Product Data Sheet AC100 NR-017 (Var.: 2speed + boost)

ebmpapst

The engineer's choice

GREEN TECH

AC100 NR-017 (Var.: 2speed + boost)

INDEX

1 General

Fan type	Fan
Rotating direction looking at rotor	Clockwise
Airflow direction	Air intake over flange
Bearing system	Ball bearing
Mounting position - shaft	Any

2 Mechanics

2.1 General

Width	0 mm	
Height	0 mm	
Depth	130 mm	
Diameter	98 mm	
Mass	0,425 kg	
Housing material	Plastic	
Impeller material	Mixed	

2.2 Connections

Electrical connection	Special design	
Lead wire length Tolerance	See drawing	
Tube length Tolerance	See drawing	
Wire size (AWG)		
Insulation diameter		
Plug	See drawing	
Contact	See drawing	

Wire	Color	Operation
1	gray	N
2	brown	L
3	black	BOOST

3 Operating Data

3.1 Electrical Interface - Input

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

Control input	2 speed via jumper + boost

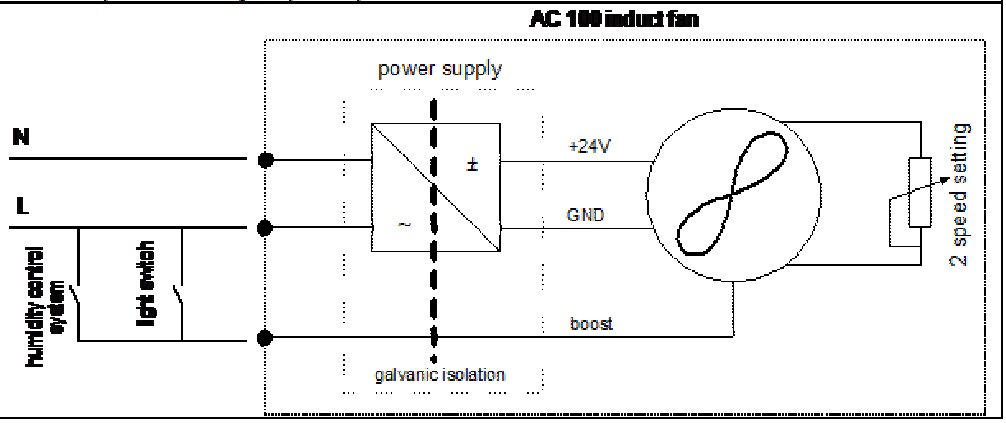
Features

Characteristics

		Switched life / boost	
		0	**1**
2 speed	**0**	860rpm	2180rpm
	1	1200rpm	2680rpm

0 = Jumper geschlossen / *jumper closed*
1 = Jumper offen / *jumper open*

Schematics



3.2 Electrical Operating Data

Measurement conditions:	Normal air density = 1,2 kg/m3; Temperature 23℃ +/- 3℃; 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.
∆p = 0:	corresp. to free air flow (see chapter aerodynamics)
I:	corresp. to arithm. mean current value

Features	Condition	Symbol	Values			
Voltage range Tolerance		U	85 V			265 V
Nominal voltage		U_N			230 V	
Frequency		f	50 Hz / 60 Hz			
Power consumption Tolerance	∆p = 0	P	4 W +- 15 %			
Current consumption Tolerance	∆p = 0	I_{RMS}	57 mA +- 15 %		30 mA +- 15 %	29 mA +- 15 %
Speed Tolerance	∆p = 0	n	3.300 1/min +- 10 %			

3.3 Electrical Features

Electronic function	Speed-Controlled	
Locked rotor protection	Auto restart	

3.4 Aerodynamics

Measurement conditions:	Measured with a double chamber intake rig acc. to DIN EN ISO 5801. Normal air density = 1,2 kg/m3; Temperature 23℃ +/ - 3℃; 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:

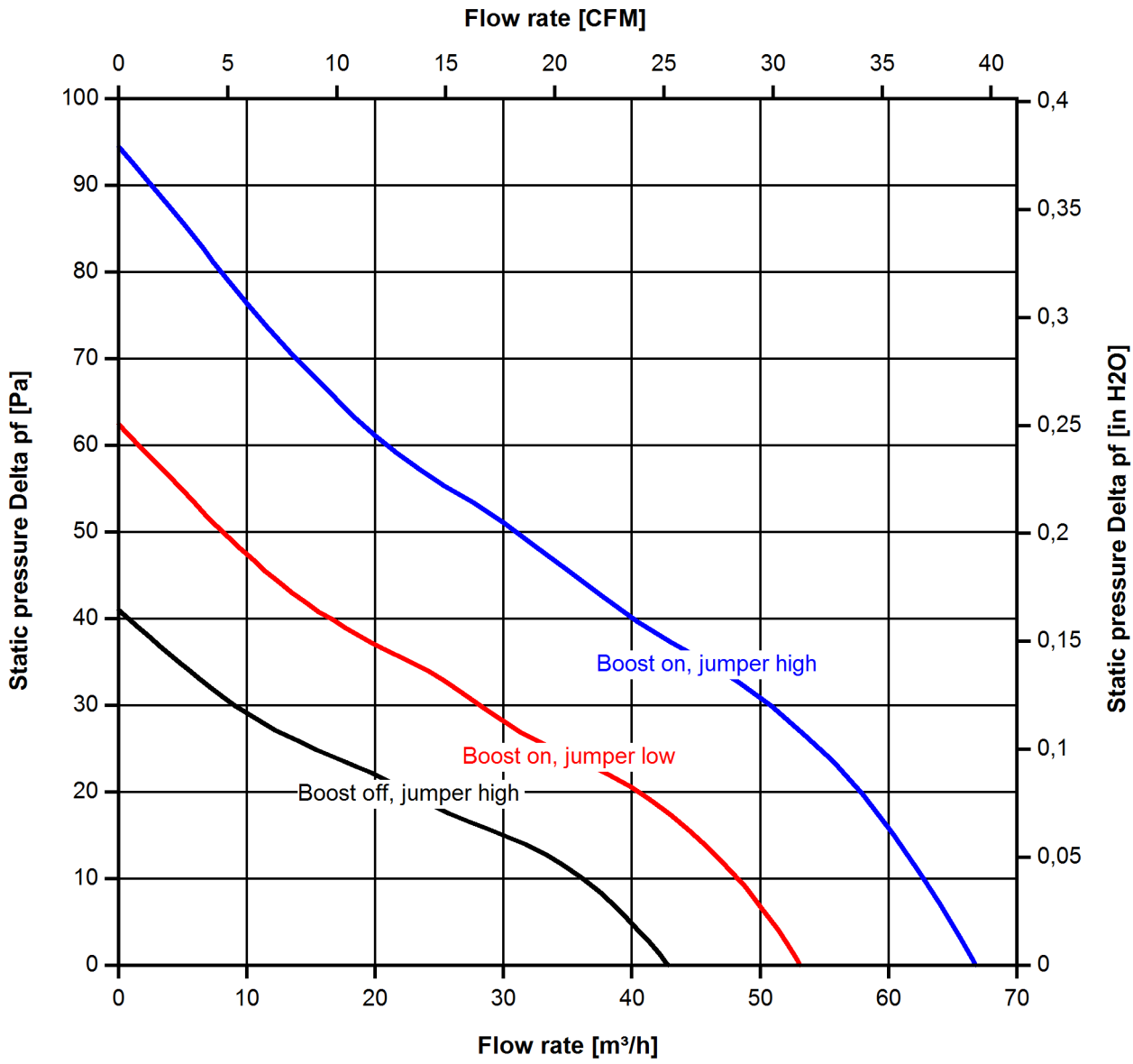
3.300 1/min at free air flow Frequency: 50 Hz Nominal voltage: 230 V

Max. free-air flow (Δp = 0 / $\dot{V}$ = max.)	67,0 m3/h
Max. static pressure (Δp = max. / $\dot{V}$ =0)	94 Pa

b) Operation condition:

Frequency: 60 Hz

Max. free-air flow (Δp = 0 / $\dot{V}$ = max.)	67,0 m3/h
Max. static pressure (Δp = max. / $\dot{V}$ =0)	94 Pa


Flow rate [CFM]
0
5
10
15
20
25
30
35
40
100
90
80
70
60
50
40
30
20
10
0
0,4
0,35
0,3
0,25
0,2
0,15
0,1
0,05
0
Static pressure Delta pf [Pa]
Static pressure Delta pf [in H2O]
Boost on, jumper high
Boost on, jumper low
Boost off, jumper high
0
10
20
30
40
50
60
70
Flow rate [m³/h]

3.5 Sound Data

Measurement conditions:	Sound pressure level: 1 meter distance between microphone and the air intake. Measured in a semianchoic chamber with a background noise level of Lp(A) < 5 dB(A) For further measurement conditions see chapter aerodynamics.

a) Operation condition:
3.300 1/min at free air flow — Frequency: 50 Hz — Nominal voltage: 230 V
b) Operation condition:
Frequency: 60 Hz

4 Environment

4.1 General

Min. permitted ambient temperature TU min.	-5 °C	
Max. permitted ambient temperature TU max.	50 °C	
Min. permitted storage temperature TL min.	-40 °C	
Max. permitted storage temperature TL max.	85 °C	

4.2 Climatic Requirements

Humidity requirements	humid heat, cyclic; according to DIN EN 60068-2-30, 6 cycle	
Water exposure	Splash water check IPX4; according to DIN EN 60529 VDE 0470, not certified	
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 3 (according DIN EN 60664-1)
It occurs conductive pollution or dry non-conductive pollution which becomes conductive due to condensation.

5 Safety

5.1 Electrical Safety

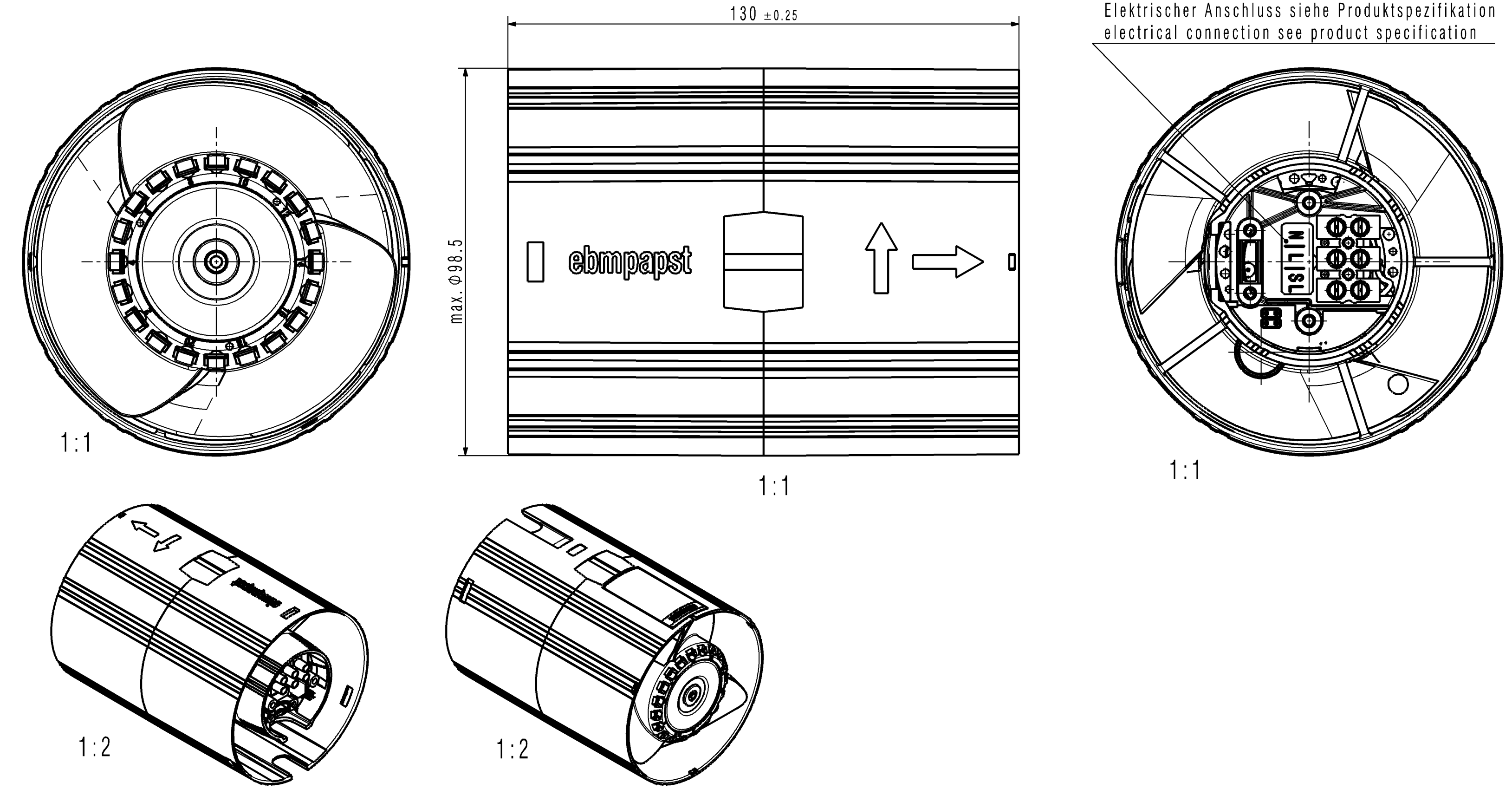
A verification of thermal conditions (normal and abnormal operation) as well as the protection against electric shock, ingress of solid foreign objects and water has to be done in conjuction with the appliance.

Test voltage HV type test	1500 V
Unit test voltage	VAC
Time type test HV	60 s
Insulation resistance	RI > 10 MOhm
Protection class	built-in fan

5.2 Approval Tests

CE	EC Declaration of Conformity	Yes
EAC	Eurasian Conformity	Yes
UL	Underwriters Laboratories	No
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	Not applicable

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.

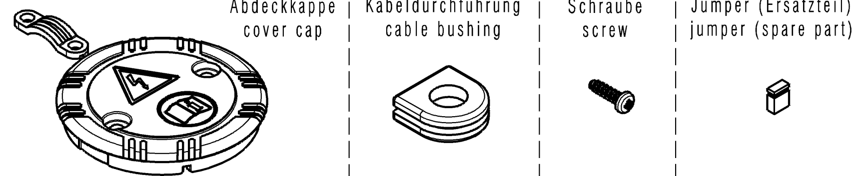


Elektrischer Anschluss siehe Produktspezifikation
electrical connection see product specification

Axialspiel mit Feder spielfrei verspannt
without axial clearance by a pre-loaded spring

Im Lieferumfang enthalten / included in delivery

1x Zugentlastungsklemme strain relief clamp	1x Abdeckkappe cover cap	1x Kabeldurchführung cable bushing	4x Schraube screw	1x Jumper (Ersatzteil) jumper (spare part)



SAP-Status/State	Aend.-Nr./ Change-No.	CATIA-System-Version/ CATIA-System-Version	CAD-Umgebung/ CAD-Environment
		9203510017 CPR000 - 6225001000 CPA000A 3116100022 CPA000 -	
		3D-Referenzmodell / 3D-Referencemodel	

Tolerierung / Tolerances:

Allgemeintoleranzen / Gen. Tolerances:

	Datum	Name
Bearb./ Drawn		
Gepr./ Checked		
Freig./ Releas.		

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Werkstoff / Material:
Volumen / Volume (mm^3):
Gewicht / Mass (g):
Artikel / Title:
Zchg.-Nr./ Drawing No:
Ers.f.Zchg. / Replaces:
Dokumenttyp / Type of Document
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