



8318/17

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1 General

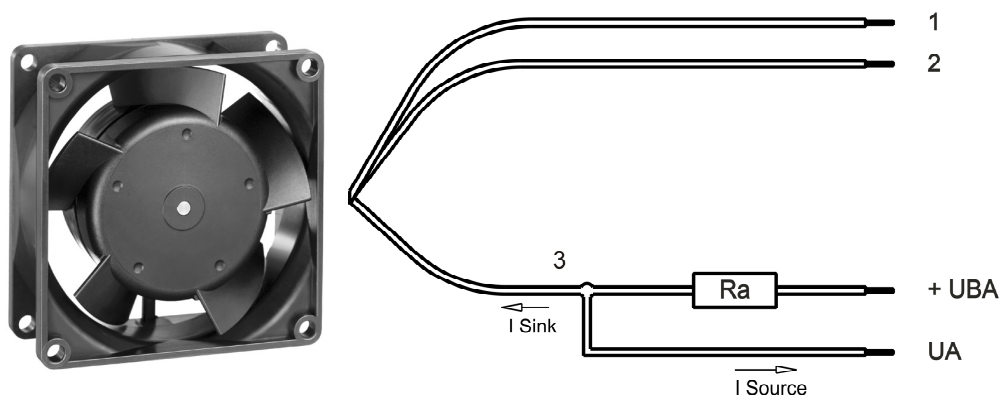
Fan type	Fan	
Rotational direction looking at rotor	clockwise	
Airflow direction	Air outlet over struts	
Bearing system	Ball bearing	
Mounting position	any	

2 Mechanics**2.1 General**

Width	80,0 mm	
Height	80,0 mm	
Depth	32,0 mm	
Weight	0,170 kg	
Housing material	Plastic	
Impeller material	Plastic	
Max. torque when mounted across both mounting flanges	wire outlet corner: 20 Ncm remaining corners: 30 Ncm	
Screw size	ISO 4762 - M4 degreased, without an additional brace and without washer	

2.2 Connections

Electrical connection	Wires	
Length of lead wire	310 mm	
Tolerance	+ - 10,0 mm	
Wire gauge (AWG)	24	
Insulation diameter	1,55 mm	
Contact	see drawing	



	Colour	Operation
Wire 1	red	+ UB
Wire 2	blue	- GND
Wire 3	white	Alarm

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 Operating Data - Electrical Interface - Input

Control input	None
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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.

$\Delta p = 0$: corresp. to free air flow (see section 3.5)
 I: corresp. to arithm. mean current value

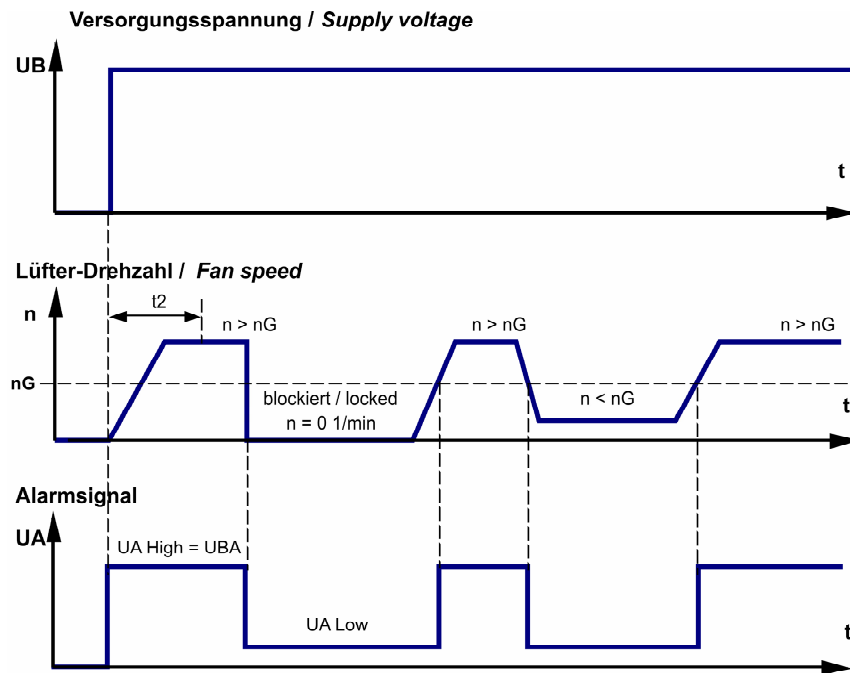
Features	Condition	Symbol	Values		
Voltage range	$\Delta p = 0$	U	36,0 V		56,0 V
Nominal voltage	$\Delta p = 0$	U_N		48,0 V	
Power consumption	$\Delta p = 0$	P	1,6 W	2,9 W	2,5 W
Tolerance	0001		+/- 25,0 %	+/- 25,0 %	+/- 25,0 %
Current consumption	$\Delta p = 0$	I	45 mA	60 mA	45 mA
Tolerance	0001		+/- 25,0 %	+/- 25,0 %	+/- 25,0 %
Speed	$\Delta p = 0$	n	2.500 1/min	3.300 1/min	3.300 1/min
Tolerance	0001		+/- 12,5 %	+/- 7,5 %	+/- 7,5 %
Starting current consumption				185 mA	

3.3 Operating Data - Electrical Interface -Output

Tacho type	None
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Alarm type	/17 (high = ok, Open collector)
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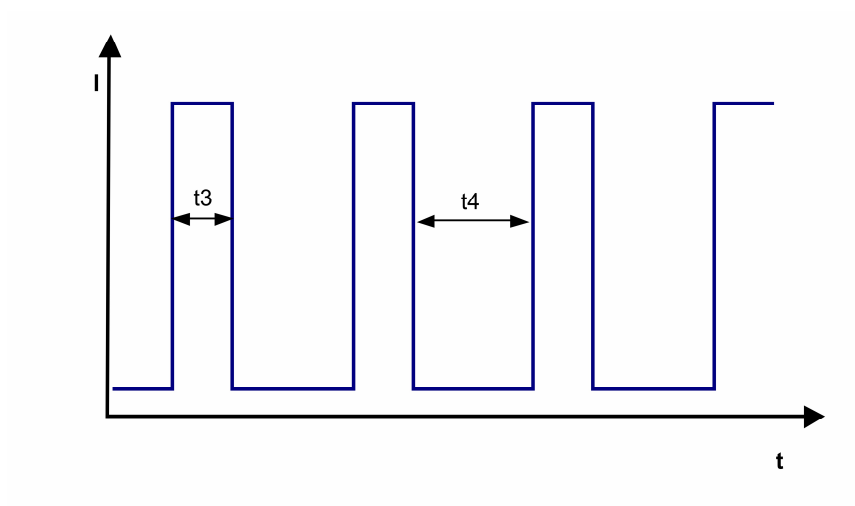
$$R_a = \frac{U_{BA} - U_{A \text{ Low}}}{I_{\text{Sink}}}$$



Features	Note	Values
Alarm operating voltage (UBA)		$\leq 60\text{ V}$
Alarm signal Low *)	I sink: 50 mA	$\leq 0,4\text{ V}$
Alarm signal High *)	I source: 0 mA	60 V
Maximum sink current		100 mA
External resistor	External resistor Ra from UBA to UA required. All voltage measured to GND.	
Alarm start-up delay time (t2)		$\leq 15\text{ s}$
Alarm trip speed limit (nG)		1.500 1/min
Tolerance		$\pm 100\text{ 1/min}$
Alarm at sense failure	No	
Alarm latch	No	
Alarm isolated from motor	No	

3.4 Electrical Features

Electronic function	Speed-Controlled	
Reversed polarity protection	Rectifying diode	
Max. residual current at Un	IF $\leq 50\text{ uA}$	
Locked rotor protection	Auto restart	
Locked rotor current at Un	approx. 185 mA	
Clock signal t3/t4 at locked rotor	Typical: 0,6 s / 20 s	



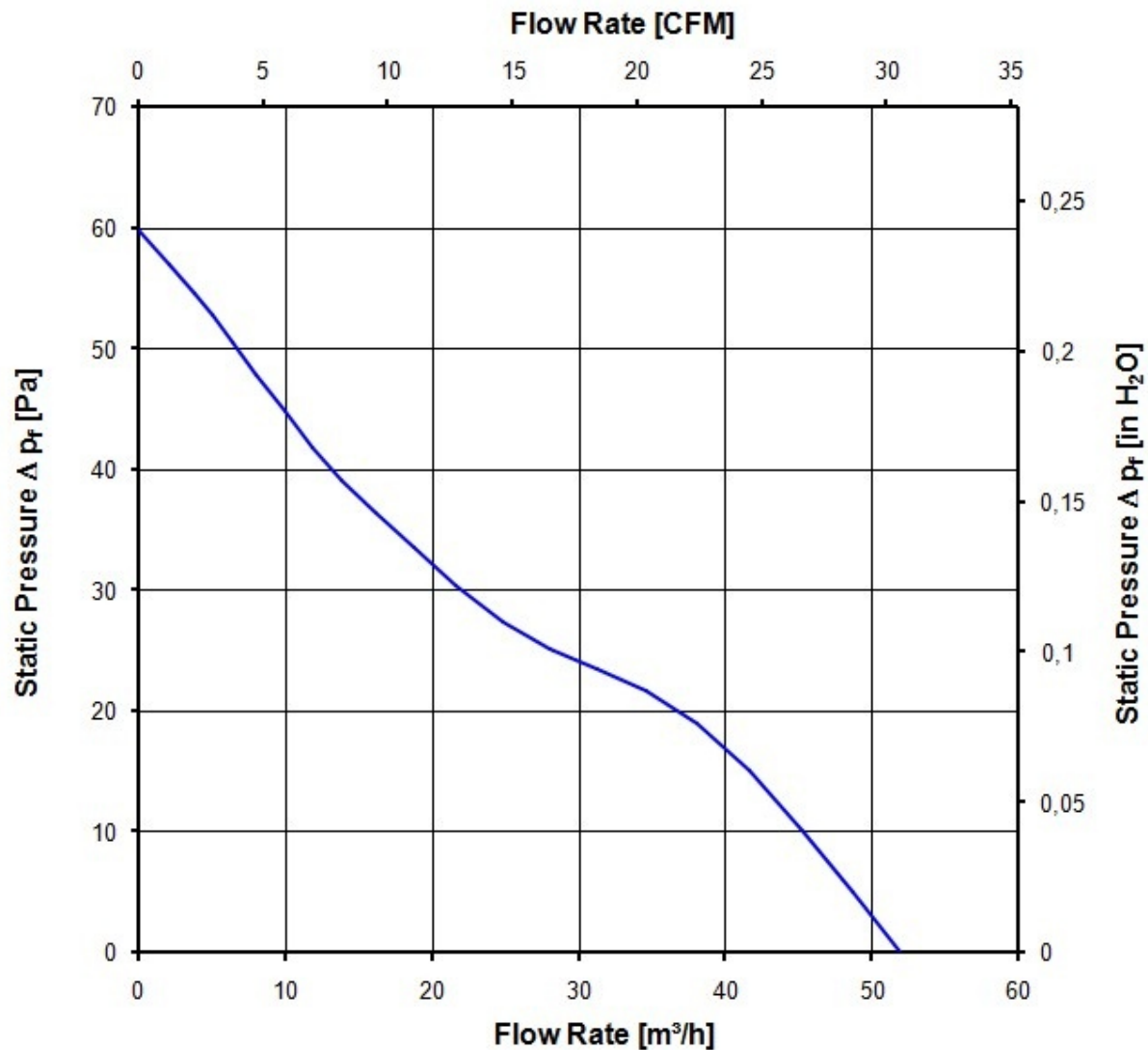
3.5 Aerodynamic

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.

a.) Operation condition:

3.300 1/min at free air flow

Max. free-air flow ($\Delta p = 0$ / $\dot{V} = \text{max.}$)	52,0 m ³ /h	
Max. static pressure ($\Delta p = \text{max.}$ / $\dot{V} = 0$)	60 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 $L_p(A) < 5 \text{ dB(A)}$
 For further measurement conditions see section 3.5

a.) Operation condition:

3.300 1/min at free air flow

Optimal operating point	41,0 m ³ /h @ 14 Pa	
Sound power level at the optimal operating point	5,1 bel(A)	
Sound pressure level at free air flow, measured in rubber bands	35,0 dB(A)	

4 Environment

4.1 General

Min. permitted ambient temperature TU min.	-20 °C	
Max. permitted ambient temperature TU max.	65 °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	
Radiation exposure	None	
Dust requirements	None	
Salt fog requirements	None	
Harmful gas 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. 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	
Air and leakage distances	1,0 mm / 1,5 mm	
Protection class	III	

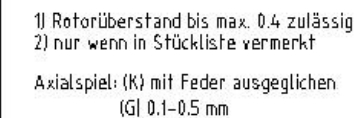
5.2 Approval Tests

CE	Yes
UL	No
VDE	No
CSA	No
CCC	Yes / GB 12350 Safety Requirements for small Power Motors

The approval tests are observed to:

Maximal permitted operating voltage (see section 3.1) and max. permitted ambient temperature TU max.

Schutzanmerk nach DIN 34 beachten



Anzahl und Längen der Litzen siehe Bv-Bl.1

Allgemeintoleranzen

DIN ISO 2768 - c

082								
210	m				Datum	Name	Artikel	Maßstab
232	l				Erstellt			
235	k				Geprüft			
240	i							
516					PAPST		Zchg.-Nr.	Blatt
	Index	Änd.-Nr.	Datum	Beinhaltet von	PAPST-MOTOREN GmbH & Co KG D-78125 St. Georgen Germany		Zrs./Zchg.	
	Zur Verwendung im Verteiler freigegeben							
	von _____ an _____							