Product Data Sheet ACi 4420 HHR

ebmpapst

Die Wahl der Ingenieure

GREEN TECH

ACi 4420 HHR

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1 General

Fan type	Fan
Rotating direction looking at rotor	Clockwise
Airflow direction	Air outlet over struts
Bearing system	Ball bearing
Mounting position	Any

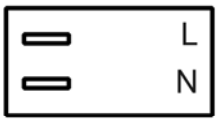
2 Mechanics

2.1 General

Width	120,0 mm	
Height	120,0 mm	
Depth	38,0 mm	
Diameter	0,0 mm	
Mass	0,275 kg	
Housing material	Plastic	
Impeller material	Plastic	
Max. torque when mounted across both mounting flanges Screw size	wire outlet corner: 50 Ncm remaining corners: 80 Ncm ISO 4762 - M4 degreased, without an additional brace and without washer	

2.2 Connections

Electrical connection	Plug	



3 Operating Data

3.1 Operating Data - Electrical Interface - Input

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

3.2 Electrical Operating Data

Features	Condition	Symbol	Values			
Voltage range	Δp = 0	U				
Nominal voltage	Δp = 0	U_N		230 V		
Frequency	Δp = 0	f		50 Hz		
Power consumption Tolerance	Δp = 0	P		4,4 W +- 20,0 %		
Speed Tolerance	Δp = 0	n		3.300 1/min +- 10,0 %		

3.3 Operating Data - Electrical Interface - Output

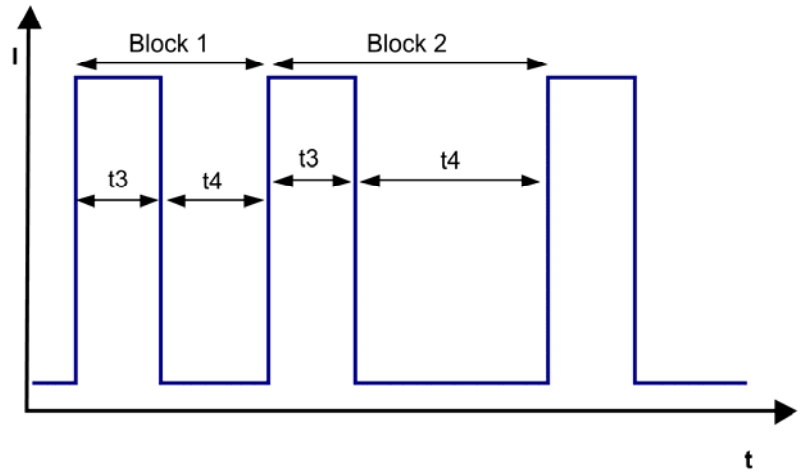
External voltage supply for input and output signals must be SELV conform.

Tacho type	None

Alarm type	None

3.4 Electrical Features

Electronic function	Speed-Controlled	
Locked rotor protection	Auto restart	



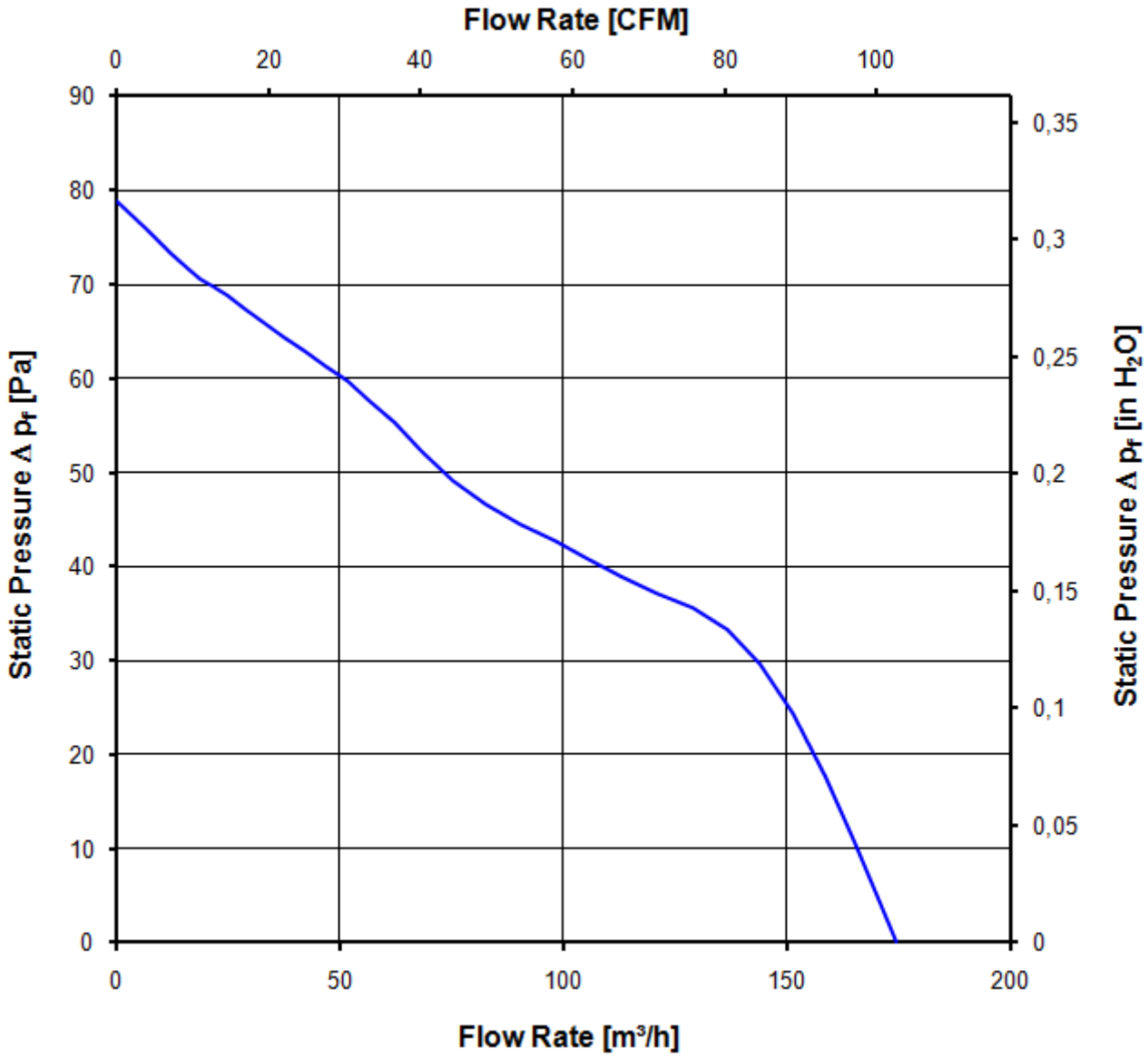
3.5 Aerodynamics

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

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

Max. free-air flow (Δp = 0 / V̇ = max.)	175,0 m3/h
Max. static pressure (Δp = max. / V̇ =0)	78 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 Lp(A) < 5 dB(A) For further measurement conditions see section 3.4

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

Optimal operating point	142,0 m3/h @ 27 Pa	
Sound power level at the optimal operating point	5,5 bel(A)	
Sound pressure level at free air flow, measured in rubber bands	43,0 dB(A)	

4 Environment

4.1 General

Min. permitted ambient temperature TU min.	-20 °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*)

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	

*) Permittet 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.**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	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	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

6 Reliability

6.1 General

Life expectancy L10 at TU = 40 °C	65.000 h	
Life expectancy L10 at TU max.	30.000 h	
Life expectancy L10 Delta (40 °C)	130.000 h	
Life expectancy L10 acc. to IPC 9591 at TU = 40 °C	110.000 h	

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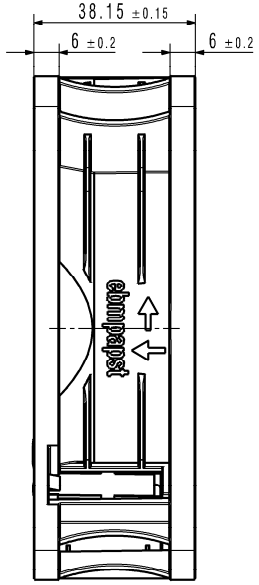
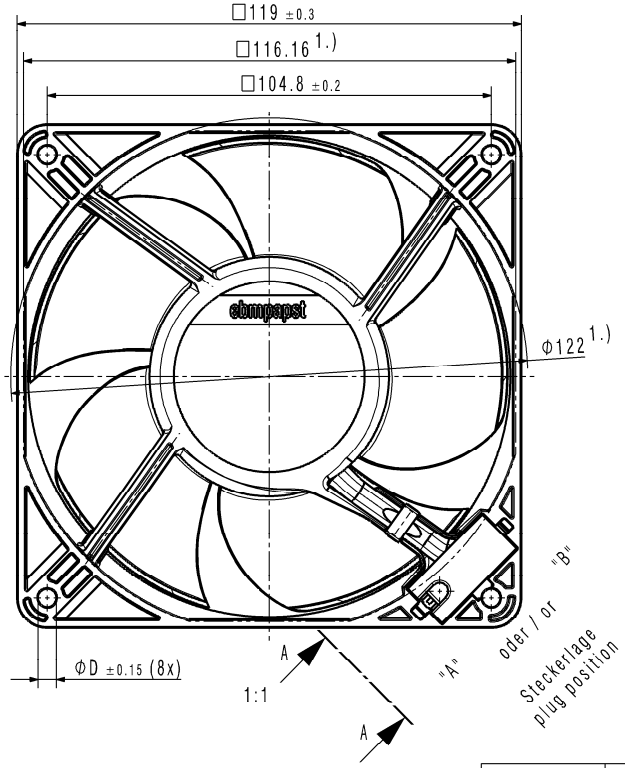
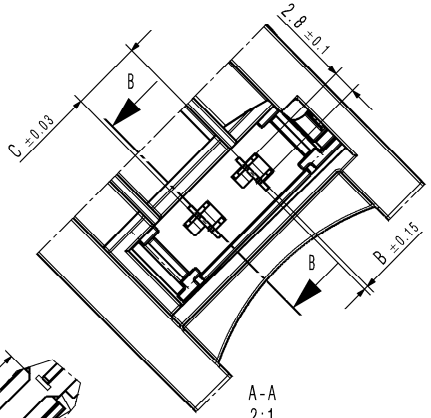
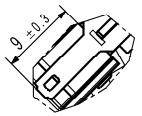
Refer to protection notice DIN ISO 16016!









Erzeugnis-Nr. product-no.	Typ model	Befestigungsbohrung Ø mounting hole Ø D	Steckermasse plug dimension B / C	Steckerlage plug position "A" / "B"
9203509001	ACi 4420 HH	4.3	0.5 / 8.5	"A"
(A) 9203509101	ACi 4410 HH	4.3	0.5 /8.5	" A "

SAP-Status/State	Aend.-Nr./ Change-No.	CATIA-System-Version/ CATIA-System-Version	CAD-Umgebung/ CAD-Environment	Werkstoff / Material:	Volumen / Volume (mm^3):
					Gewicht / Mass (g):
		9203509001 CPR000A		Artikel / Title:	
		3D-Referenzmodell / 3D-Referencemodel			
Tolerierung / Tolerances:		Datum	Name		
		Bearb./ Drawn			
Allgemeintoleranzen / Gen. Tolerances:		Gepr./ Checked		Zchg.-Nr./ Drawing No:	Ers.f.Zchg. / Replaces:
		Freig./ Releas.			
		ebmpapst		Dokumenttyp / Type of Document	Teildokument (Blatt/Page) / Index / Index / Format / Size: / Massstab/Scale
		ebm-papst St.Georgen GmbH & Co KG			

1.) Maße für Montagewand
1.) dimension for worktop mounting
- Kein Axialspiel bei Kugellager durch Federausgleich
  no axial clearence of ball bearings conditional in a pre-load spring