

Product Data Sheet RG125-19/06R

**ebmpapst**

The engineer's choice



RG125-19/06R

INDEX

**1 General ..... 3**

**2 Mechanics ..... 3**

    2.1 GENERAL ..... 3

    2.2 CONNECTIONS ..... 4

**3 Operating Data ..... 5**

    3.1 ELECTRICAL OPERATING DATA ..... 5

    3.2 ELECTRICAL FEATURES ..... 6

    3.3 AERODYNAMICS ..... 6

    3.4 SOUND DATA ..... 7

**4 Environment ..... 7**

    4.1 GENERAL ..... 7

    4.2 CLIMATIC REQUIREMENTS\*) ..... 7

**5 Safety ..... 8**

    5.1 ELECTRICAL SAFETY ..... 8

    5.2 APPROVAL TESTS ..... 8

**6 Reliability ..... 8**

    6.1 GENERAL ..... 8

**1 General**

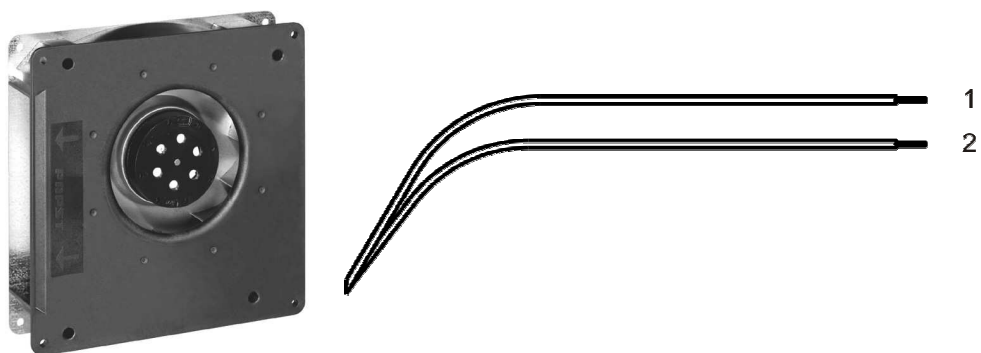
|                                     |                                  |
|-------------------------------------|----------------------------------|
| Fan type                            | Blower                           |
| Rotating direction looking at rotor | Clockwise                        |
| Airflow direction                   | Air in axially, Air out radially |
| Bearing system                      | Ball bearing                     |
| Mounting position - shaft           | Any                              |
| Balancing grade                     | 6,3                              |

**2 Mechanics****2.1 General**

|   |  |  |
|---|--|--|
| Width   | 180,0 mm   |  |
| Height  | 180,0 mm   |  |
| Depth   | 40,0 mm  |  |
| Diameter  | 0,0 mm   |  |
| Mass  | 0,850 kg   |  |
| Housing material  | Plastic  |  |
| Impeller material   | Mixed  |  |
| Max. torque when mounted across both mounting flanges; Metal flange on mounting plate<br>Screw size | Wire outlet corner: 70 Ncm<br>Remaining corners: 70 Ncm<br>ISO 4762 - M4 degreased, without an additional brace and without washer |  |

## 2.2 Connections

|                       |              |  |
|-----------------------|--------------|--|
| Electrical connection | Wires        |  |
| Lead wire length      | L = 310,0 mm |  |
| Tolerance             | +/- 10,0 mm  |  |
| Tube length           | S = 270,0 mm |  |
| Tolerance             | +/- 10,0 mm  |  |
| Wire size (AWG)       | 22           |  |
| Insulation diameter   | 1,09 mm      |  |
| Plug                  | See drawing  |  |
| Contact               | See drawing  |  |



|   | Color | Operation |
|---|-------|-----------|
| 1 | blue  | L         |
| 2 | blue  | N         |

### 3 Operating Data

#### 3.1 Electrical Operating Data

Measurement conditions: Normal air density = 1,2 kg/m<sup>3</sup>; Temperature 23°C +/- 3°C; Motor axis horizontal; warm-up time before measuring 5 minutes (unless otherwise specified).  
In the intake and outlet area should not be any solid obstruction within 0,5 m.

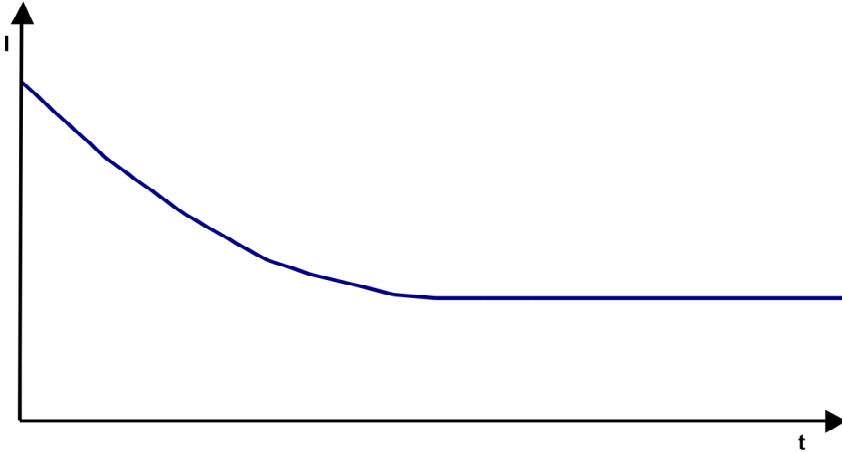
$\Delta p = 0$ : corresp. to free air flow (see chapter aerodynamics)

I: corresp. to RMS line current

| Features                       | Condition      | Symbol | Values                                    |   |
|--------------------------------|----------------|--------|---|---|
| Frequency                      | $\Delta p = 0$ | f      | 50 Hz                                     | 60 Hz                                     |
| Nominal voltage<br>Tolerance   | $\Delta p = 0$ | $U_N$  | 115 V<br>+/- 10 %                         | 115 V<br>+/- 10 %                         |
| Power consumption<br>Tolerance | $\Delta p = 0$ | P      | 20 W<br>+ 5 %                      - 10 % | 19 W<br>+ 5 %                      - 10 % |
| Speed<br>Tolerance             | $\Delta p = 0$ | n      | 2.550 1/min<br>+/- 3 %                    | 2.750 1/min<br>+/- 3 %                    |

### 3.2 Electrical Features

|                         |           |
|-------------------------|-----------|
| Locked rotor protection | Impedance |
| Locked rotor current at |           |



### 3.3 Aerodynamics

Measurement conditions: Measured with a double chamber intake rig acc. to DIN EN ISO 5801. Normal air density = 1,2 kg/m<sup>3</sup>; Temperature 23°C +/- 3°C; In the intake and outlet area should not be any solid obstruction within 0,5 m. Motor shaft horizontal. The information is only valid under the specified test conditions and may be changed by the installation conditions. If there are deviations from the standard test conditions, the characteristic values must be checked under the installed conditions.

a.) Operation condition:  
2.550 1/min at free air flow                      Frequency: 50 Hz

|   |                        |
|---|------------------------|
| Max. free-air flow ( $\Delta p = 0 / \dot{V} = \max.$ )   | 80,0 m <sup>3</sup> /h |
| Max. static pressure ( $\Delta p = \max. / \dot{V} = 0$ ) | 150 Pa                 |

b.) Operation condition:  
2.750 1/min at free air flow                      Frequency: 60 Hz

|   |                        |
|---|------------------------|
| Max. free-air flow ( $\Delta p = 0 / \dot{V} = \max.$ )   | 85,0 m <sup>3</sup> /h |
| Max. static pressure ( $\Delta p = \max. / \dot{V} = 0$ ) | 210 Pa                 |

**3.4 Sound Data**

Measurement conditions: Sound pressure level: 1 meter distance between microphone and the air intake.  
 Sound power level: Acc. to DIN 45635 part 38 (ISO 10302) Sound power level: Acc. to DIN 45635 part 38 (ISO 10302)  
 Measured in a semianchoic chamber with a background noise level of  $L_p(A) < 5 \text{ dB}(A)$   
 For further measurement conditions see chapter aerodynamics.

a.) Operation condition:  
 2.550 1/min at free air flow Frequency: 50 Hz

|   |                    |  |
|---|--------------------|--|
| Optimal operating point   | 12,0 m3/h @ 122 Pa |  |
| Sound power level at the optimal operating point                | 5,5 bel(A)         |  |
| Sound pressure level at free air flow, measured in rubber bands |                    |  |

b.) Operation condition:  
 2.750 1/min at free air flow Frequency: 60 Hz

|   |                    |  |
|---|--------------------|--|
| Optimal operating point   | 14,0 m3/h @ 162 Pa |  |
| Sound power level at the optimal operating point                | 6,0 bel(A)         |  |
| Sound pressure level at free air flow, measured in rubber bands |                    |  |

**4 Environment**

**4.1 General**

|  |                                  |  |
|--|----------------------------------|--|
| Min. permitted ambient temperature TU min. | -30 °C / 50 Hz<br>-30 °C / 60 Hz |  |
| Max. permitted ambient temperature TU max. | 70 °C / 50 Hz<br>80 °C / 60 Hz   |  |
| Min. permitted storage temperature TL min. | -40 °C                           |  |
| Max. permitted storage temperature TL max. | 80 °C                            |  |

**4.2 Climatic Requirements \*)**

|                       |   |  |
|-----------------------|---|--|
| Humidity requirements | humid heat, cyclic; according to DIN EN 60068-2-30, 6 cycle |  |
| Water exposure        | None  |  |
| Dust requirements     | Dust check; according to DIN EN 60068-2-68, 6g/m2d, 1 day   |  |
| Salt fog requirements | None  |  |

Permitted application area:  
 The product is for the use in sheltered rooms with limited controlled temperature. Occasionally condensed water is allowed. Direct exposure to water must be avoided. Saline ambient conditions must be avoided.

Pollution degree 2 (according DIN EN 60664-1)  
 It occurs only non-conductive pollution. Occassionally, temporary conductivity caused by condensation occurs.

## 5 Safety

### 5.1 Electrical Safety

|   |  |
|---|--|
| Dielectric strength<br>DIN EN 60950 (VDE 0805) and DIN EN 60335 (VDE 0700)<br>A.) Type test<br>Measuring conditions: After 48h of storage at 95% R.H. and 25°C.<br>No arcing or breakdown is allowed!<br>All connections together to ground.<br>B.) Routine test<br>Measuring conditions: At indoor climate.<br>No arcing or breakdown is allowed!<br>All connections together to ground. | 1000 VAC / 1 Min.<br><br>1500 VAC / 1 Sec. |
| Isolation resistance<br>Measuring conditions: After 48h of storage at 95% R.H. and 25°C measured with U=500 VDC for 1 min.  | RI > 50 MOhm                               |
| Clearance / creepage distance   | 2,0 mm / 1,1 mm                            |
| Protection class  | I  |

### 5.2 Approval Tests

|     |   |   |
|-----|---|---|
| CE  | EC Declaration of Conformity  | Yes   |
| EAC | Eurasian Conformity   | Yes   |
| UL  | Underwriters Laboratories   | Yes / UL507, Electric Fans  |
| VDE | Association for Electrical, Electronic and Information Technologies | Yes / Approval acc. to EN 60950 (VDE 0805) - Information technology equipment |
| CSA | Canadian Standards Association                                      | Yes / C22.2 No. 113 Fans and Ventilators                                      |
| CCC | China Compulsory Certification                                      | Yes / GB 12350 Safety Requirements for small Power Motors                     |

The approval tests are observed to:

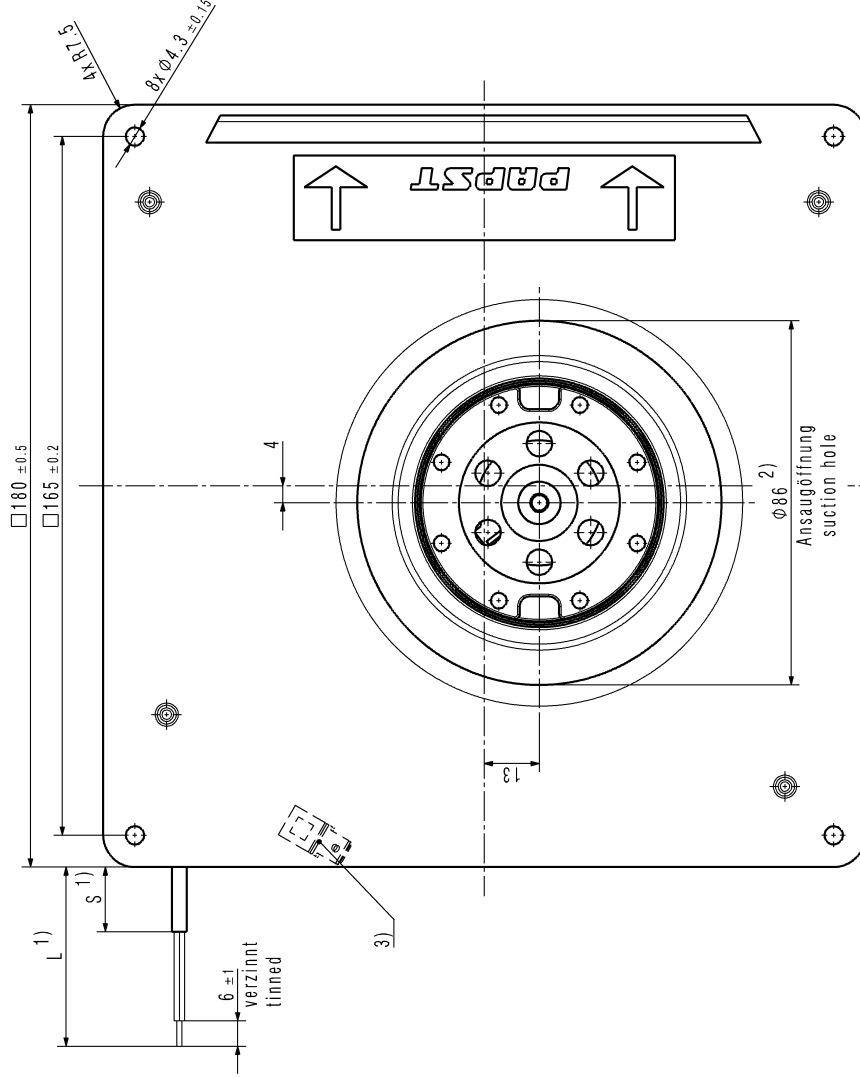
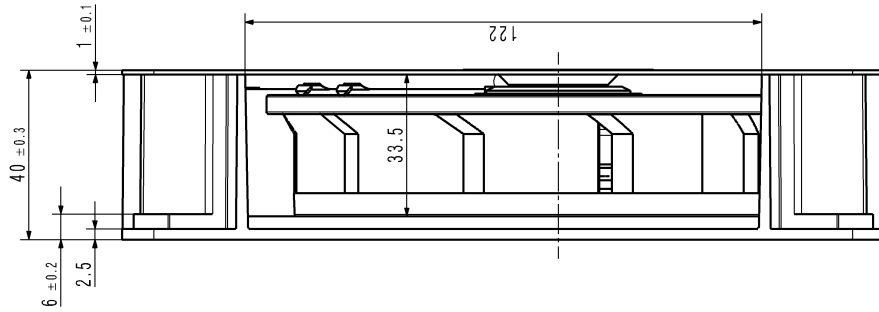
U approval max.: 115 V / f: 60 Hz @ TU approval max.: 80 °C

## 6 Reliability

### 6.1 General

|                                   |                                      |  |
|-----------------------------------|--------------------------------------|--|
| Life expectancy L10 at TU = 40 °C | 37.500 h / 50 Hz<br>40.000 h / 60 Hz |  |
| Life expectancy L10 at TU max.    | 20.000 h / 50 Hz<br>15.000 h / 60 Hz |  |





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Schutzwerk nach DIN ISO 15018 Bauteile  
 Refer to production order DIN ISO 15018 Bauteile

- 1) Anzahl und Länge der Litzen sowie Länge des Schlauchs siehe Produktspezifikation.
- 2) Öffnung für Montagewand > = 100mm
- 3) Flachstecker 6,3 x 0,8 für Schutzleiter
  - Axialspiel mit Feder spielfrei verspannt.

- 1) number and length of wires and length of tube see design specification
- 2) opening for mounting plate > = 100mm
- 3) flat pin 6,3 x 0,8 for ground wire
  - without axial clearance by a preloaded spring

|  |   |                                     |  |   |
|--|---|-------------------------------------|--|---|
| 3M-Steckleiste<br>Order-No./<br>Change-No. | DATA-System-Verlust/<br>DATA-System-Verlust | CAD-Nummern/<br>CAD-Identifizierung | Werkstoff / Material:                  | Volumen (cm <sup>3</sup> )/<br>Volume (in <sup>3</sup> ): |
|  |   |                                     |  |   |
| Toleranzung / Tolerances:                  | 3M-Referenzmodell / 3M-Referenzmodell       | Name                                | AP11463 / T1147:                       | Eckwert /<br>Roundness:                                   |
|  |   |                                     |  |   |
| Allgemeintoleranzen / gen. Tolerances:     | DIN 1218                                    | DIN 1218                            | Eckwert /<br>Roundness:                | Eckwert /<br>Roundness:                                   |
|  |   |                                     |  |   |
| Allgemeintoleranzen / gen. Tolerances:     | DIN 1218                                    | DIN 1218                            | Eckwert /<br>Roundness:                | Eckwert /<br>Roundness:                                   |
|  |   |                                     |  |   |
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