

Product Data Sheet

9695480314
VWS0148PULCZ
6314 NH

ebmpapst

The engineer's choice



6314 NH

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1 General

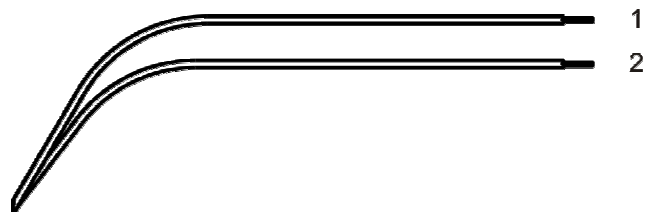
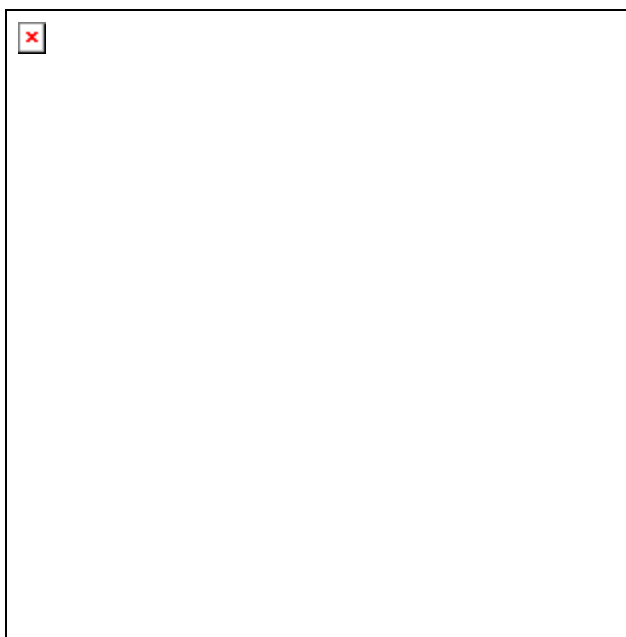
Fan type	Fan	
Rotating direction looking at rotor	Counterclockwise	
Airflow direction	Air outlet over struts	
Bearing system	Ball bearing	
Mounting position - shaft	Any	

2 Mechanics**2.1 General**

Depth	51,0 mm	
Diameter	172,0 mm	
Mass	0,730 kg	
Housing material	Metal	
Impeller material	Plastic	
Max. torque when mounted across both mounting flanges Screw size	Wire outlet corner: 600 Ncm Remaining corners: 600 Ncm ISO 4762 - M4 degreased, without an additional brace and without washer	

2.2 Connections

Electrical connection	Wires	
Lead wire length	L = 365 mm	
Tolerance	+ - 10,0 mm	
Tube length	S = 10 mm	
Tolerance	+ - 5,0 mm	



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

The auxiliaries shown on the schematic diagram (which are required for the intended use) are not part of our delivery.

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)

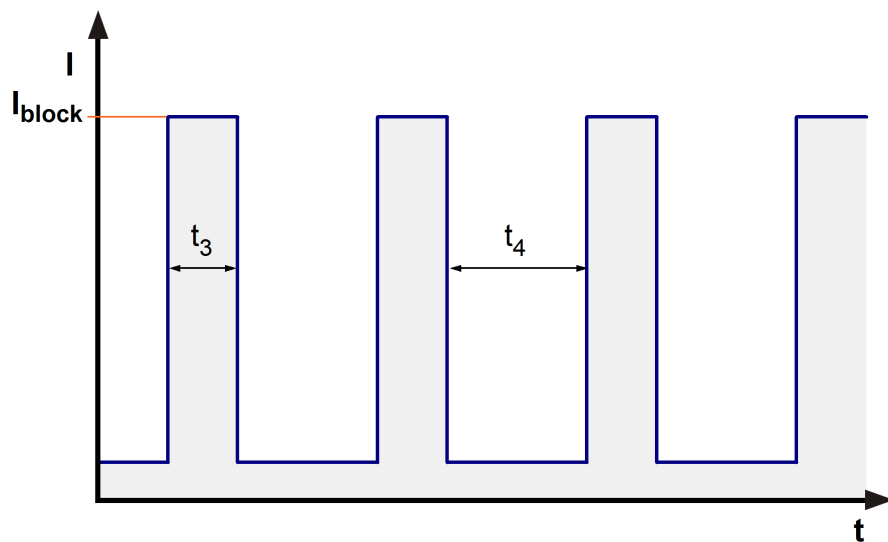
I: corresp. to arithm. mean current value

>90% PWM; f = 2 kHz or broken lead wire (open control input)

Features	Condition	Symbol	Values		
Voltage range		U	16 V		32 V
Nominal voltage		U_N		24,0 V	
Power consumption	$\Delta p = 0$	P	12 W	23 W	23,5 W
Tolerance	0010		+/- 10,0 %	+/- 10,0 %	+/- 10,0 %
Current consumption	$\Delta p = 0$	I	760 mA	940 mA	740 mA
Tolerance	0010		+/- 10,0 %	+/- 10,0 %	+/- 10,0 %
Speed	$\Delta p = 0$	n	2.700 1/min	3.500 1/min	3.500 1/min
Tolerance	0010		+/- 10,0 %	+/- 10,0 %	+/- 10,0 %

3.2 Electrical Features

Electronic function	None	
Reversed polarity protection	Rectifying diode	
Max. residual current at U_N	$I_F \leq 5 \text{ mA}$	
Locked rotor protection	Auto restart	
Locked rotor current at U_N	I_{block} approx. 1.000 mA	
Clock signal at locked rotor	t_3 / t_4 typical: 0,5 s / 10,0 s	



This fan has a startup delay of 2,2 seconds after applying supply voltage.

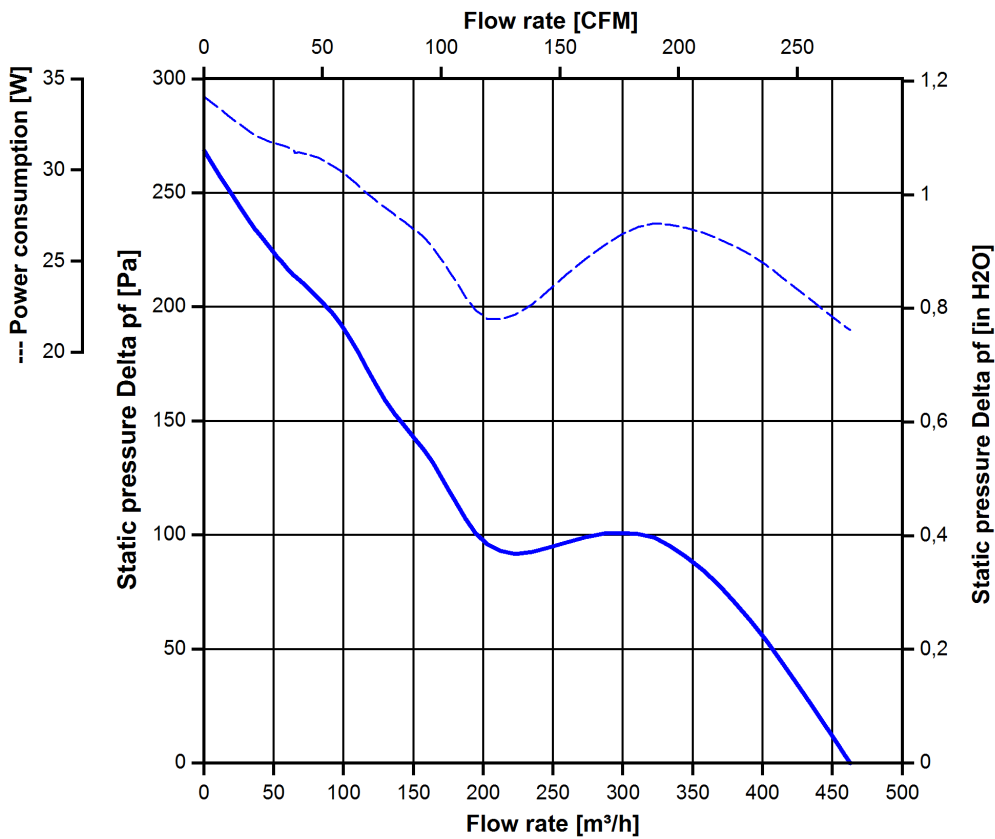
Internal Fuse: Littelfuse Nano2 Fuse Very Fast-Acting 451/453 Series 4A / 75V

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. 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:

3.500 1/min at free air flow		
Max. free-air flow ($\Delta p = 0 / \dot{V} = \text{max.}$)	463 m ³ /h	
Max. static pressure ($\Delta p = \text{max.} / \dot{V} = 0$)	268 Pa	



3.4 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 $L_p(A) < 5 \text{ dB(A)}$
For further measurement conditions see chapter aerodynamics.

a.) Operation condition:

3.500 1/min at free air flow

4 Environment

4.1 General

Min. permitted ambient temperature TU min.	-20 °C	
Max. permitted ambient temperature TU max.	70 °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.

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.	1000 VAC / 1 Min.	
B.) Routine test Measuring conditions: At indoor climate. No arcing or breakdown is allowed! All connections together to ground.	1700 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 / 1,5 mm	
Protection class	III	

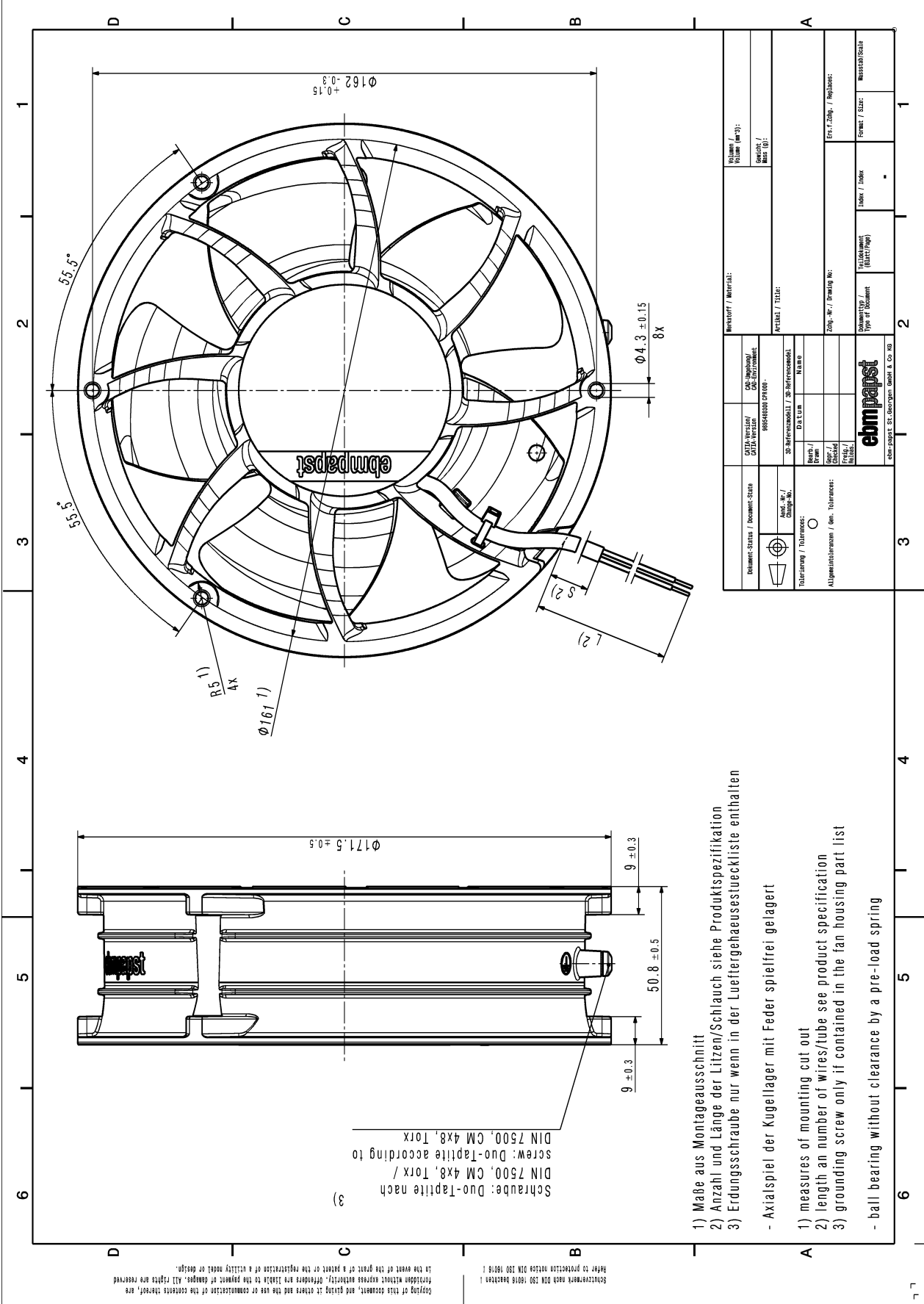
5.2 Approval Tests

CE	EC Declaration of Conformity	No
EAC	Eurasian Conformity	Yes
UL	Underwriters Laboratories	Yes
VDE	Association for Electrical, Electronic and Information Technologies	Yes
CSA	Canadian Standards Association	Yes
CCC	China Compulsory Certification	Not applicable

6 Reliability

6.1 General

Life expectancy L10 at TU = 40 °C	82.500 h	
Life expectancy L10 at TU max.	32.500 h	
Life expectancy L10 acc. to IPC 9591 at TU = 40 °C	140.000 h	



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Stichtwerk nach DIN 150 1810 beachten!

Refer to protection notes DIN 150 1810!

- 1) Maße aus Montageausschnitt
 2) Anzahl und Länge der Litzen/Schlauch siehe Produktspezifikation
 3) Erdungsschraube nur wenn in der Lüftergehäusesteckleiste enthalten
- Axialspiel der Kugellager mit Feder spielfrei; gelagert
- 1) measures of mounting cut out
 2) length an number of wires/tube see product specification
 3) grounding screw only if contained in the fan housing part list
- ball bearing without clearance by a pre-load spring

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APPROVED / Approved	88849989 07000	APPROVED / TITLE:	Quantity / Spezif. / Mess (D):
Drawn / Gezeichnet	DATE / Datum	Part No. / Zeich. No.	Form. / Zeich. / Revisions:
Checked / Geprüft	Name	Doc. No. / Drawing No.	Form. / Zeich. / Revisions:
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Approved / Genehmigt	Scale / Maßstab	Doc. No. / Drawing No.	Form. / Zeich. / Revisions:
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