Product Data Sheet | 4656 EZ

LARANTHERA

4656 EZ

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6.1 General 9

1 General

Fan type	Fan without chassis
Rotational direction looking at rotor	clockwise
Airflow direction	Air outlet over flange
Bearing system	Ball bearing
Mounting position	any
Balancing grade	2,5

2 Mechanics

2.1 General

Width	0,0 mm	
Height	0,0 mm	
Depth	39,0 mm	
Diameter	108,0 mm	
Weight	0,380 kg	
Housing material		
Impeller material	Metal	

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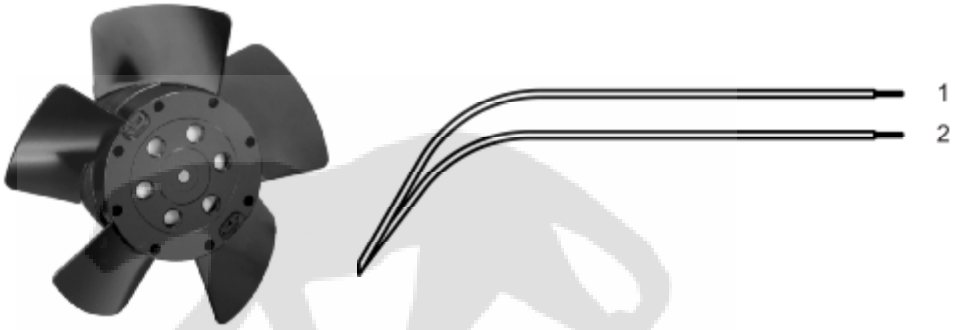
2.2 Connections

Electrical connection	Wires	
Length of lead wire Tolerance	L = 375,0 mm +- 10,0 mm	
Length of tube Tolerance	see drawing	
Wire gauge (AWG)	18	
Insulation diameter	2,06 mm	
Plug	see drawing	
Contact	see drawing	



	Colour	Operation
Wire 1	black	L
Wire 2	black	N

3 Operating Data

3.1 Electrical Operating Data

For checking purposes the electrical data can be specified without an intake nozzle / aperture plate as well. For this the data have to defined by the appropriate quality assurance.

Electrical Operating Date with intake nozzel (For checking purposes)

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.

Measurement setup:	Measured with an aperture plate
Aperture plate diameter:	109 mm
Distance between mounting traverse and aperture plate:	20,5 mm

Δp = 0: corresp. to free air flow (see section 3.4)
I: corresp. to RMS line current

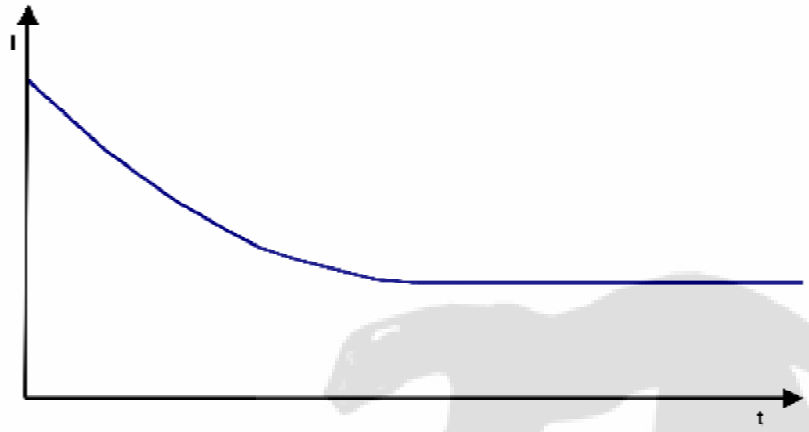
Features	Condition	Symbol	Values	
Frequency	Δp = 0	f	50 Hz	60 Hz
Nominal voltage Tolerance	Δp = 0	U_N	230,0 V + 6,0 % - 10,0 %	230,0 V + 6,0 % - 10,0 %
Power consumption Tolerance	Δp = 0	P	19,0 W +- 10,0 %	18,0 W +- 10,0 %
Speed Tolerance	Δp = 0	n	2.600 1/min +- 3,0 %	2.950 1/min +- 3,0 %

3.2 Operating Data - Electrical Interface -Output

Tacho type	None

3.3 Electrical Features

Locked rotor protection	Impedance
Locked rotor current at Un	



3.4 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.

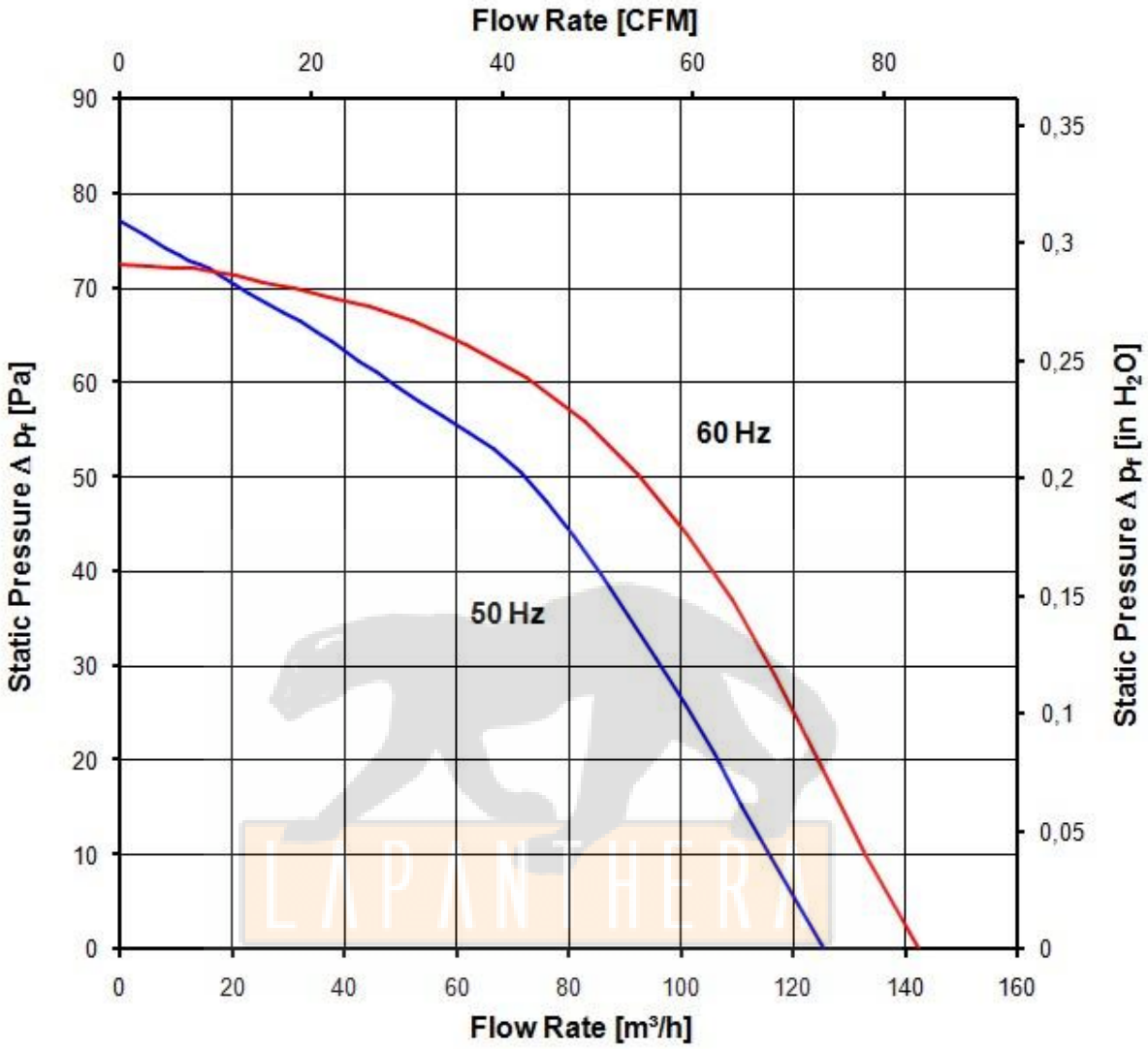
Measurement setup:	Measured with an aperture plate
Aperture plate diameter:	109 mm
Distance between mounting traverse and aperture plate:	20,5 mm

a.) Operation condition:
2.600 1/min at free air flow Frequency: 50 Hz

Max. free-air flow (Δp = 0 / $\dot{V}$ = max.)	124,0 m3/h
Max. static pressure (Δp = max. / $\dot{V}$ =0)	72 Pa

b.) Operation condition:
2.950 1/min at free air flow Frequency: 60 Hz

Max. free-air flow (Δp = 0 / $\dot{V}$ = max.)	142,0 m3/h
Max. static pressure (Δp = max. / $\dot{V}$ =0)	77 Pa


Flow Rate [CFM]
0
20
40
60
80
90
80
70
60
50
40
30
20
10
0
0,35
0,3
0,25
0,2
0,15
0,1
0,05
0
60 Hz
50 Hz
Static Pressure Δ pf [Pa]
Static Pressure Δ pf [in H2O]
0
20
40
60
80
100
120
140
160
Flow Rate [m³/h]

3.5 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:
2.600 1/min at free air flow Frequency: 50 Hz

Optimal operating point		
Sound power level at the optimal operating point		
Sound pressure level at free air flow, measured in rubber bands	39,0 dB(A)	

b.) Operation condition:
2.950 1/min at free air flow Frequency: 60 Hz

Optimal operating point		
Sound power level at the optimal operating point		
Sound pressure level at free air flow, measured in rubber bands	42,0 dB(A)	

4 Environment

4.1 General

Min. permitted ambient temperature TU min.	-40 °C / 50 Hz -40 °C / 60 Hz	
Max. permitted ambient temperature TU max.	65 °C / 50 Hz 70 °C / 60 Hz	
Min. permitted storage temperature TL min.	-40 °C	
Max. permitted storage temperature TL max.	100 °C	

4.2 Climatic requirements*)

Humidity requirements	humid heat, constant; according to DIN EN 60068-2-78, 14 days	
Water exposure	None	
Radiation exposure	None	
Dust requirements	None	
Salt fog requirements	None	
Harmful gas requirements	None	

*) Permittet 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.

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.	1500 VAC / 1 Min. 1500 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 > 50 MOhm
Air and leakage distances	2,0 mm / 1,8 mm
Protection class	I

5.2 Approval Tests

CE	Yes
UL	Yes / UL507, Electric Fans
VDE	Yes / Approval acc. to EN 60950 (VDE 0805) - Information technology equipment
CSA	No
CCC	Yes / GB 12350 Safety Requirements for small Power Motors

The approval tests are observed to:
U approval max.: 230 V / f: 60 Hz @ TU approval max.: 65 °C

6 Reliability

6.1 General

Life expectancy L10 at TU = 40 °C	37.500 h / 50 Hz	
Life expectancy L10 at TU max.	15.000 h / 50 Hz	

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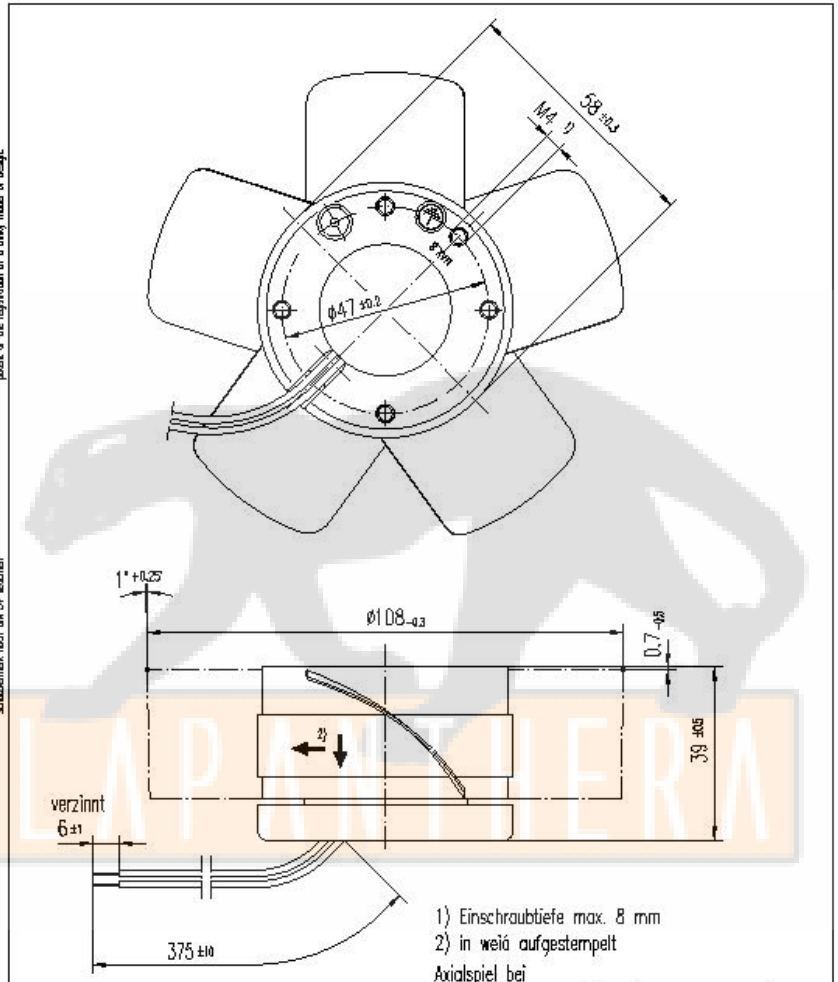
Schutzvermerk nach DIN 34 beachten



1) Einschraubtiefe max. 8 mm
2) in weiá aufgesternpelt

Axialspiel bei
- Kugellagerung (K): 0 (mit Federausgleich)
- Gleitlagerung (G): 0.1 – 0.6

084
218
232
235
240
516

Allgemeintoleranzen
DIN 2768 – mK

gilt f?r: 924 4014 942 (k) 4656 EZ
924 4014 945 (k) 4656 EZR
924 4014 951 (G) 4580 EZ-951
Ⓓ 924 4014 007 (k) 4656 EZU

					Datum	Name
				Erstellt	01.09.95	Kieninger
				Gepr?ft	29.04.96	Wrobel G.

Index	Änd.–Nr.	Datum	Geändert von
a	Ergänzung	25.03.97	Koletzki M.

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D–78112 St.Georgen
Germany

Artikel: Axiall?fter

Maßstab: 1:1

Zchg.–Nr.: 924 4014 942

Blatt 2

Ers.f.Zchg.:

K:\924\4014\