

RG160-28/14NTD

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6.1 General 8

1 General

Fan type	Blower	
Rotational direction looking at rotor	counterclockwise	
Airflow direction	Air in axially, Air out radially	
Bearing system	Ball bearing	
Mounting position	any	

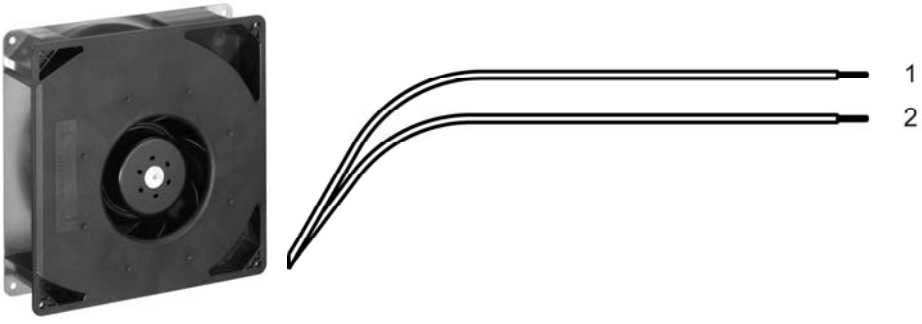
2 Mechanics

2.1 General

Width	220,0 mm	
Height	220,0 mm	
Depth	56,0 mm	
Weight	1,400 kg	
Housing material	Mixed	
Impeller material	Mixed	
Max. torque when mounted across both mounting flanges; Metal flange on mounting plate Screw size	wire outlet corner: 70 Ncm remaining corners: 70 Ncm ISO 4762 - M4 degreased, without an additional brace and without washer	

2.2 Connections

Electrical connection	Wires	
Length of lead wire Tolerance	L = 325 mm +- 10,0 mm	
Length of tube Tolerance	S = 25 mm +- 10,0 mm	
Wire gauge (AWG)	22	
Insulation diameter	1,7 mm	



	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.

$\Delta p = 0$: 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	16,0 V		28,0 V
Nominal voltage	$\Delta p = 0$	U_N		24,0 V	
Power consumption Tolerance	$\Delta p = 0$ 0001	P	56,0 W +- 17,5 %	64,0 W +- 12,5 %	64,0 W +- 15,0 %
Current consumption Tolerance	$\Delta p = 0$ 0001	I	3.450 mA +- 17,5 %	2.650 mA +- 12,5 %	2.300 mA +- 15,0 %
Speed Tolerance	$\Delta p = 0$ 0001	n	4.100 1/min +- 12,5 %	4.200 1/min +- 7,5 %	4.200 1/min +- 10,0 %

No inrush current means: Inrush current is mainly affected by length and kind of connecting line and the 470 uF capacitor.

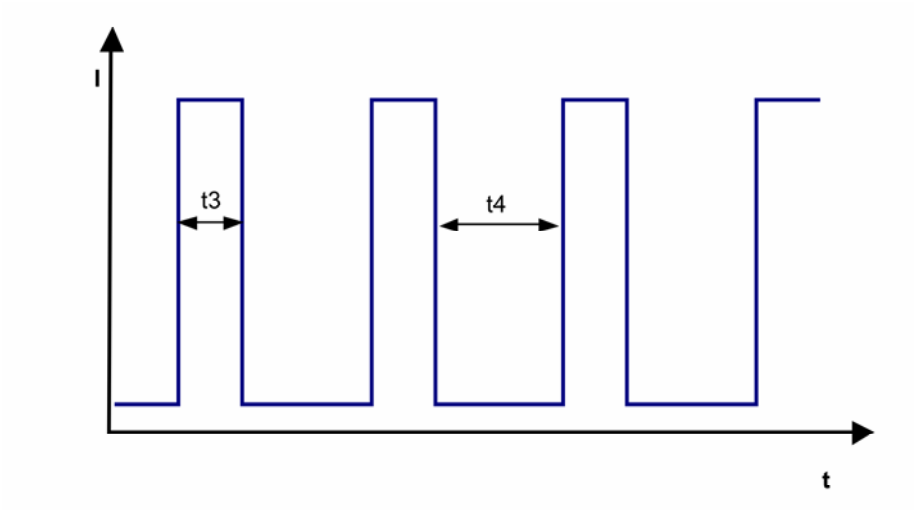
3.3 Operating Data - Electrical Interface -Output

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	Auto restart	
Locked rotor current at Un		
Clock signal t3/t4 at locked rotor	Typical: 1,0 s / 3,1 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:

4.200 1/min at free air flow

Max. free-air flow (Δp = 0 / V̇ = max.)	308,0 m3/h	
Max. static pressure (Δp = max. / V̇ =0)	780 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:

4.200 1/min at free air flow

Optimal operating point	180,0 m3/h @ 360 Pa	
Sound power level at the optimal operating point	7,5 bel(A)	
Sound pressure level at free air flow, measured in rubber bands		

4 Environment

4.1 General

Min. permitted ambient temperature TU min.	-20 °C	
Max. permitted ambient temperature TU max.	60 °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	

*) 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.	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	Yes / Approval acc. to EN 60950 (VDE 0805) - Information technology equipment
CSA	Yes / C22.2 No. 113 Fans and Ventilators
CCC	No

The approval tests are observed to:
U approval max.:28,0 V @ TU approval max.: 60,0 °C

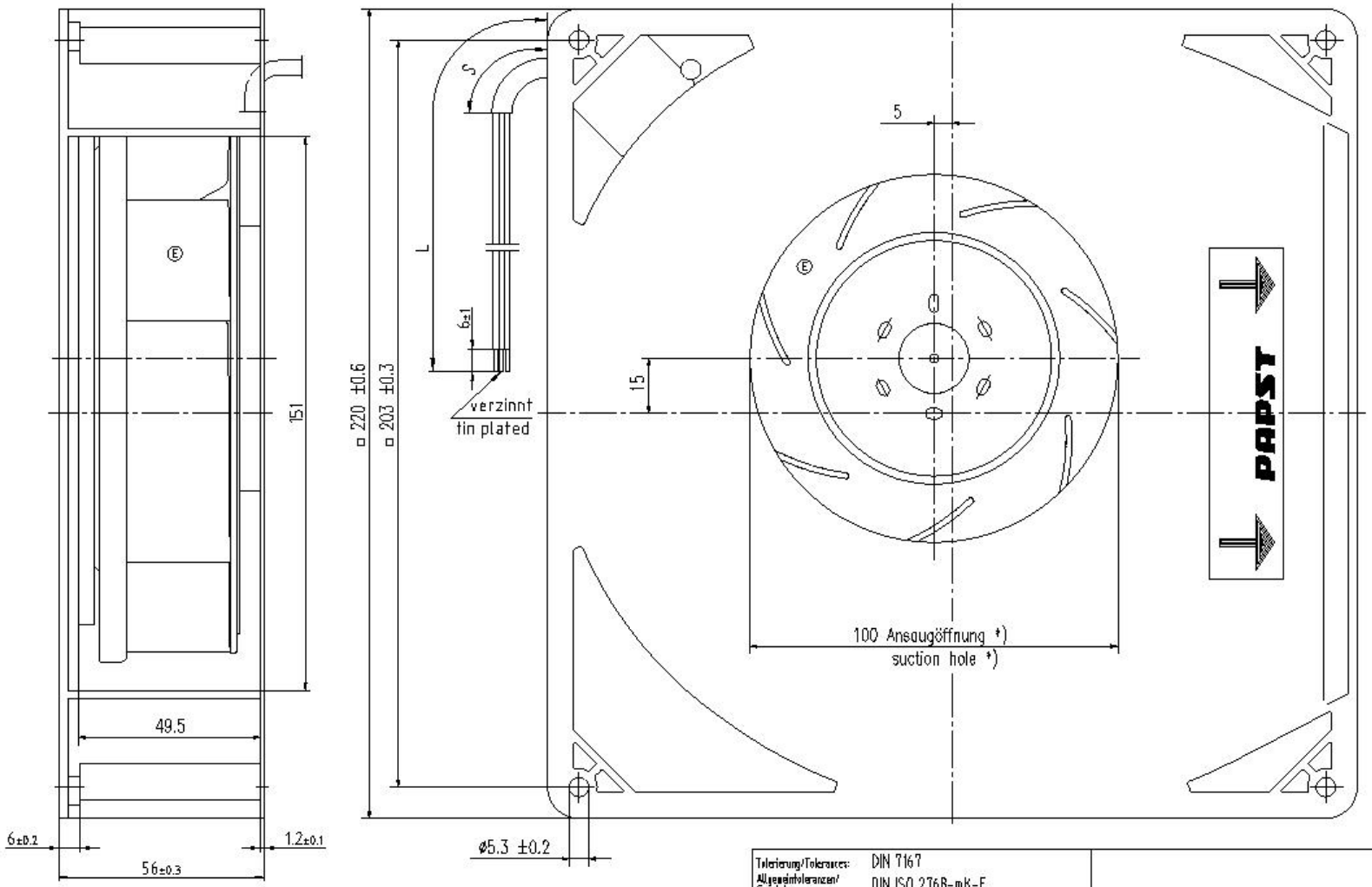
6 Reliability

6.1 General

Life expectancy L10 at TU = 40 °C	55.000 h	
Life expectancy L10 at TU max.	35.000 h	
Life expectancy L10 Delta (40 °C)	110.000 h	

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Refer to protection notice DIN ISO 16016!



Anzahl und Länge der Litzen
sowie Länge Schlauch siehe BV Bl. 1

Length and number of wires and length
of tube see design specification page 1

Axialspiel: mit Feder spielfrei verspannt.
without axial clearance by a pre-loaded spring

*) Öffnung f. Montagewand ≥ 115
*) Opening for mounting plate ≥ 115

Toleranzen/Tolerances: DIN 7167 Allgemeintoleranzen/ Gen. Tolerances: DIN ISO 2768-mK-E			
	Datum/Date	Name/Name	Artikel/ Title
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