

G1G120-AB67-02

## EC centrifugal fan

forward curved, single inlet

with housing (flange)

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## Nominal data

|                          |                      |          |
|--------------------------|----------------------|----------|
| Type                     | G1G120-AB67-02       |          |
| Motor                    | M1G055-BD            |          |
| Nominal voltage          | [VDC]                | 24       |
| Nominal voltage range    | [VDC]                | 16 .. 28 |
| Type of data definition  |                      | rfa      |
| Speed                    | [min <sup>-1</sup> ] | 2200     |
| Power input              | [W]                  | 40       |
| Current draw             | [A]                  | 1.9      |
| 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

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## Technical features

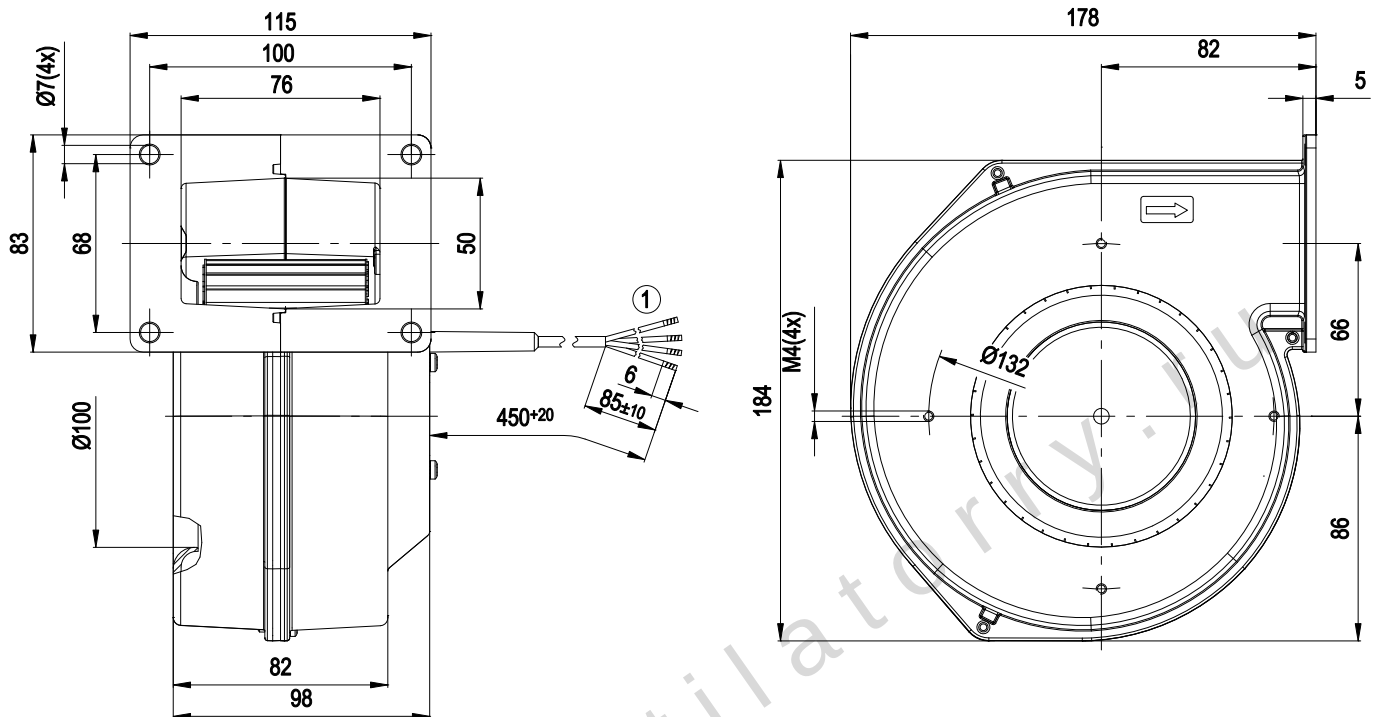
|                                                         |                                                                                                                                                         |
|---------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| Size                                                    | 120 mm                                                                                                                                                  |
| Operation mode                                          | S1                                                                                                                                                      |
| Direction of rotation                                   | Clockwise, seen on rotor                                                                                                                                |
| Mounting position                                       | Any                                                                                                                                                     |
| EMC interference emission                               | Acc. to EN 61000-6-3 (household environment)                                                                                                            |
| EMC interference immunity                               | Acc. to EN 61000-6-2 (industrial environment)                                                                                                           |
| Insulation class                                        | "B"                                                                                                                                                     |
| Cable exit                                              | Axial                                                                                                                                                   |
| Condensate discharge holes                              | None                                                                                                                                                    |
| Bearing motor                                           | Ball bearing                                                                                                                                            |
| Mass                                                    | 1.57 kg                                                                                                                                                 |
| Housing material                                        | Die-cast aluminium                                                                                                                                      |
| Material of impeller                                    | Sheet steel, hot-galvanised                                                                                                                             |
| Motor protection                                        | Reverse polarity and locked-rotor protection                                                                                                            |
| Product conforming to standard                          | EN 60950-1                                                                                                                                              |
| Surface of rotor                                        | Thick layer passivated                                                                                                                                  |
| Type of protection                                      | IP 22                                                                                                                                                   |
| 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 1004-1                                                                                                                              |

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## Product drawing



1 Connection line AWG20, 4x brass lead tips crimped

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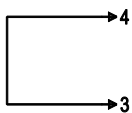
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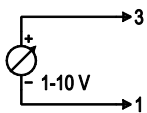
## Connection screen

### Customer circuit

#### Full speed

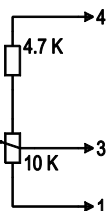


#### Speed setting

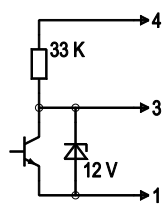


10 V → n = max  
1 V → n = min  
<1 V → n = 0  
Safe start-up at Unom -30 %  
from 4 V Ucontr.

#### Speed setting with fixed resistance

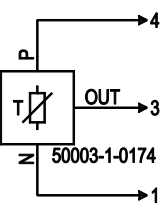


#### Speed setting via PWM 1-10 kHz



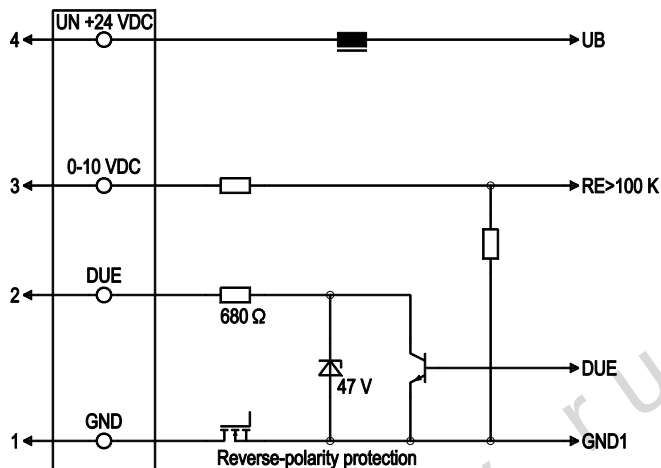
100 % PWM → n = max  
10 % PWM → n = min  
<10 % PWM → n = 0  
Safe start-up at Unom -30 %  
from 40 % PWM

#### Setting of values via temperature controller



### Connection

### Fan / motor



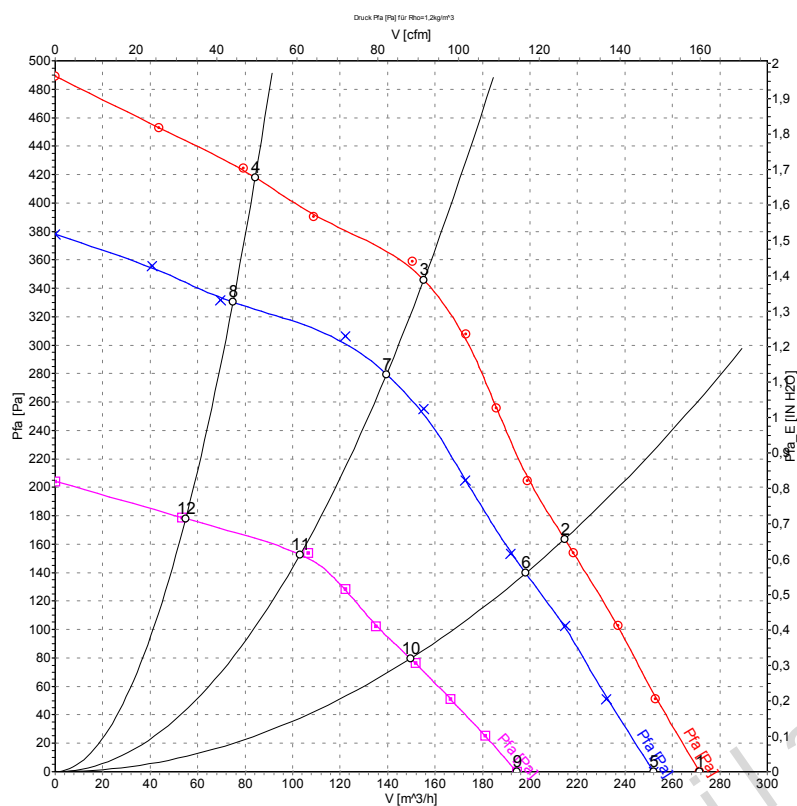
| Line | No. | Signal     | Colour | Function / assignment                                             |
|------|-----|------------|--------|-------------------------------------------------------------------|
| 1    | 1   | GND        | blue   | Reference mass                                                    |
| 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-48521  
Measurement: LU-48520  
Measurement: LU-48522

## Measured values

|    | U   | n                    | P <sub>1</sub> | I    | $\dot{V}$           | P <sub>fa</sub> |
|----|-----|----------------------|----------------|------|---------------------|-----------------|
|    | [V] | [min <sup>-1</sup> ] | [W]            | [A]  | [m <sup>3</sup> /h] | [Pa]            |
| 1  | 28  | 2380                 | 49             | 2.09 | 270                 | 0               |
| 2  | 28  | 2675                 | 45             | 1.82 | 215                 | 164             |
| 3  | 28  | 3025                 | 39             | 1.54 | 155                 | 348             |
| 4  | 28  | 3315                 | 31             | 1.23 | 85                  | 418             |
| 5  | 24  | 2200                 | 40             | 1.90 | 250                 | 0               |
| 6  | 24  | 2480                 | 36             | 1.64 | 200                 | 140             |
| 7  | 24  | 2730                 | 29             | 1.34 | 140                 | 280             |
| 8  | 24  | 2940                 | 24             | 1.10 | 75                  | 330             |
| 9  | 16  | 1750                 | 19             | 1.32 | 195                 | 0               |
| 10 | 16  | 1895                 | 16             | 1.11 | 150                 | 80              |
| 11 | 16  | 2050                 | 13             | 0.92 | 105                 | 155             |
| 12 | 16  | 2215                 | 9.94           | 0.78 | 55                  | 178             |