



The engineer's choice

**ebm**papst

## AC 6200 NMU

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|          |                                                     |          |
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## 1 General

|                                       |                        |
|---------------------------------------|------------------------|
| Fan type                              | Fan                    |
| Rotational direction looking at rotor | counterclockwise       |
| Airflow direction                     | Air outlet over struts |
| Bearing system                        | Ball bearing           |
| Mounting position                     | any                    |

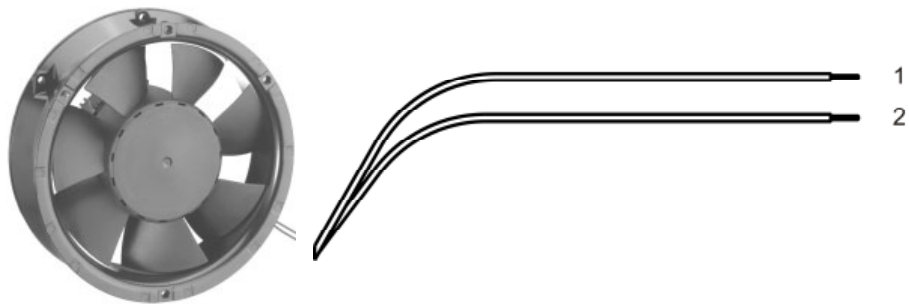
## 2 Mechanics

### 2.1 General

|                   |          |  |
|-------------------|----------|--|
| Width             | 0 mm     |  |
| Height            | 0 mm     |  |
| Depth             | 84 mm    |  |
| Diameter          | 172 mm   |  |
| Weight            | 0,970 kg |  |
| Housing material  | Metal    |  |
| Impeller material | Plastic  |  |

## 2.2 Connections

|                       |             |  |
|-----------------------|-------------|--|
| Electrical connection | Wires       |  |
| Length of lead wire   | L = 450 mm  |  |
| Tolerance             | +/- 10 mm   |  |
| Length of tube        | S = 10 mm   |  |
| Tolerance             | +/- 5 mm    |  |
| Wire gauge (AWG)      | 22          |  |
| Insulation diameter   |             |  |
| Plug                  | see drawing |  |
| Contact               | see drawing |  |



|        | Colour | Operation |
|--------|--------|-----------|
| Wire 1 | black  | L         |
| Wire 2 | black  | N         |

### 3 Operating Data

#### 3.1 Operating Data - Electrical Interface - Input

|                                                                            |      |
|----------------------------------------------------------------------------|------|
| External voltage supply for input and output signals must be SELV conform. |      |
| Control input                                                              | None |

#### Features

#### 3.2 Electrical Operating Data

| Features                       | Condition      | Symbol | Values                 |                        |                        |                        |
|--------------------------------|----------------|--------|------------------------|------------------------|------------------------|------------------------|
| Voltage range                  | $\Delta p = 0$ | U      | 85 V                   |                        | 265 V                  | 115 V / 230 V          |
| Nominal voltage                | $\Delta p = 0$ | $U_N$  |                        | 115 V / 230 V          |                        |                        |
| Frequency                      | $\Delta p = 0$ | f      | 50 Hz                  |                        |                        | 60 Hz                  |
| Power consumption<br>Tolerance | $\Delta p = 0$ | P      | 14 W<br>+- 20 %        | 14 W<br>+- 20 %        | 14 W<br>+- 25 %        | 14 W<br>+- 25 %        |
| Speed<br>Tolerance             | $\Delta p = 0$ | n      | 2.850 1/min<br>+- 10 % | 2.850 1/min<br>+- 10 % | 2.850 1/min<br>+- 10 % | 2.850 1/min<br>+- 10 % |

#### 3.3 Operating Data - Electrical Interface -Output

|            |      |
|------------|------|
| Tacho type | None |
| Alarm type | None |

#### 3.4 Electrical Features

|                         |      |  |
|-------------------------|------|--|
| Electronic function     | None |  |
| Locked rotor protection | PWM  |  |

### 3.5 Aerodynamic

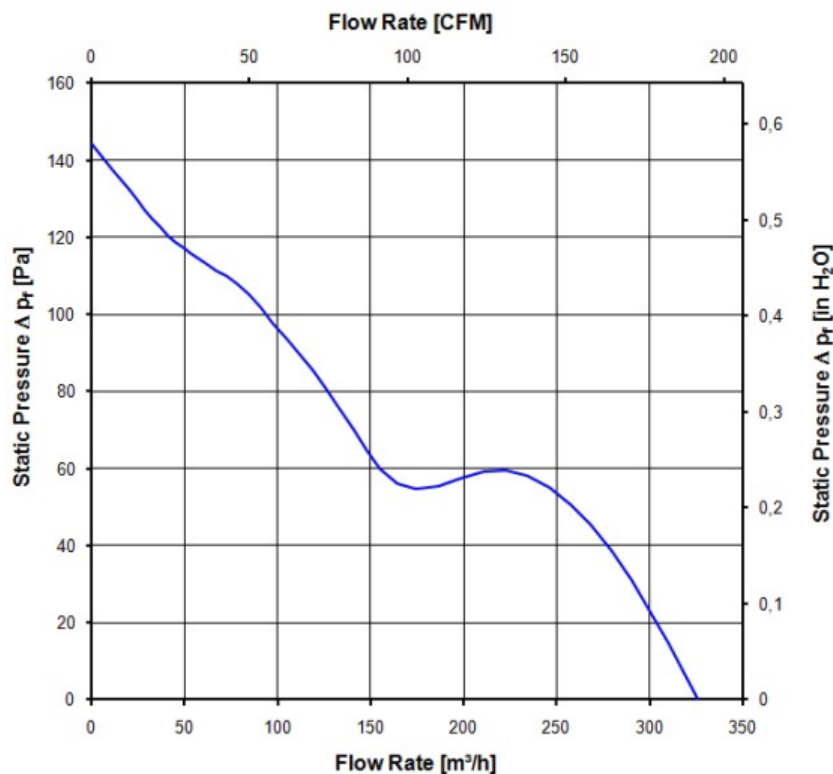
Measurement conditions: Measured with a double chamber intake rig acc. to DIN EN ISO 5801.  
Normal air density = 1,2 kg/m<sup>3</sup>; Temperature 23°C +/- 3°C;  
In the intake and outlet area should not be any solid obstruction within 0,5 m.  
The information is only valid under the specified test 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:  
2.850 1/min at free air flow      Frequency: 50 Hz      Nominal voltage: 115 V / 230 V

|                                                             |                         |
|-------------------------------------------------------------|-------------------------|
| Max. free-air flow ( $\Delta p = 0$ / $\dot{v} = \max.$ )   | 325,0 m <sup>3</sup> /h |
| Max. static pressure ( $\Delta p = \max.$ / $\dot{v} = 0$ ) | 145 Pa                  |

b) Operation condition:  
2.850 1/min at free air flow      Frequency: 60 Hz      Nominal voltage: 115 V / 230 V

|                                                             |                         |
|-------------------------------------------------------------|-------------------------|
| Max. free-air flow ( $\Delta p = 0$ / $\dot{v} = \max.$ )   | 325,0 m <sup>3</sup> /h |
| Max. static pressure ( $\Delta p = \max.$ / $\dot{v} = 0$ ) | 145 Pa                  |



### 3.6 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)  
 Measured in a semianchoic chamber with a background noise level of  $L_p(A) < 5 \text{ dB(A)}$   
 For further measurement conditions see section 3.4

a) Operation condition:

2.850 l/min at free air flow

Frequency: 50 Hz

Nominal voltage: 115 V / 230 V

|                                                                 |                                 |  |
|-----------------------------------------------------------------|---------------------------------|--|
| Optimal operating point                                         | 255,0 m <sup>3</sup> /h @ 46 Pa |  |
| Sound power level at the optimal operating point                | 5,9 bel(A)                      |  |
| Sound pressure level at free air flow, measured in rubber bands | 50,0 dB(A)                      |  |

b) Operation condition:

2.850 l/min at free air flow

Frequency: 60 Hz

Nominal voltage: 115 V / 230 V

|                                                                 |                                 |  |
|-----------------------------------------------------------------|---------------------------------|--|
| Optimal operating point                                         | 255,0 m <sup>3</sup> /h @ 46 Pa |  |
| Sound power level at the optimal operating point                | 5,9 bel(A)                      |  |
| Sound pressure level at free air flow, measured in rubber bands | 50,0 dB(A)                      |  |

## 4 Environment

### 4.1 General

|                                            |        |  |
|--------------------------------------------|--------|--|
| Min. permitted ambient temperature TU min. | -20 °C |  |
| Max. permitted ambient temperature TU max. | 72 °C  |  |
| Min. permitted storage temperature TL min. | -40 °C |  |
| Max. permitted storage temperature TL max. | 80 °C  |  |

### 4.2 Climatic requirements\*)

|                                |                                                                                                                                           |  |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|--|
| IP-protection type (certified) | IP 55 **)                                                                                                                                 |  |
| Humidity requirements          | humid temperature, cyclic; according to DIN EN 60068-2-38, 10 cycle and condensation water check; according to DIN EN ISO 6270-2, 14 days |  |
| Salt fog requirements          | None                                                                                                                                      |  |

\*) Permitted application area:

The product is for the use in partial sheltered rooms or open, roofed areas. Direct exposure to water is allowed provided that this does not prevent the normal operation. Saline ambient conditions must be avoided.

Pollution degree 3 (according DIN EN 60664-1)

It occurs conductive pollution or dry non-conductive pollution which becomes conductive due to condensation.

\*\*) The specification of the IP protection refers to the conditions mentioned in certification of the fan. The above mentioned short description of the protection scope is not final. For detailed information of the respective protection scope and definitions, see certification as well as DIN EN 60529 (protection by housings) and ISO 20653 (for vehicles) with the letter K.

#### **Short description of the IP-protection type:**

Solid particle Protection: Protected against dust.

Protection against deliberate contact: Protected against contact to hazardous parts with a wire.

Protection against water: Protected against water jets.



## 5 Safety

### 5.1 Electrical Safety

A verification of thermal conditions (normal and abnormal operation) as well as the protection against electric shock, ingress of solid foreign objects and water has to be done in conjunction with the appliance.

|                           |        |
|---------------------------|--------|
| Test voltage HV type test | 1500 V |
| Unit test voltage         |        |
| Time type test HV         | 1 s    |
| Insulation resistance     |        |
| Protection class          | II     |

### 5.2 Approval Tests

|     |                                                                                                     |
|-----|-----------------------------------------------------------------------------------------------------|
| CE  | No                                                                                                  |
| UL  | Yes / UL507, Electric Fans                                                                          |
| VDE | Yes / Approval acc. to EN 60335 (VDE 0700) - Safety for household and similar electrical appliances |
| CSA | Yes                                                                                                 |
| CCC | Yes                                                                                                 |

According to the guidelines on the application of Directive 2006/95/EC, chapter III: Scope of the "low voltage" directive, paragraph: Are "components" included in the scope? the following has to be applied:

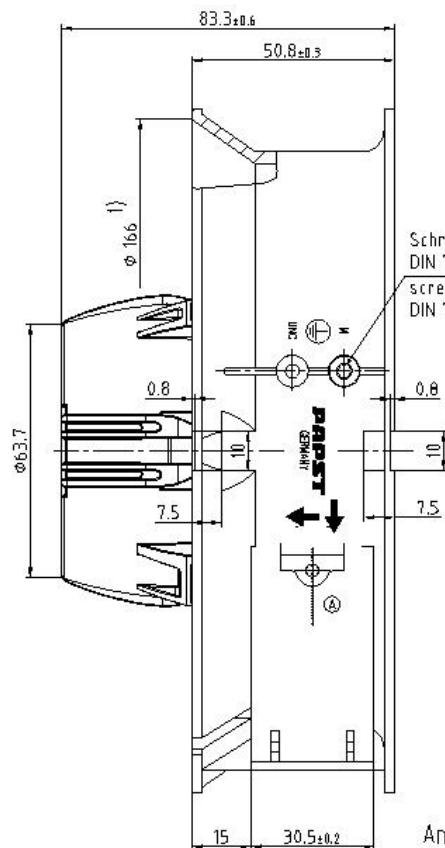
However, some types of electrical devices, designed and manufactured for being uses as basic components to be incorporated into other electrical equipment, are such that their safety to a very large extent depends on how they are integrated into the final product and the overall characteristics of the final product. These basic components include electronic and certain other components.

Taking into account these objectives of the "Low Voltage" Directive, such basic components, the safety of which can only, to a very large extent, be assessed taking into account, how they are incorporated and for which a risk assessment cannot be undertaken, then they are not covered as such by the Directive. In particular, they must not be CE marked unless covered by other Community legislation that requires CE marking. The approval tests are observed to:

U approval max.:240 V @ TU approval max.:

Legende der Zeichnung: Maßangaben in mm, alle Maße sind in mm angegeben. Alle Maße sind in mm angegeben. Alle Maße sind in mm angegeben.

Schraube nach DIN 7500, CM 4x8, Torx  
Screw according to DIN 7500, CM 4x8, Torx



Schraube: Duo-Tapite nach  
DIN 7500, CM 4x8, Torx  
screw: Duo-Tapite according to  
DIN 7500, CM 4x8, Torx

Anzahl und Länge der Litzen (L) sowie Länge Schlauch (S) siehe Spezifikation  
length (L) and number of wires and length (S) of tube see specification

1) Durchmesser für Ausschnitt ILuftauslass)  
- Axialspiel: mit Feder spielfrei verspannt

1) diameter for cutout (air outlet)  
- without axial clearance by a pre-loaded spring

|                                                                                                |  |               |  |
|------------------------------------------------------------------------------------------------|--|---------------|--|
| Tolerierung/Tolerances: DIN 7167<br>Allgemeintoleranzen/<br>Gen. tolerances: DIN ISO 2768-mK-E |  | Artikel/Title |  |
| Bezeichnung/Name                                                                               |  | axial fan     |  |
| Zeich.-Nr./<br>Dwg.-No.                                                                        |  | Blatt/Page    |  |
| Prüfung/Check                                                                                  |  | A3            |  |