

Product Data Sheet **8315100286**  
VWCF092DSGJS  
AxiACi92U-00286

**ebmpapst**

engineering a better life



AxiACi92U-00286

INDEX

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

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

2.1 General ..... 3

2.2 Connections ..... 3

**3 Operating Data ..... 4**

3.1 Electrical Interface - Input ..... 4

3.2 Electrical Operating Data ..... 4

3.3 Electrical Features ..... 5

3.4 Aerodynamics ..... 6

3.5 Sound Data ..... 7

**4 Environment ..... 8**

4.1 General ..... 8

4.2 Climatic Requirements ..... 8

**5 Safety ..... 9**

5.1 Electrical Safety ..... 9

5.2 Approval Tests ..... 9

**6 Reliability ..... 10**

6.1 General ..... 10

**1 General**

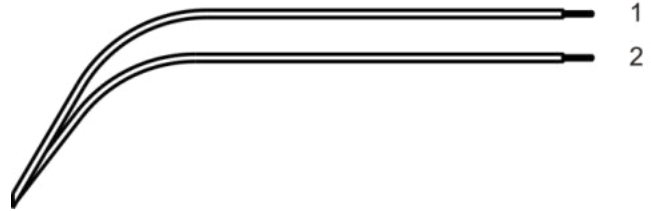
Fan type	Axial
Rotating direction looking at rotor	Counterclockwise
Airflow direction	Air outlet over struts
Bearing system	Ball bearing
Mounting position - shaft	Any

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

Width	92 mm	
Height	92 mm	
Depth	38 mm	
Diameter	0 mm	
Mass	0,23 kg	
Housing material	Plastic	
Impeller material	Plastic	
Max. torque when mounted across both mounting flanges	Wire outlet corner: 50 Ncm Remaining corners: 80 Ncm	
Screw size	ISO 4762 - M4 degreased, without an additional brace and without washer	

**2.2 Connections**

Electrical connection	Cable	
Lead wire length	L = 310 mm	
Tolerance	+/- 10 mm	
Tube length	See drawing	
Tolerance		
Wire size (AWG)	20	
Insulation diameter	1,5 mm	
Plug	See drawing	
Contact	See drawing	



Wire	Color	Operation
1	black	L1
2	brown	L2

### 3 Operating Data

#### 3.1 Electrical Interface - Input

External voltage supply for input and output signals must be SELV conform.

Control input	None
---------------	------

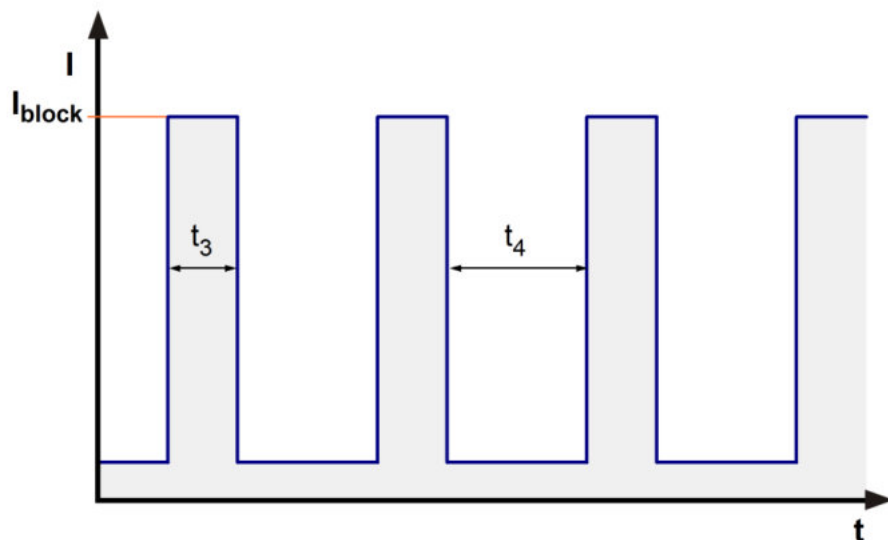
#### Features

#### 3.2 Electrical Operating Data

Features	Condition	Symbol	Values			
Voltage range Tolerance		U	100 V -10,0 %			240 V
Nominal voltage		U <sub>N</sub>		115 V	230 V	
Frequency		f	50 Hz / 60 Hz			
Power consumption Tolerance	$\Delta p = 0$	P	3,4 W + - 20 %			
Current consumption Tolerance	$\Delta p = 0$	I <sub>RMS</sub>	54 mA + - 20 %	47 mA + - 20 %	30 mA + - 20 %	30 mA + - 20 %
Speed Tolerance	$\Delta p = 0$	n	4.500 1/min + - 10 %			

3.3 Electrical Features

Electronic function	Speed-Controlled	
Locked rotor protection	Auto restart	
Clock signal at locked rotor	$t_3/t_4$ typical: 4,3 s / 10 s	



3.4 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.

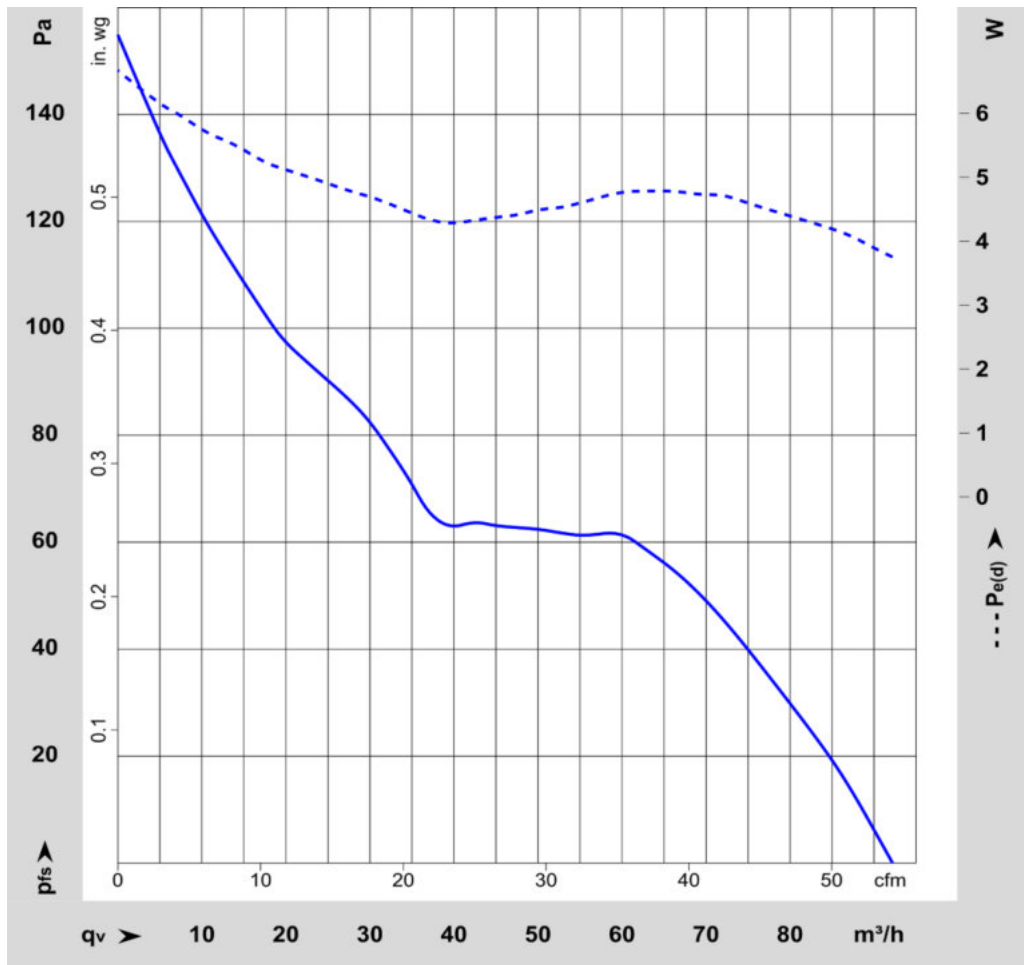
The information is only valid under the specified test conditions and may be changed by the installation conditions. If there are deviations from the standard test conditions, the characteristic values must be checked under the installed conditions. Power consumption of the fan motor when operating at normal voltage is shown. Depending on the operating conditions of the application, the power input may be higher.

a) Operation condition: 4.500 1/min at free air flow                      Frequency: 50 Hz                      Nominal voltage: 230 V

Max. free-air flow ( $\Delta p = 0 / \dot{V} = \text{max.}$ )	92 m <sup>3</sup> /h
Max. static pressure ( $\Delta p = \text{max.} / \dot{V} = 0$ )	155 Pa

b) Operation condition: 4.500 1/min at free air flow                      Frequency: 60 Hz                      Nominal voltage: 115 V

Max. free-air flow ( $\Delta p = 0 / \dot{V} = \text{max.}$ )	92 m <sup>3</sup> /h
Max. static pressure ( $\Delta p = \text{max.} / \dot{V} = 0$ )	155 Pa



**3.5 Sound Data**

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

a) Operation condition:  
 4.500 1/min at free air flow                      Frequency: 50 Hz                      Nominal voltage: 230 V

Optimal operating point	60 m <sup>3</sup> /h @ 62 Pa	
Sound power level at the optimal operating point	5,2 bel(A)	
Sound pressure level at free air flow, measured in rubber bands	44 dB(A)	

b) Operation condition:  
 4.500 1/min at free air flow                      Frequency: 60 Hz                      Nominal voltage: 115 V

Optimal operating point	60 m <sup>3</sup> /h @ 62 Pa	
Sound power level at the optimal operating point	5,2 bel(A)	
Sound pressure level at free air flow, measured in rubber bands	44 dB(A)	

## 4 Environment

### 4.1 General

Min. permitted ambient temperature TU min.	-40 °C	
Max. permitted ambient temperature TU max.	75 °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 65 (for fan only, not for connector if applicable) **)	
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	Salt fog, cyclic, in operation; according to DIN EN 60068-2-52; 10 cycles	

Permitted application area:

The product is for the use in open and unsheltered areas. Direct exposure to water as well as saline ambient conditions are allowed provided that this does not prevent the normal operation.

Pollution degree 4 (according DIN EN 60664-1)

It occurs permanent conductivity caused by conductive dust, rain or moisture.

\*\*) 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: Dust tight.

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	3000 V
Unit test voltage	VAC
Time type test HV	1 s
Insulation resistance	RI > 10 MOhm
Protection class	built-in fan

### 5.2 Approval Tests

CE	EC Declaration of Conformity	Yes
EAC	Eurasian Conformity	No
UL	Underwriters Laboratories	Yes / UL507, Electric Fans E38324
VDE	Association for Electrical, Electronic and Information Technologies	Yes / Approval acc. to EN 60335 (VDE 0700) - Safety for household and similar electrical appliances
CSA	Canadian Standards Association	No
CCC	China Compulsory Certification	Yes / GB 12350 Safety Requirements for small Power Motors

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.

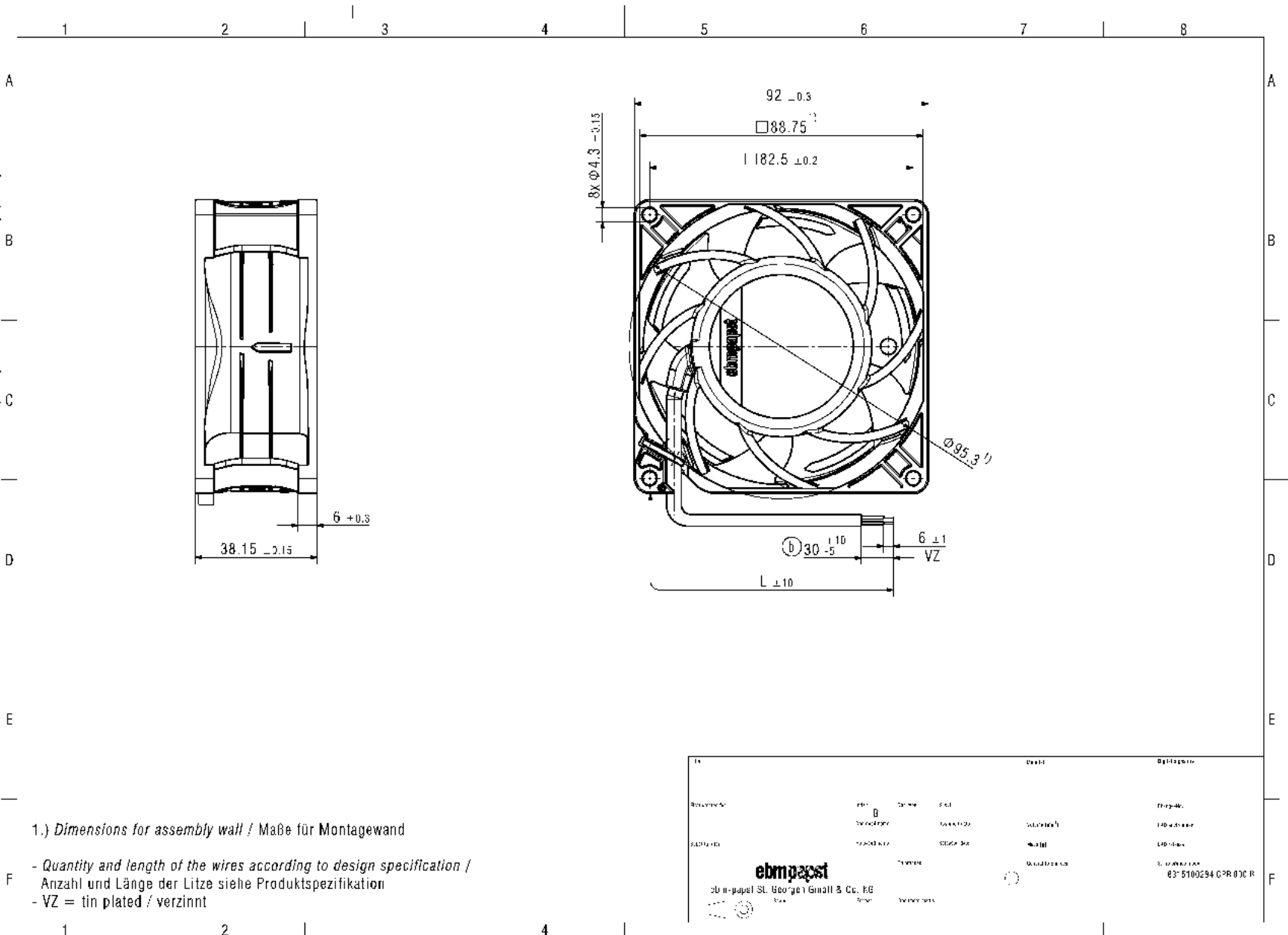
Taking into account these objectives of the "Low Voltage" Directive, such basic components, the safety of which can only, to a very large extend, be assessed taking into account, how they are incorporated and for which a risk assessment cannot be undertaken, then they are not covered as such by the Directive.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

**6 Reliability**

**6.1 General**

Life expectancy L10 at TU = 40 °C	65.000 h	
Life expectancy L10 at TU max.	25.000 h	
Life expectancy L10 acc. to IPC 9591 at TU = 40 °C	110.000 h	

The construction identification and lead-in of this drawing is valid as long as the manufacturer of this component is not notified in writing. Any changes to the design of this drawing without the manufacturer's approval is prohibited. The manufacturer shall be held liable for the payment of the manufacturing costs of this drawing. The manufacturer shall be held liable for the payment of the manufacturing costs of this drawing. The manufacturer shall be held liable for the payment of the manufacturing costs of this drawing.



- 1.) *Dimensions for assembly wall / Maße für Montagewand*
- *Quantity and length of the wires according to design specification / Anzahl und Länge der Litze siehe Produktspezifikation*
  - *VZ = tin plated / verzinkt*

Rev.	Change	By	Date
1	Initial		
2	Change		
3	Change		
4	Change		
5	Change		
6	Change		
7	Change		
8	Change		

**ebmpapst**  
 ebm-papst SL, George & Co., KG  
 83100 Zettlitz, Germany

83100 Zettlitz, Germany  
 83100 Zettlitz, Germany