Product Data Sheet | 7114 NHR-130



The engineer's choice

ebmpapst

7114 NHR-130

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1 General

Fan type	Fan
Rotational direction looking at rotor	counterclockwise
Airflow direction	Air outlet over struts
Bearing system	Ball bearing
Mounting position	any

2 Mechanics

2.1 General

Depth	38,0 mm
Diameter	150,0 mm
Weight	0,620 kg
Housing material	Metal
Impeller material	Metal
Max. torque when mounted across both mounting flanges Screw size	wire outlet corner: 460 Ncm remaining corners: 460 Ncm ISO 4762 - M4 degreased, without an additional brace and without washer

2.2 Connections

Electrical connection	Wires
Length of lead wire Tolerance	
Wire gauge (AWG)	22
Insulation diameter	1,70 mm
Contact	see drawing





	Colour	Operation
Wire 1	red	+ UB
Wire 2	black	- GND

3 Operating Data

3.1 Operating Data - Electrical Interface - Input

Control input	None

3.2 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 section 3.5)
I: corresp. to arithm. mean current value

Features	Condition	Symbol	Values		
Voltage range	Δp = 0	U	12,0 V		26,5 V
Nominal voltage	Δp = 0	U_N		24,0 V	
Power consumption Tolerance	Δp = 0 0001	P	3,6 W +- 17,5 %	17,3 W +- 12,5 %	21,75 W +- 15,0 %
Current consumption Tolerance	Δp = 0 0001	I	300 mA +- 17,5 %	720 mA +- 12,5 %	820 mA +- 15,0 %
Speed Tolerance	Δp = 0 0001	n	1.750 1/min +- 12,5 %	3.350 1/min +- 7,5 %	3.600 1/min +- 10,0 %

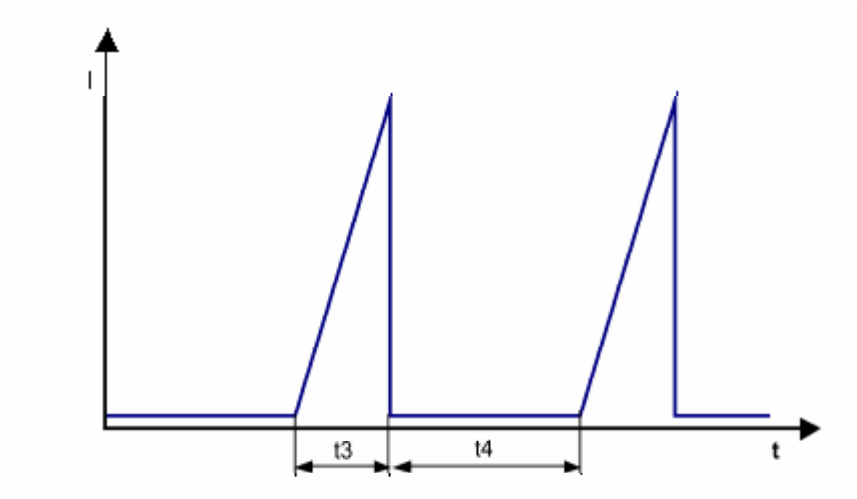
3.3 Operating Data - Electrical Interface -Output

Tacho type	None

Alarm type	None

3.4 Electrical Features

Electronic function	None	
Reversed polarity protection Max. residual current at Un	Rectifying diode IF <= 10 mA	
Locked rotor protection	PWM	
Locked rotor current at Un	approx. 100 mA	



PWM interlock frequency 1.9 kHz

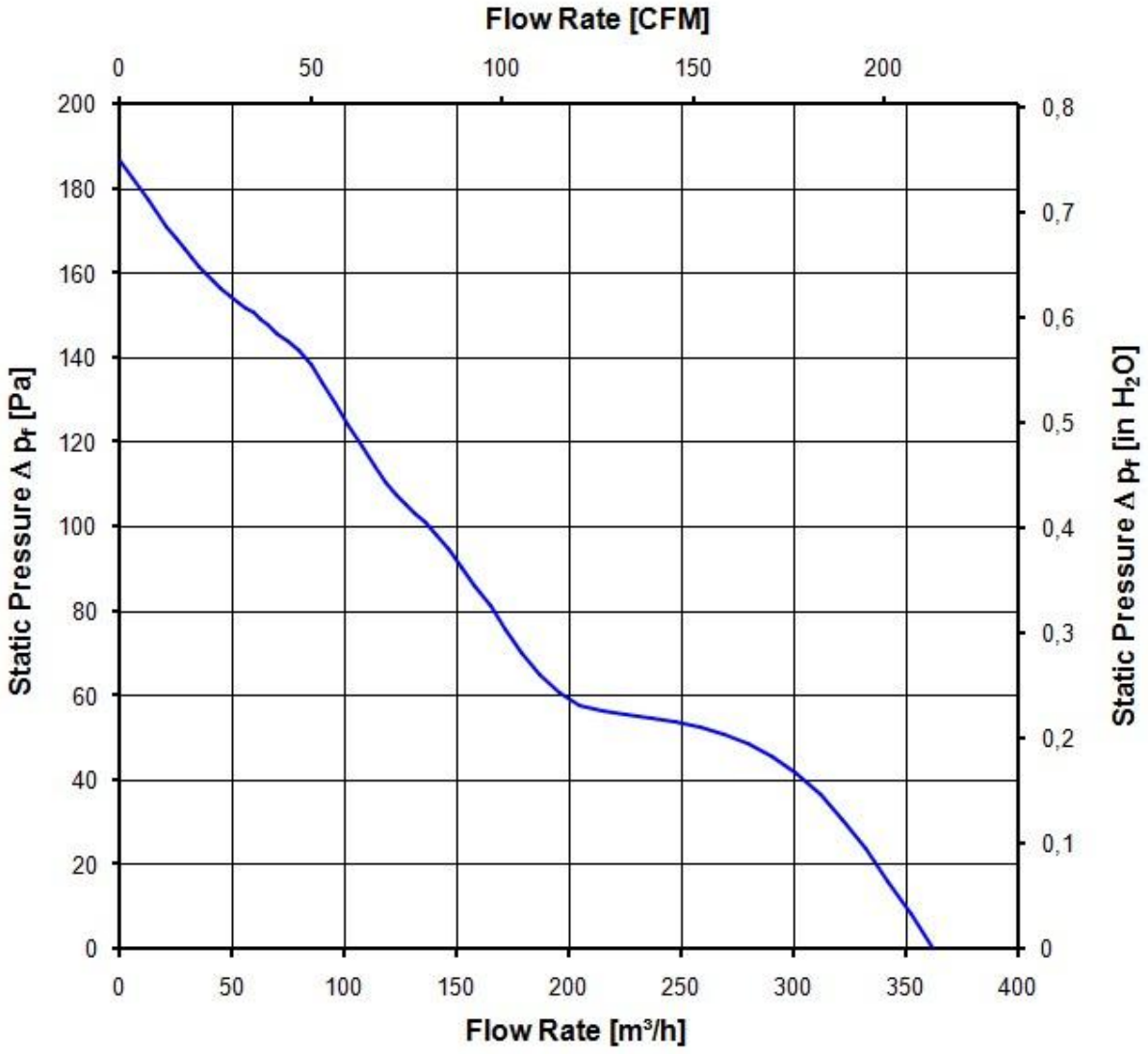
3.5 Aerodynamic

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:

3.350 1/min at free air flow

Max. free-air flow (Δp = 0 / $\dot{V}$ = max.)	360,0 m3/h	
Max. static pressure (Δp = max. / $\dot{V}$ =0)	185 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 3.5

a.) Operation condition:

3.350 1/min at free air flow

Optimal operating point	295,0 m3/h @ 40 Pa	
Sound power level at the optimal operating point	6,7 bel(A)	
Sound pressure level at free air flow, measured in rubber bands	58,0 dB(A)	

4 Environment

4.1 General

Min. permitted ambient temperature TU min.	-25 °C	
Max. permitted ambient temperature TU max.	72 °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	
Radiation exposure	None	
Dust requirements	Dust check; according to DIN EN 60068-2-68, 6g/m2d, 1 day	
Salt fog requirements	None	
Harmful gas 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.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. B.) Routine test Measuring conditions: At indoor climate. No arcing or breakdown is allowed! All connections together to ground.	500 VAC / 1 Min. 500 VAC / 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

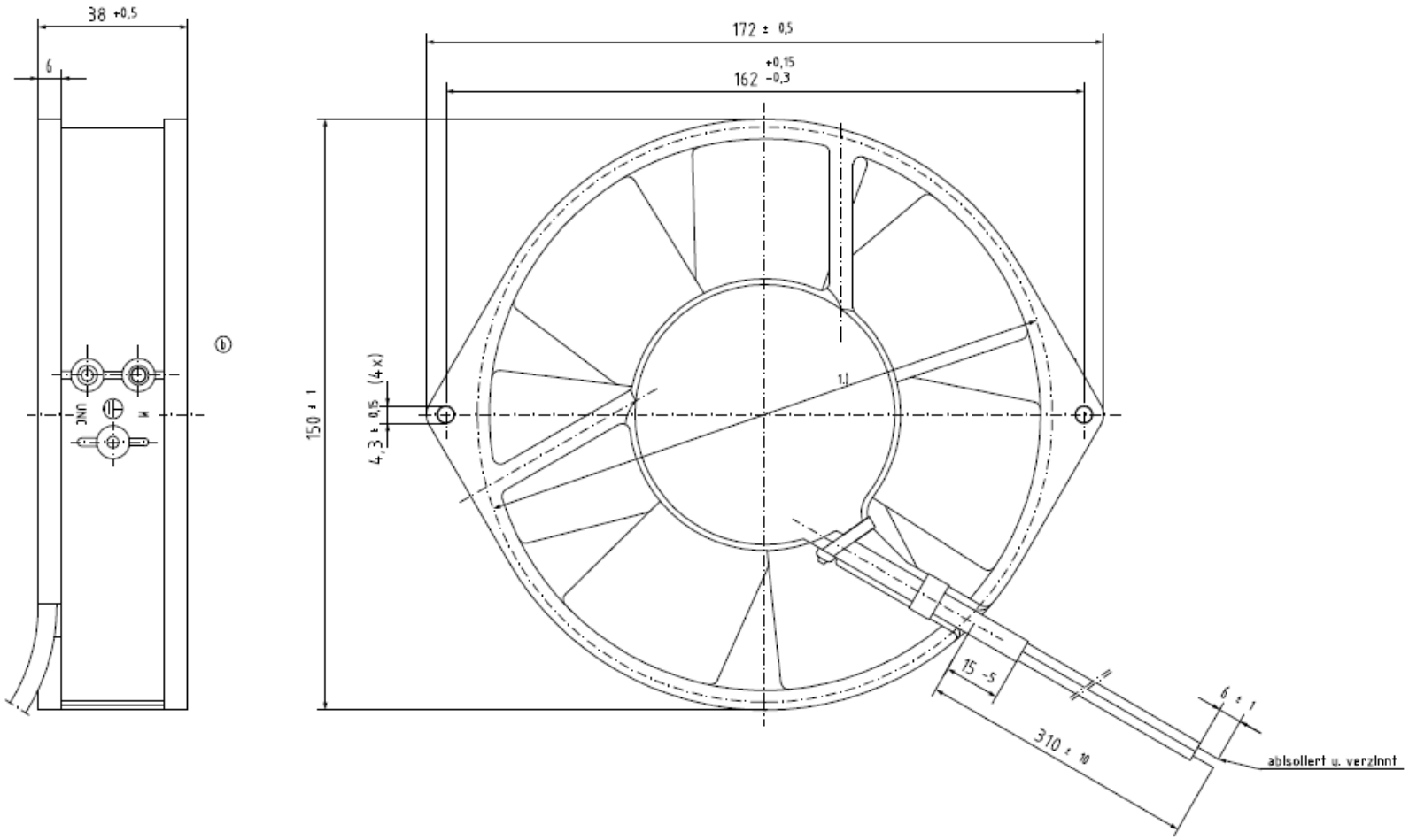
CE	Yes
UL	Yes / UL507, Electric Fans
VDE	No
CSA	No
CCC	No

The approval tests are observed to:
Maximal permitted operating voltage (see section 3.1) and max. permitted ambient temperature TU max.

6 Reliability

6.1 General

Life expectancy L10 at TU = 40 °C	75.000 h	
Life expectancy L10 at TU max.	35.000 h	
Life expectancy L10 Delta (40 °C)	147.500 h	



Axialspiel mit Feder spielfrei verspannt
1.) Durchmesser für Montagewand 146^{+1}

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Allgemeintoleranzen	ISO 2768 – m	gilt für

929 5410 130	TYP NHP-130		

					Datum	Name
				Erstellt	27.07.95	Koletzki
				Geprüft	28.07.95	Wrobel G.
b	97351	05.06.97	Nuber J.			
a	447/95	06.12.95	Engel W.			
Index	Änd.-Nr.	Datum	Geändert von			

Zur Verwendung in Verteiler/Teilgeräten
von Wrobel G. am 20.06.97

PAPST
PAPST-MOTOREN GmbH & Co KG
D-78112 St.Georgen
Germany

Artikel: Axiallüfter

Maßstab: 1:1

Zchg.-Nr.: 929 5410 130

Blatt 2

Ers.f.Zchg.:

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