

**ebm-papst Mulfingen GmbH & Co. KG**

Bachmühle 2

74673 Mulfingen

Phone: +49 7938 81-0

Fax: +49 7938 81-110

www.ebmpapst.com

info1@de.ebmpapst.com

**Nominal data**

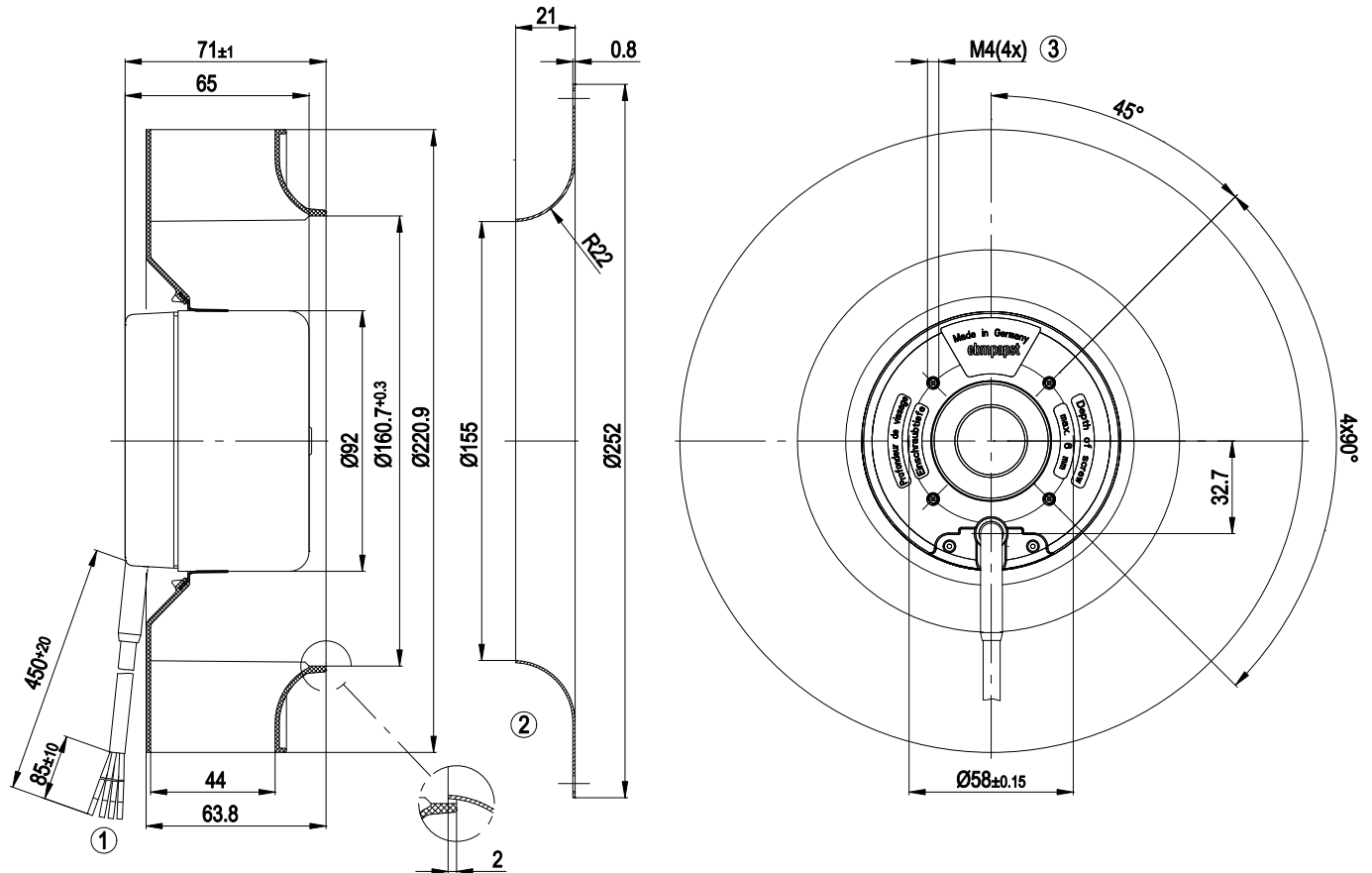
|                          |                      |          |
|--------------------------|----------------------|----------|
| Type                     | R1G220-AB35-52       |          |
| Motor                    | M1G074-BF            |          |
| Nominal voltage          | [VDC]                | 24       |
| Nominal voltage range    | [VDC]                | 16 .. 28 |
| Type of data definition  |                      | rfa      |
| Speed                    | [min <sup>-1</sup> ] | 3150     |
| Power input              | [W]                  | 106      |
| Current draw             | [A]                  | 5.0      |
| Min. ambient temperature | [°C]                 | - 25     |
| Max. ambient temperature | [°C]                 | +60      |

ml = max. load · me = max. efficiency · rfa = running at free air · cs = customer specs · cu = customer unit  
Subject to alterations

## Technical features

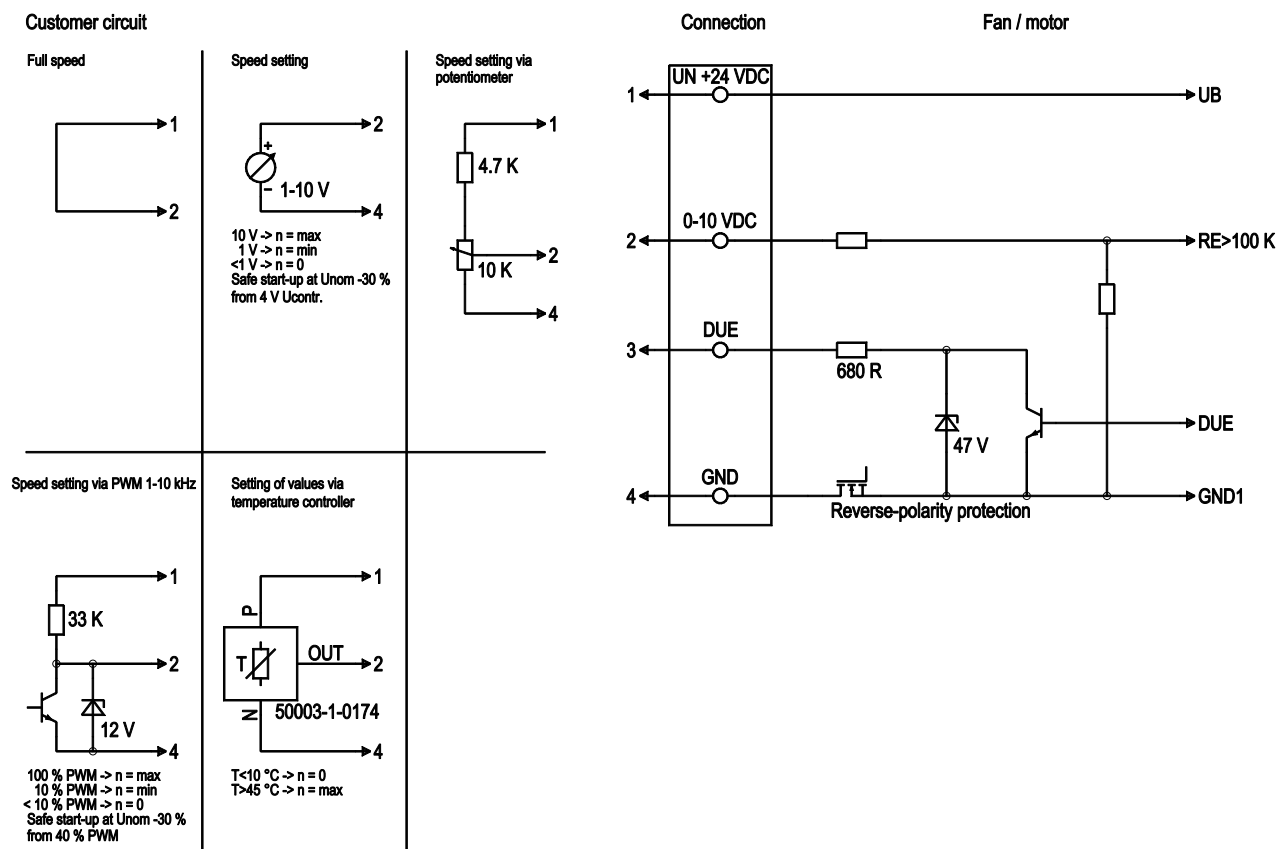
|                                                         |                                                                                                                                                              |
|---------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Size                                                    | 220 mm                                                                                                                                                       |
| Operation mode                                          | S1                                                                                                                                                           |
| Direction of rotation                                   | Clockwise, seen on rotor                                                                                                                                     |
| Mounting position                                       | Any                                                                                                                                                          |
| EMC interference emission                               | Acc. to EN 55022 (Class B)                                                                                                                                   |
| EMC interference immunity                               | Acc. to EN 61000-6-2                                                                                                                                         |
| Insulation class                                        | "B"                                                                                                                                                          |
| Cable exit                                              | Variable                                                                                                                                                     |
| Condensate discharge holes                              | None                                                                                                                                                         |
| Bearing motor                                           | Ball bearing                                                                                                                                                 |
| Mass                                                    | 1.4 kg                                                                                                                                                       |
| Material of impeller                                    | Plastic PA66, fibreglass-reinforced                                                                                                                          |
| Motor protection                                        | Reverse polarity and locked-rotor protection                                                                                                                 |
| Product conforming to standard                          | EN 60950-1                                                                                                                                                   |
| Surface of rotor                                        | Coated in black                                                                                                                                              |
| Number of blades                                        | 11                                                                                                                                                           |
| Type of protection                                      | IP 42                                                                                                                                                        |
| Technical features                                      | <ul style="list-style-type: none"> <li>- Control input 0-10 VDC / PWM</li> <li>- Tach output</li> <li>- Motor current limit</li> <li>- Soft start</li> </ul> |
| Max. permissible ambient motor temp. (transp./ storage) | +80 °C                                                                                                                                                       |
| Min. permissible ambient motor temp. (transp./storage)  | -40 °C                                                                                                                                                       |
| Approval                                                | CSA C22.2 Nr.77; UL 1004                                                                                                                                     |

## Product drawing



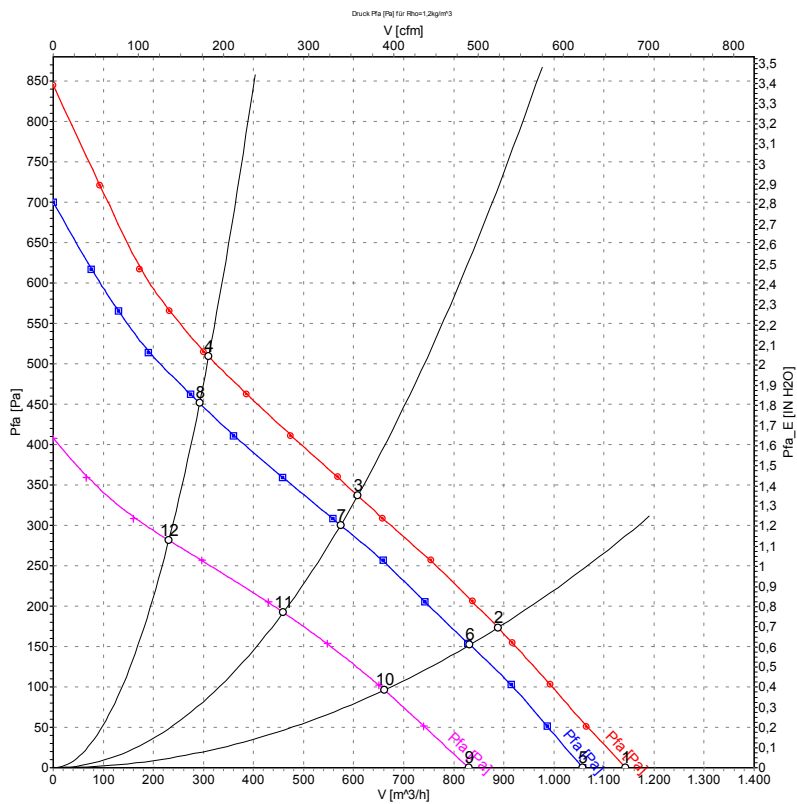
- |   |                                                                                           |
|---|-------------------------------------------------------------------------------------------|
| 1 | Connection line AWG20, 4 x brass lead tips crimped                                        |
| 2 | Accessory part: Inlet nozzle 09609-2-4013, 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   | DUE        | white  | Speed monitoring output, 3 pulses per rotation, Isink max = 10 mA |
| 1    | 4   | GND        | blue   | Reference mass                                                    |

## Charts: Air flow



## Measured values

|    | U   | n                    | P <sub>1</sub> | I    | $\hat{V}$           | p <sub>fa</sub> |
|----|-----|----------------------|----------------|------|---------------------|-----------------|
|    | [V] | [min <sup>-1</sup> ] | [W]            | [A]  | [m <sup>3</sup> /h] | [Pa]            |
| 1  | 28  | 3405                 | 129            | 5.33 | 1145                | 0               |
| 2  | 28  | 3135                 | 134            | 5.71 | 890                 | 173             |
| 3  | 28  | 2985                 | 137            | 5.96 | 610                 | 337             |
| 4  | 28  | 3175                 | 133            | 5.63 | 310                 | 508             |
| 5  | 24  | 3150                 | 106            | 5.00 | 1055                | 0               |
| 6  | 24  | 2930                 | 112            | 5.32 | 830                 | 150             |
| 7  | 24  | 2810                 | 114            | 5.52 | 575                 | 300             |
| 8  | 24  | 2980                 | 111            | 5.25 | 290                 | 450             |
| 9  | 16  | 2460                 | 50             | 3.50 | 830                 | 0               |
| 10 | 16  | 2330                 | 56             | 3.88 | 660                 | 97              |
| 11 | 16  | 2260                 | 59             | 4.11 | 460                 | 192             |
| 12 | 16  | 2360                 | 55             | 3.81 | 230                 | 282             |