

KARTA KATALOGOWA

4114 NHHR

Wentylator osiowy kompaktowy DC

Producent: ebm-papst



Dane znamionowe		Budowa	
Napięcie znamionowe	24 V DC (18...28 V DC)	Wymiary	119 × 119 × 38 mm
Prędkość obrotowa	4750 obr/min	Materiał wirnika	tworzywo sztuczne
Pobór mocy	15,5 W	Obudowa	metal
Pobór prądu	650 mA	Łożyskowanie	kulkowe
Wydajność	250 m³/h	Trwałość L10 (40 °C)	70000 h
Maks. ciśnienie statyczne	170 Pa		
Poziom ciśnienia akustycznego	59 dB(A)		
Poziom mocy akustycznej	6,7 B		
Temperatura otoczenia	-20...+60 °C		

Dane na okładce odczytane z karty produktu ebm-papst (oryginał na kolejnych stronach).
 Producent zastrzega możliwość zmian.

Dobór, wycena i dostawa – zapytaj LUFTBERG

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Product Data Sheet

9294310247
VUC0119YUJBZ
4114 NHHR-247

ebm**papst**

The engineer's choice



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1 General

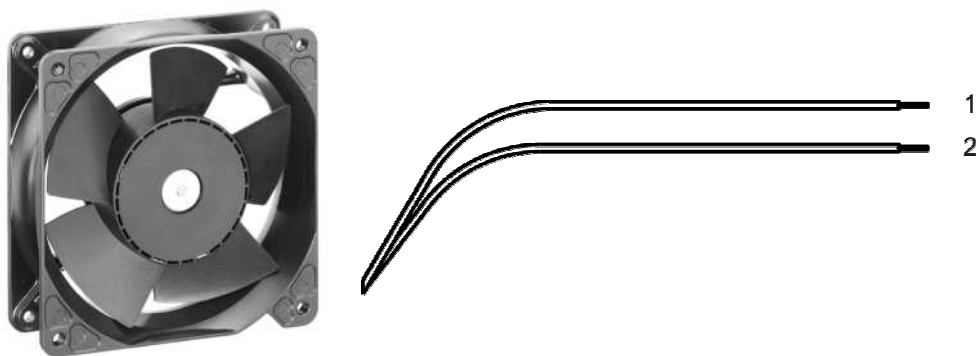
Fan type	Fan	
Rotating direction looking at rotor	Clockwise	
Airflow direction	Air intake over struts	
Bearing system	Ball bearing	
Mounting position - shaft	Any	

2 Mechanics
2.1 General

Width	119,0 mm	
Height	119,0 mm	
Depth	38,0 mm	
Mass	0,390 kg	
Housing material	Metal	
Impeller material	Plastic	

2.2 Connections

Electrical connection	Wires - Plug	
Lead wire length	L = 314 mm	
Tolerance	+/- 10,0 mm	
Plug	See drawing	
Contact	See drawing	



Wire	Color	Operation	Wire size	Insulation diameter
1	red	+ UB	AWG 22	1,7 mm
2	blue	- GND	AWG 22	1,7 mm

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3 Operating Data
3.1 Electrical Operating Data

Measurement conditions: Normal air density = 1,2 kg/m³; 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.

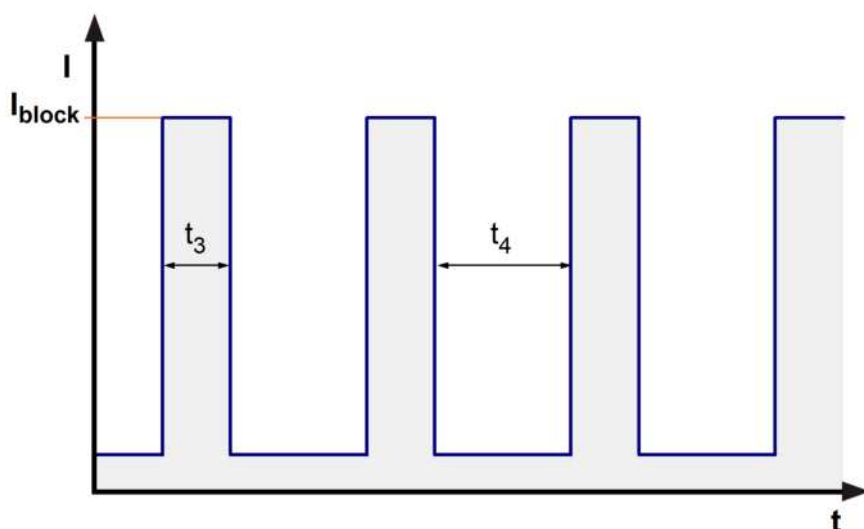
Δp = 0: corresp. to free air flow (see chapter aerodynamics)
 I: corresp. to arithm. mean current value

Features	Condition	Symbol	Values		
Voltage range		U	18 V		28 V
Nominal voltage		U _N		24 V	
Power consumption	Δp = 0	P	7,4 W	15,5 W	15,1 W
Tolerance	0010		+/- 15 %	+/- 15 %	+/- 15 %
Current consumption	Δp = 0	I	410 mA	650 mA	540 mA
Tolerance	0010		+/- 15 %	+/- 12,5 %	+/- 15 %
Speed	Δp = 0	n	3.900 1/min	4.750 1/min	5.200 1/min
Tolerance	0010		+/- 10 %	+/- 10 %	+/- 10 %

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3.2 Electrical Features

Electronic function	None	
Reversed polarity protection	Rectifying diode	
Max. residual current at U_N	$I_F \leq 30 \mu A$	
Locked rotor protection	Auto restart	
Locked rotor current at U_N	I_{block} approx. 2.800 mA	
Clock signal at locked rotor	t_3 / t_4 typical: 0,3 s / 1,2 s	


3.3 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. 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:

4.750 1/min at free air flow		
Max. free-air flow ($\Delta p = 0 / \dot{V} = \max.$)	250,0 m ³ /h	
Max. static pressure ($\Delta p = \max. / \dot{V} = 0$)	170 Pa	

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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)
 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:

4.750 1/min at free air flow

Optimal operating point	180,0 m ³ /h @ 62 Pa	
Sound power level at the optimal operating point	6,7 bel(A)	
Sound pressure level at free air flow, measured in rubber bands	59,0 dB(A)	

4 Environment
4.1 General

Min. permitted ambient temperature TU min.	-20 °C	
Max. permitted ambient temperature TU max.	60 °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/m ² d, 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.

Please require severity levels and specification parameters from the responsible development departments.

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5 Safety
5.1 Electrical Safety

Dielectric strength DIN EN 60950 (VDE 0805) and DIN EN 60335 (VDE 0700) A.) Type test Measuring conditions: After 48h of storage at 95% R.H. and 25°C. No arcing or breakdown is allowed! All connections together to ground. B.) Routine test Measuring conditions: At indoor climate. No arcing or breakdown is allowed! All connections together to ground.	500 VAC / 1 Min. 850 VDC / 1 Sec.	
Isolation resistance Measuring conditions: After 48h of storage at 95% R.H. and 25°C measured with U=500 VDC for 1 min.	RI > 10 MOhm	
Clearance / creepage distance	1,0 mm / 1,2 mm	
Protection class	III	

5.2 Approval Tests

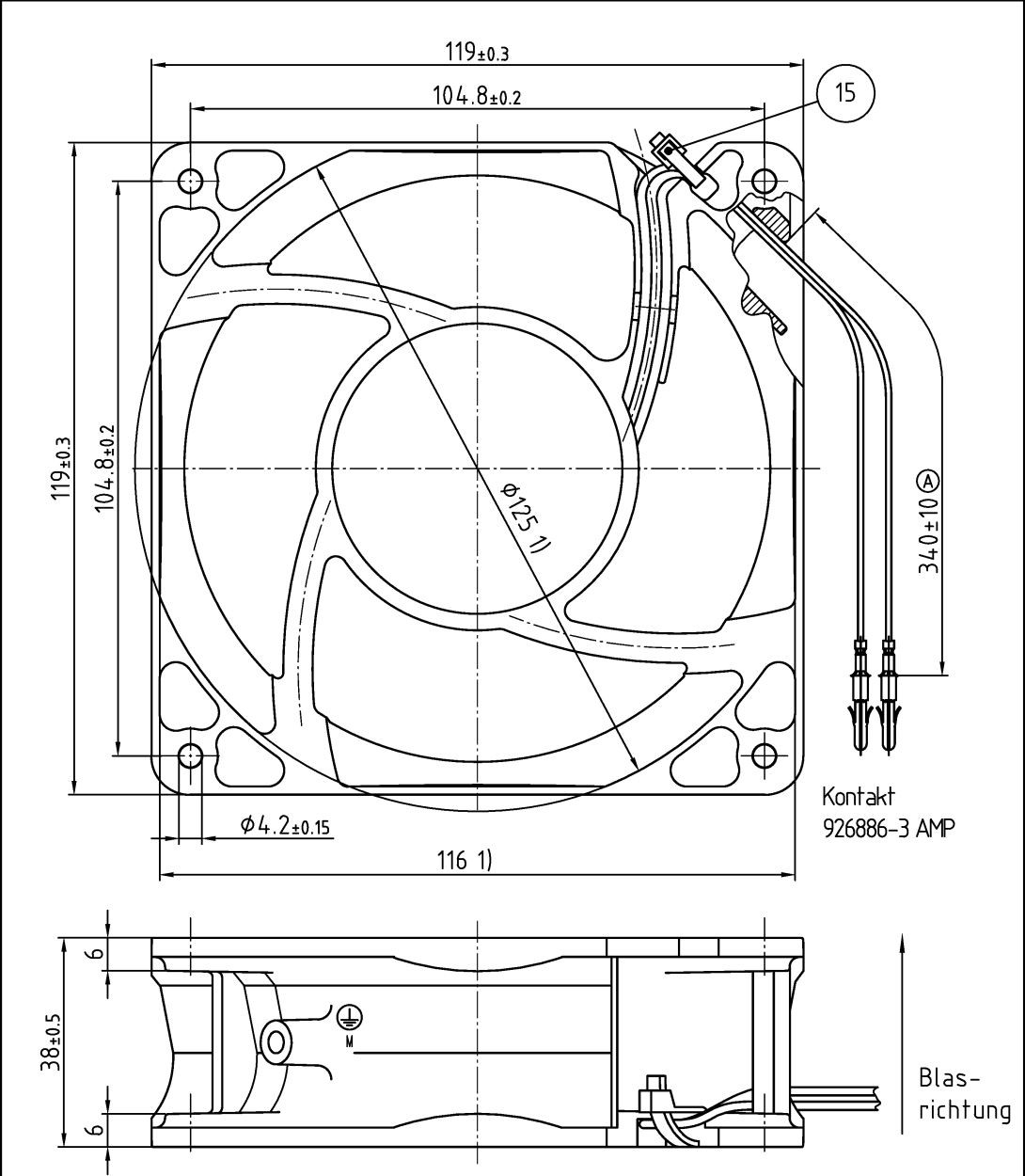
CE	EC Declaration of Conformity	No
EAC	Eurasian Conformity	Yes
UL	Underwriters Laboratories	Yes / UL507, Electric Fans E38324
VDE	Association for Electrical, Electronic and Information Technologies	Yes / Approval acc. to EN 60950 (VDE 0805) - Information technology equipment
CSA	Canadian Standards Association	Yes / C22.2 No. 113 Fans and Ventilators
CCC	China Compulsory Certification	Not applicable

6 Reliability
6.1 General

Life expectancy L10 at TU = 40 °C	70.000 h	
Life expectancy L10 at TU max.	45.000 h	
Life expectancy L10 acc. to IPC 9591 at TU = 40 °C	117.500 h	

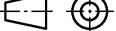
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Refer to protection notice DIN ISO 16016!



Axialspiel bei
- Kugellagerung (K): 0 mit Federausgleich

1) Maße für Montagewand

				ebmpapst		Werkstoff/Material:				Volumen/Volume (mm³)		
SAP-Status/State	Aend.-Nr./Change-No.	AutoCAD-System-Version		CAD-Umgebung/ CAD-Enviroment						Gewicht/Mass (g):		
		Datum/Date		Name/Name								
		Bearb./ Drawn			Artikel/Title							
		Gepr./ Checked										
Tolerierung/Tolerances:		Freig./ Releas.										
Allgemeintoleranzen/Gen. tolerances:		ebmpapst				Zchg.-Nr./ Drawing.-No.:				Ers.f.Zchg./Replaces:		
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