

KARTA KATALOGOWA

4184 NXHH

Wentylator osiowy kompaktowy DC

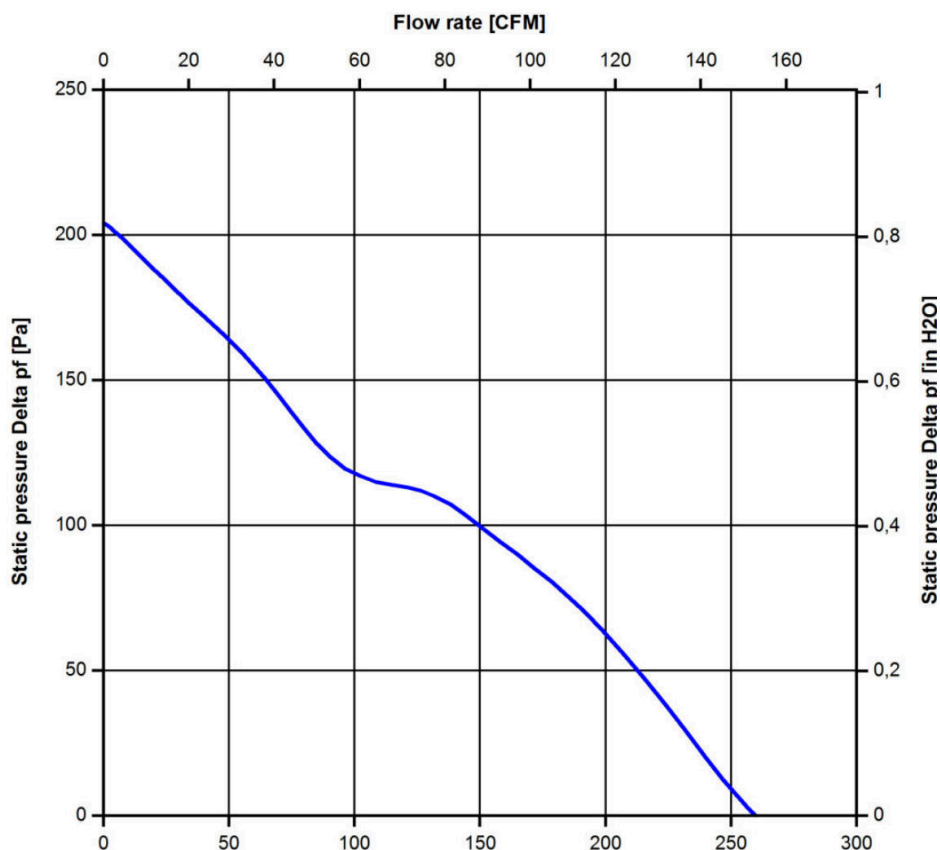
Producent: ebm-papst



Zdjęcie poglądowe

Dane znamionowe		Budowa	
Napięcie znamionowe	24 V DC (zakres 12...25 V)	Wymiary	119 × 119 × 38 mm
Prędkość obrotowa	4900 obr/min	Materiał obudowy	metal
Pobór mocy	12 W	Materiał wirnika	tworzywo sztuczne
Pobór prądu	508 mA	Łożyskowanie	kulkowe
Wydajność maks. (swobodny wylot)	260 m³/h	Kierunek przepływu	zasysanie przez żebra
Maks. ciśnienie statyczne	204 Pa	Zabezpieczenie	ochrona przed zablokowaniem, auto-restart
Poziom ciśnienia akustycznego	60 dB(A)	Masa	0,38 kg
Temperatura otoczenia	-30...+55 °C	Nr artykułu	9294310217

Charakterystyka przepływowa (24 V DC)



Dane na podstawie karty producenta ebm-papst (oryginał na kolejnych stronach).

Wartości znamionowe przy 24 V DC, swobodny wylot; producent zastrzega możliwość zmian.

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Product Data Sheet**9294310217**
VUC0119YUJBS
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Product Data Sheet
9294310217
 VUC0119YUJBS
 4184 NXHH

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	0,380 kg	
Housing material	Metal	
Impeller material	Plastic	
Max. torque when mounted across both mounting flanges	Wire outlet corner: 170 Ncm Remaining corners: 300 Ncm	
Screw size	ISO 4762 - M3 degreased, without an additional brace and without washer	

2.2 Connections

Electrical connection	Plug	
Lead wire length	See drawing	
Tolerance		
Plug	See drawing	
Contact	See drawing	



Product Data Sheet
9294310217
 VUC0119YUJBS
 4184 NXHH

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.

$\Delta p = 0$: corresp. to free air flow (see chapter aerodynamics)
 I: corresp. to arithm. mean current value

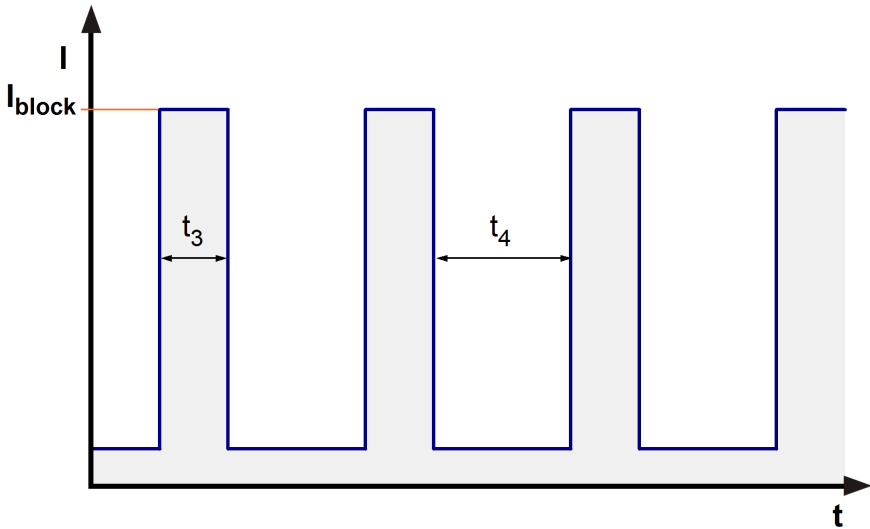
Features	Condition	Symbol	Values		
Voltage range		U	12 V		25 V
Nominal voltage		U _N		24 V	
Power consumption	$\Delta p = 0$	P	2,9 W	12 W	15 W
Tolerance	0010		+/- 17,5 %	+/- 12,5 %	+/- 15 %
Current consumption	$\Delta p = 0$	I	240 mA	508 mA	590 mA
Tolerance	0010		+/- 17,5 %	+/- 12,5 %	+/- 15 %
Speed	$\Delta p = 0$	n	2.800 1/min	4.900 1/min	5.100 1/min
Tolerance	0010		+/- 12,5 %	+/- 7,5 %	+/- 10 %
Starting current consumption				2.870 mA	

Product Data Sheet

9294310217
VUC0119YUJBS
4184 NXHH

3.2 Electrical Features

Electronic function	None	
Reversed polarity protection	Rectifying diode	
Max. residual current at U_N	$I_F \leq 20 \mu A$	
Locked rotor protection	Auto restart	
Locked rotor current at U_N	I_{block} approx. 2.870 mA	
Clock signal at locked rotor	t_3 / t_4 typical: 0,3 s / 1,6 s	



Product Data Sheet
9294310217
 VUC0119YUJBS
 4184 NXHH

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;

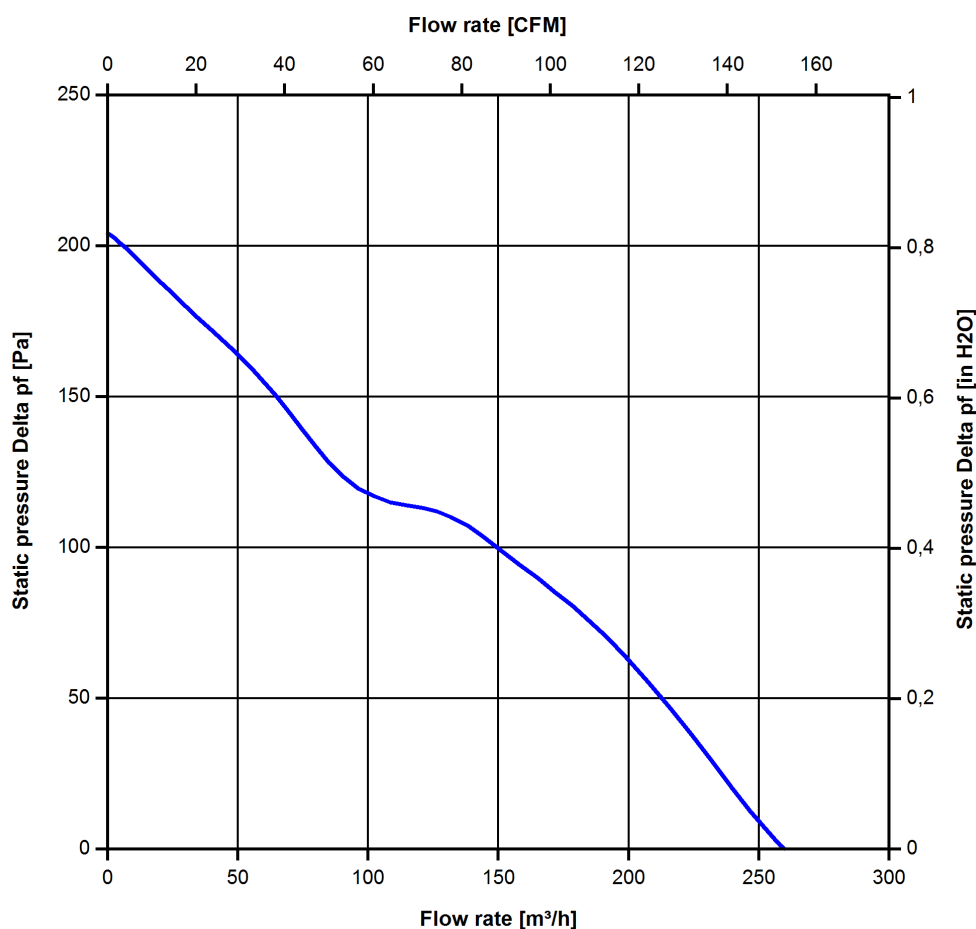
In the intake and outlet area should not be any solid obstruction within 0,5 m. Motor shaft horizontal.

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:

4.900 1/min at free air flow

Max. free-air flow ($\Delta p = 0 / \dot{V} = \max.$)	260,0 m ³ /h	
Max. static pressure ($\Delta p = \max. / \dot{V} = 0$)	204 Pa	



Product Data Sheet

9294310217
VUC0119YUJBS
4184 NXHH

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:

4.900 1/min at free air flow

Optimal operating point	160,0 m ³ /h @ 100 Pa	
Sound power level at the optimal operating point	6,7 bel(A)	
Sound pressure level at free air flow, measured in rubber bands	60,0 dB(A)	

4 Environment

4.1 General

Min. permitted ambient temperature TU min.	-30 °C	
Max. permitted ambient temperature TU max.	55 °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, constant; according to DIN EN 60068-2-78, 14 days	
Water exposure	None	
Dust requirements	None	
Salt fog requirements	None	

Permitted application area:

The product is intended for use in sheltered rooms with controlled temperature and controlled humidity. Directly exposure to water must be avoided.

Pollution degree 1 (according DIN EN 60664-1)

There is either no pollution or it occurs only dry, non-conductive pollution. The pollution has no negative impact.

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

4.3 EMC

Kind	Radiated Emission; 30 MHz - 1000 MHz
According	DIN EN 55032:2016-02
Check accuracy / Limit	Class B
Result	Below limit Class B

Product Data Sheet

9294310217
 VUC0119YUJBS
 4184 NXHH

Kind	Electrostatic Discharge Immunity Test
According	DIN EN 61000-4-2:2001-12
Check accuracy / Limit	Contact Discharge +/- 4 kV; Air Discharge +/- 8 kV
Result	A: The monitored function operates as designed during and after exposure to a disturbance.

Product Data Sheet
9294310217
 VUC0119YUJBS
 4184 NXHH

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	Yes
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

The approval tests are observed to:

U approval max.: 25,0 V @ TU approval max.: 55,0 °C

6 Reliability
6.1 General

Life expectancy L10 at TU = 40 °C	70.000 h	
Life expectancy L10 at TU max.	50.000 h	
Life expectancy L10 acc. to IPC 9591 at TU = 40 °C	117.500 h	

