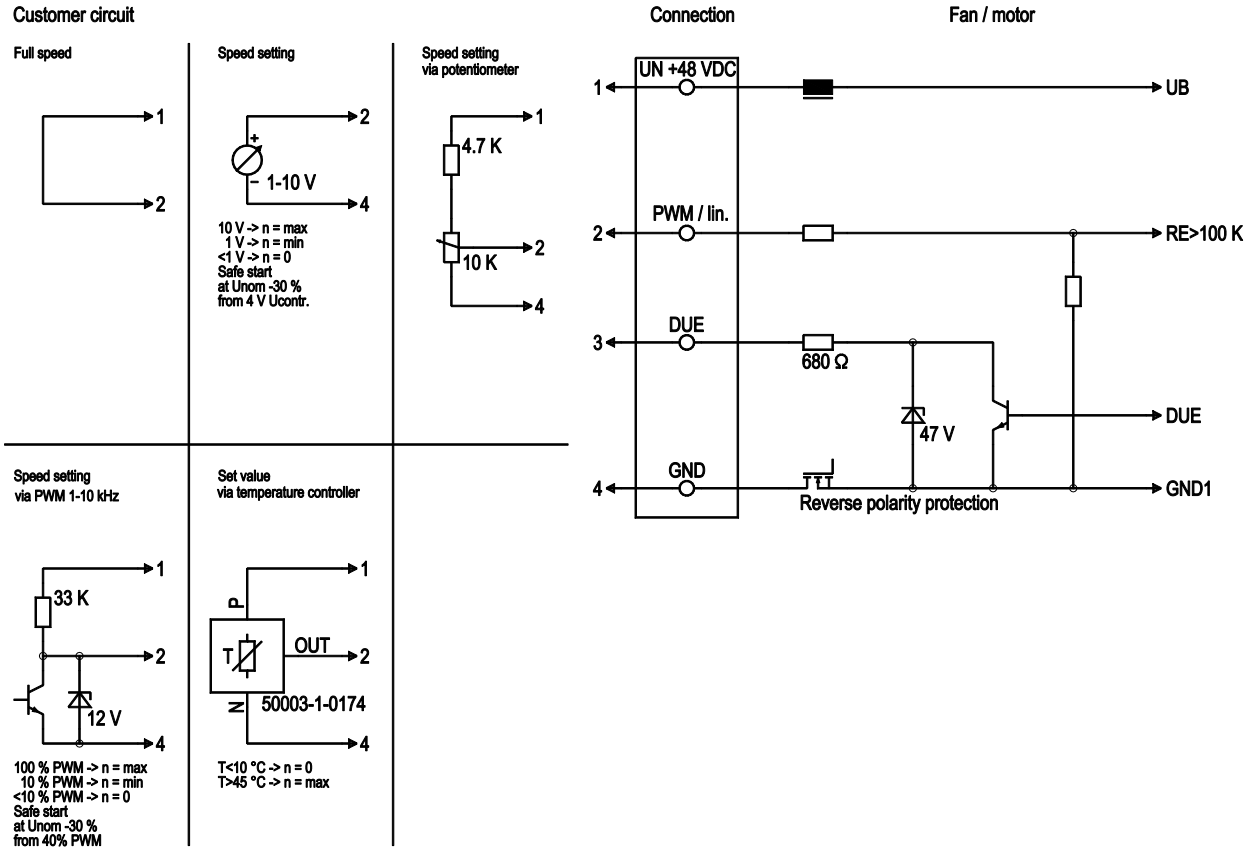


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## Connection screen




| Line | No. | Signal | Colour | Function / assignment |
|---|---|---|---|---|
| 1 | 1 | Un +48 VDC | red | Power supply 48 VDC, residual ripple 3.5 % |
| 1 | 2 | PWM / lin | yellow | PWM / lin. control input, 0-10 V |
| 1 | 3 | DUE | white | Speed monitoring output, 3 pulses per rotation, Isink max = 10 mA |
| 1 | 4 | GND | blue | Reference mass |

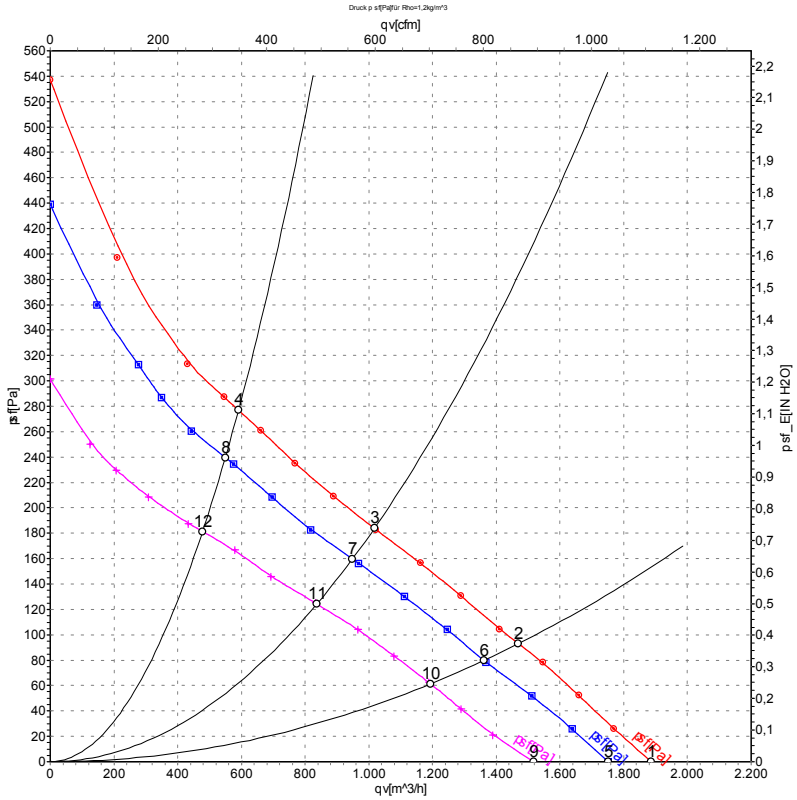


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## Charts: Air flow




Measurement: LU-54793
Measurement: LU-54792
Measurement: LU-54790

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 | n | $P_e$ | I | qv | $p_{sf}$ |
|---|---|---|---|---|---|---|
| | V | $min^{-1}$ | W | A | $m^3/h$ | Pa |
| 1 | 57 | 1845 | 118 | 2.54 | 1885 | 0 |
| 2 | 57 | 1695 | 126 | 2.76 | 1470 | 93 |
| 3 | 57 | 1620 | 130 | 2.87 | 1020 | 184 |
| 4 | 57 | 1755 | 123 | 2.66 | 590 | 277 |
| 5 | 48 | 1710 | 95 | 2.30 | 1750 | 0 |
| 6 | 48 | 1580 | 99 | 2.46 | 1360 | 80 |
| 7 | 48 | 1515 | 102 | 2.55 | 950 | 160 |
| 8 | 48 | 1635 | 98 | 2.39 | 550 | 240 |
| 9 | 36 | 1480 | 61 | 1.90 | 1515 | 0 |
| 10 | 36 | 1385 | 67 | 2.10 | 1195 | 62 |
| 11 | 36 | 1335 | 70 | 2.19 | 835 | 124 |
| 12 | 36 | 1420 | 64 | 2.01 | 480 | 181 |



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