

G1G140-AV17-02

## EC centrifugal fan

forward curved, single inlet

with housing (flange)

## ebm-papst Mulfingen GmbH &amp; 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                     | G1G140-AV17-02    |           |
| Motor                    | M1G055-CF         |           |
| Nominal voltage          | VDC               | 24        |
| Nominal voltage range    | VDC               | 16 ... 28 |
| Type of data definition  |                   | fa        |
| Speed                    | min <sup>-1</sup> | 1750      |
| Power input              | W                 | 54        |
| Current draw             | A                 | 2.5       |
| 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

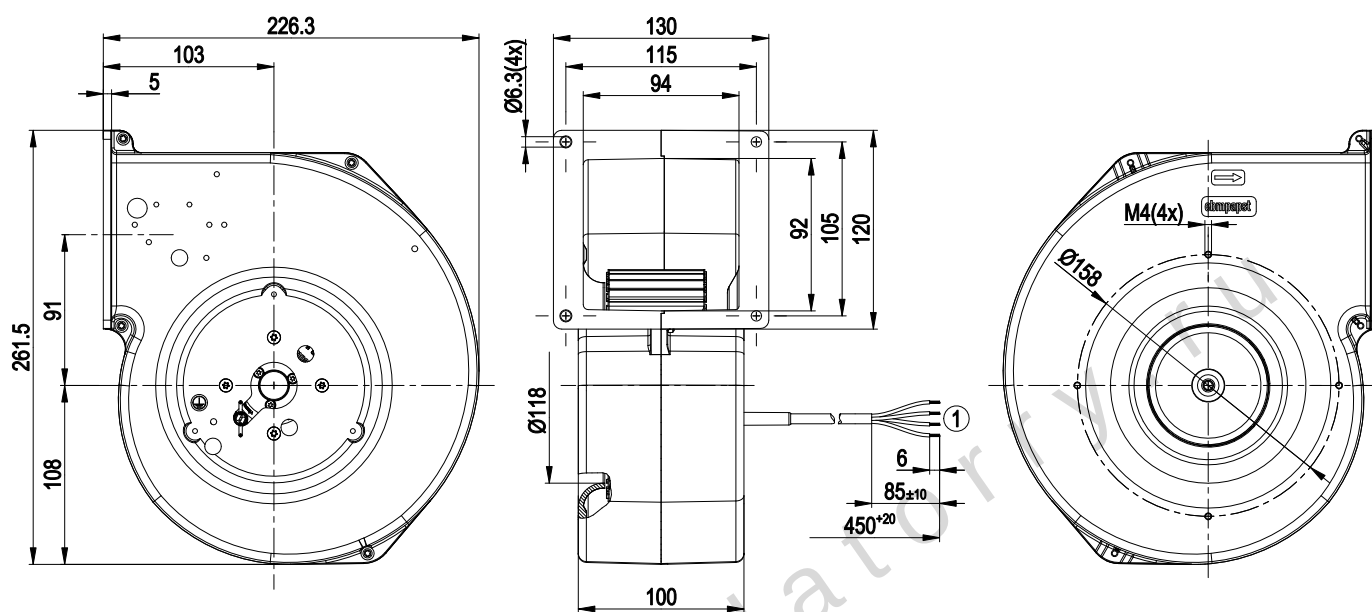
|                                                         |                                                                                                                                                         |
|---------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mass                                                    | 2.3 kg                                                                                                                                                  |
| Size                                                    | 140 mm                                                                                                                                                  |
| Surface of rotor                                        | Coated in black                                                                                                                                         |
| Material of impeller                                    | Hot-dip galvanized sheet steel                                                                                                                          |
| Housing material                                        | Die-cast aluminium                                                                                                                                      |
| Direction of rotation                                   | Clockwise, seen on rotor                                                                                                                                |
| Type of protection                                      | IP 22; Depending on installation and position                                                                                                           |
| 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                                                                                                                                                     |
| Operation mode                                          | S1                                                                                                                                                      |
| Motor bearing                                           | Ball bearing                                                                                                                                            |
| Technical features                                      | <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> |
| EMC interference immunity                               | Acc. to EN 61000-6-2 (industrial environment)                                                                                                           |
| EMC interference emission                               | Acc. to EN 55022 (Class B)                                                                                                                              |
| Motor protection                                        | Reverse polarity and locked-rotor protection                                                                                                            |
| Cable exit                                              | Axial                                                                                                                                                   |
| Protection class                                        | I (if protective earth is connected by customer)                                                                                                        |
| Product conforming to standard                          | EN 60335-1                                                                                                                                              |

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## Product drawing



1 Connection line PVC AWG20, 4x brass lead tips crimped

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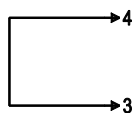
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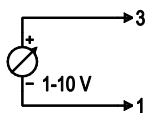
## Connection screen

### Customer circuit

#### Full speed

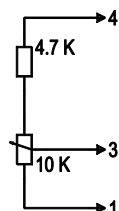


#### Speed setting

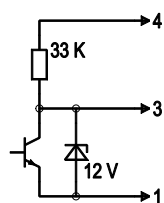


10 V → n = max  
1 V → n = min  
<1 V → n = 0  
Safe start-up at Unom -30 %  
from 4 V Ucontr.

#### Speed setting with fixed resistance

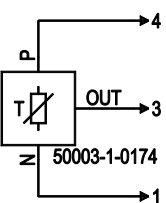


#### Speed setting via PWM 1-10 kHz



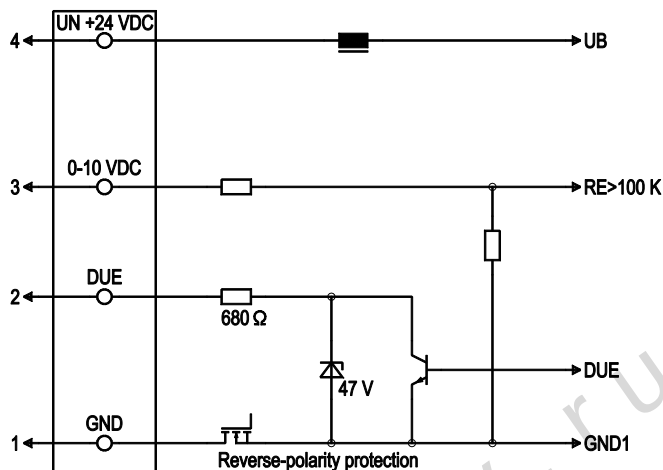
100 % PWM → n = max  
10 % PWM → n = min  
<10 % PWM → n = 0  
Safe start-up at Unom -30 %  
from 40 % PWM

#### Setting of values via temperature controller



### Connection

### Fan / motor



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

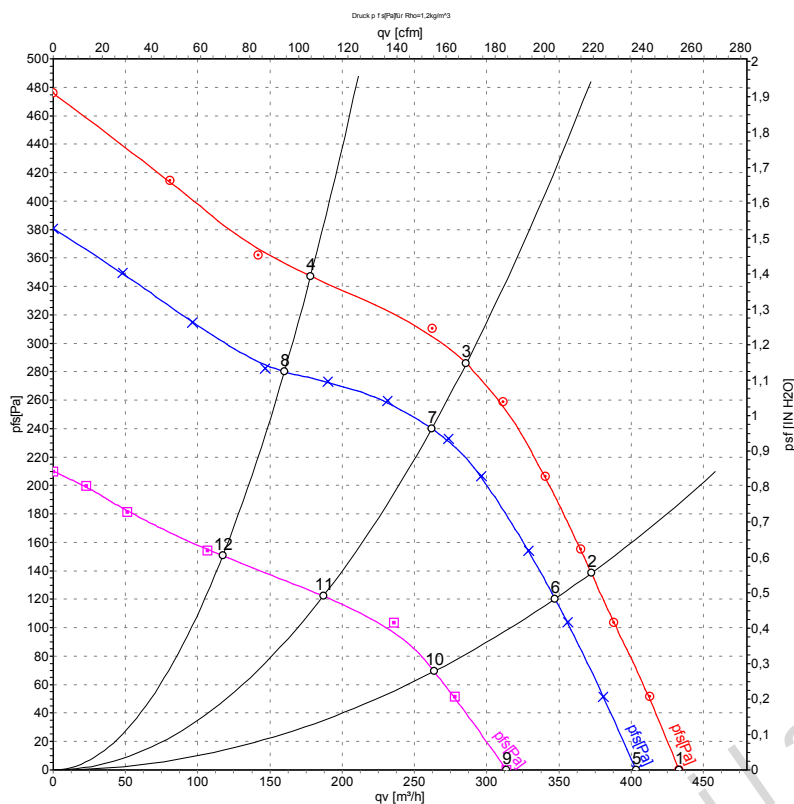
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## Charts: Air flow



Measurement: LU-50746  
Measurement: LU-50744  
Measurement: LU-50747

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  | n                 | P <sub>ed</sub> | I    | qv   | p <sub>fs</sub> |
|----|----|-------------------|-----------------|------|------|-----------------|
|    | V  | min <sup>-1</sup> | W               | A    | m³/h | Pa              |
| 1  | 28 | 1875              | 67              | 2.80 | 435  | 0               |
| 2  | 28 | 2020              | 63              | 2.58 | 370  | 138             |
| 3  | 28 | 2255              | 58              | 2.29 | 285  | 286             |
| 4  | 28 | 2525              | 47              | 1.85 | 180  | 347             |
| 5  | 24 | 1750              | 54              | 2.50 | 405  | 0               |
| 6  | 24 | 1880              | 51              | 2.35 | 345  | 120             |
| 7  | 24 | 2055              | 44              | 2.02 | 260  | 240             |
| 8  | 24 | 2275              | 35              | 1.60 | 160  | 280             |
| 9  | 16 | 1370              | 26              | 1.78 | 315  | 0               |
| 10 | 16 | 1445              | 23              | 1.60 | 265  | 70              |
| 11 | 16 | 1575              | 19              | 1.35 | 185  | 123             |
| 12 | 16 | 1695              | 15              | 1.14 | 115  | 150             |