

Product Data Sheet 4656 EZ

ebmpapst

The engineer's choice



4656 EZ

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1 General

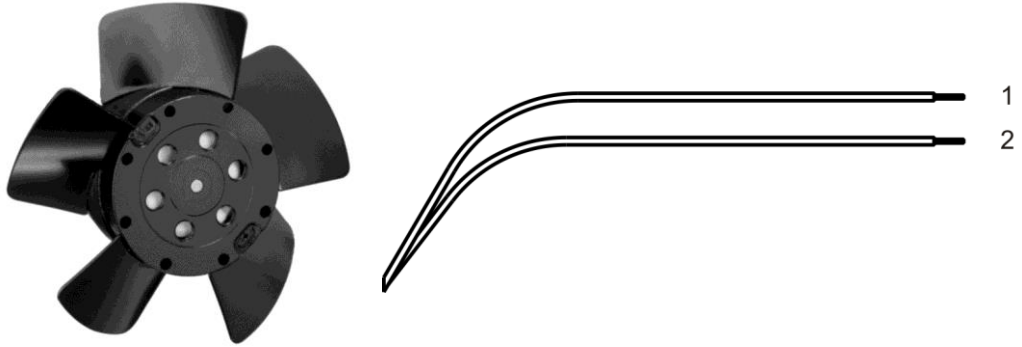
Fan type	Fan without chassis
Rotating direction looking at rotor	Clockwise
Airflow direction	Air outlet over flange
Bearing system	Ball bearing
Mounting position - shaft	Any
Balancing grade	2,5

2 Mechanics**2.1 General**

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

2.2 Connections

Electrical connection	Wires	
Lead wire length	L = 375,0 mm	
Tolerance	+/- 10,0 mm	
Tube length	See drawing	
Tolerance		
Wire size (AWG)	18	
Insulation diameter	2,06 mm	
Plug	See drawing	
Contact	See drawing	

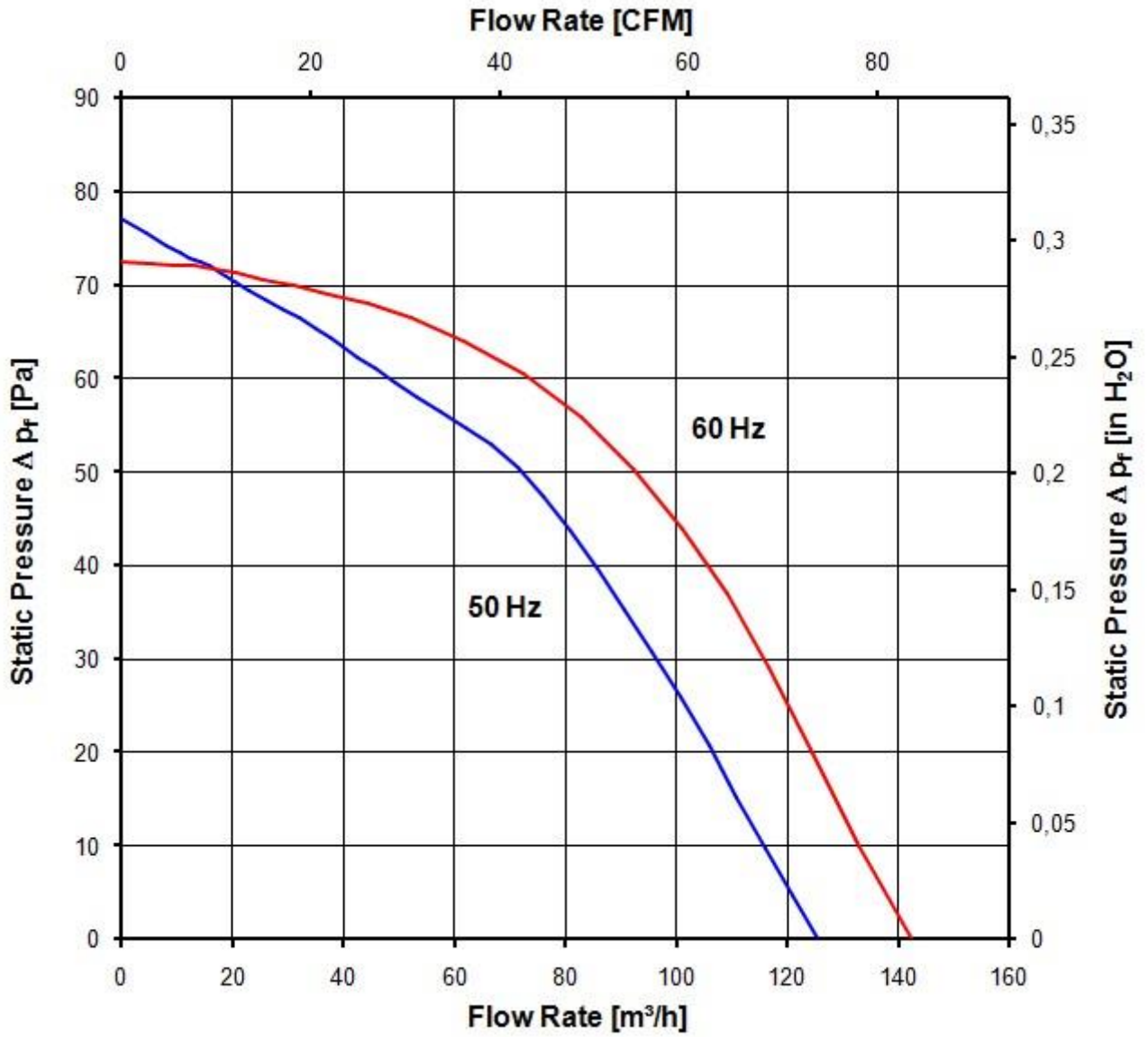


	Color	Operation
1	black	L
2	black	N

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.



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) 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:
 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	
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.

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.	1500 VAC / 1 Min.
B.) Routine test Measuring conditions: At indoor climate. No arcing or breakdown is allowed! All connections together to ground.	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
Clearance / creepage distance	2,0 mm / 1,8 mm
Protection class	I

5.2 Approval Tests

CE	EC Declaration of Conformity	Yes
EAC	Eurasian Conformity	Yes
UL	Underwriters Laboratories	Yes / UL507, Electric Fans
VDE	Association for Electrical, Electronic and Information Technologies	Yes / Approval acc. to EN 60950 (VDE 0805) - Information technology equipment
CSA	Canadian Standards Association	No
CCC	China Compulsory Certification	Yes / GB 12350 Safety Requirements for small Power Motors

The approval tests are observed to:

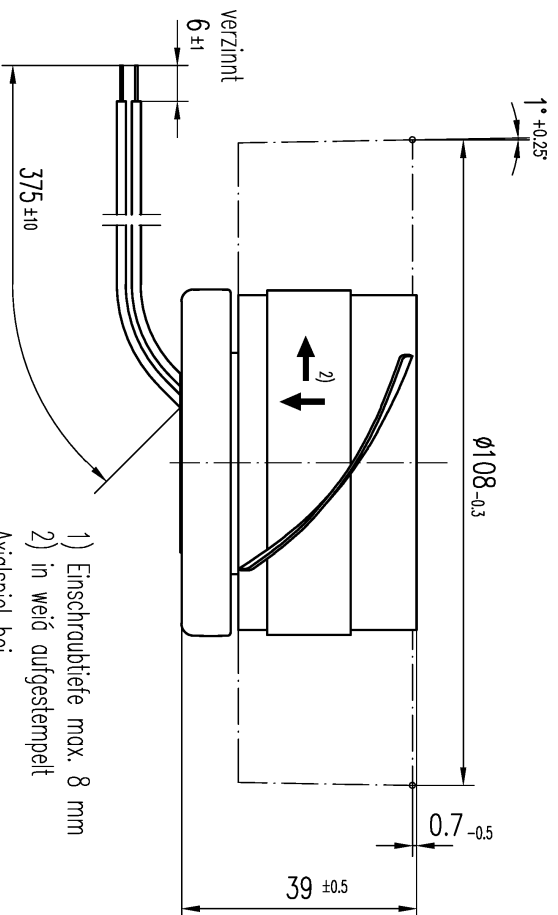
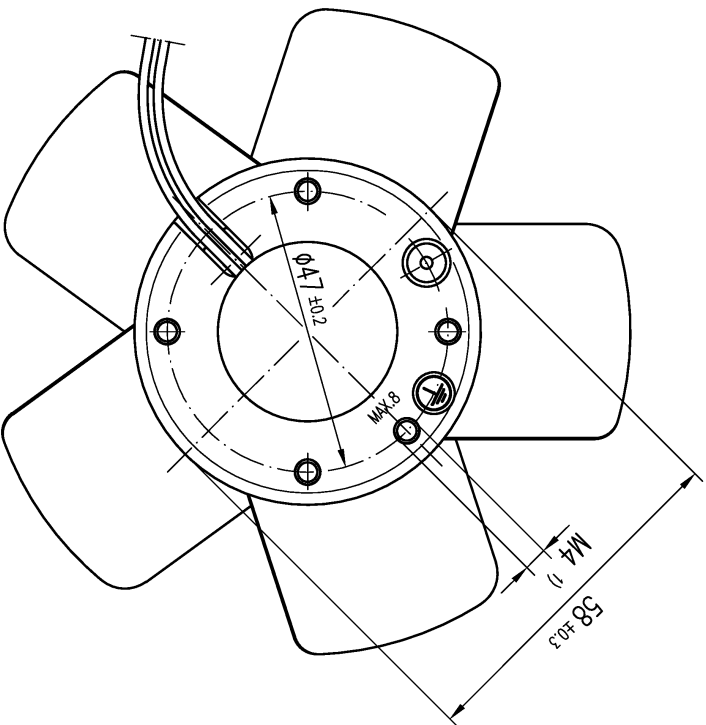
U approval max.: 230 V / f: 60 Hz @ TU approval max.: 65 °C

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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- 1) Einschraubtiefe max. 8 mm
 2) in weiß aufgestempelt
- Axialspiel bei:
 – Kugellagerung (K): 0 (mit Federausgleich)
 – Gleitlagerung (G): 0.1 – 0.6

Schutzvermerk nach DIN 34 beachten

Allgemeinabmessungen		DIN 2768 – mK		gilt für:		924 4014 942 (K) 4656 EZ	Messstab 1.1
				924 4014 945 (K) 4656 EZR		Butt	
				924 4014 951 (G) 4580 EZ-951			
				924 4014 007 (K) 4656 EZU			
		Datum	Name	Artikel	Zchg.-Nr.		
		Erstellt	Kleininger				
		Gepf./ft	Wrobel G.				
0	Ergänzung	25.03.97	Koletzki M.				
Index	Znd.-Nr.	Datum	Geändert von	PAPST-MOTOREN GmbH & Co KG			
Zur Verwendung im Verteiler freigegeben				D-78112 St. Georgen			
von Koletzki M. am				Germany			
				Ers.f.Zchg.:		:\	

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