

RG160-28/56S

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6.1 General 9

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
Balancing grade	6,3

2 Mechanics

2.1 General

Width	220,0 mm	
Height	220,0 mm	
Depth	56,0 mm	
Diameter	0,0 mm	
Weight	1,700 kg	
Housing material	Plastic	
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	325,0 mm +- 10,0 mm	
Length of tube Tolerance	285,0 mm +- 10,0 mm	
Wire gauge (AWG)	18	
Insulation diameter	1,65 mm	





	Colour	Operation
Wire 1	blue	L
Wire 2	blue	N

3 Operating Data

3.1 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 3.4)
I: corresp. to RMS line current

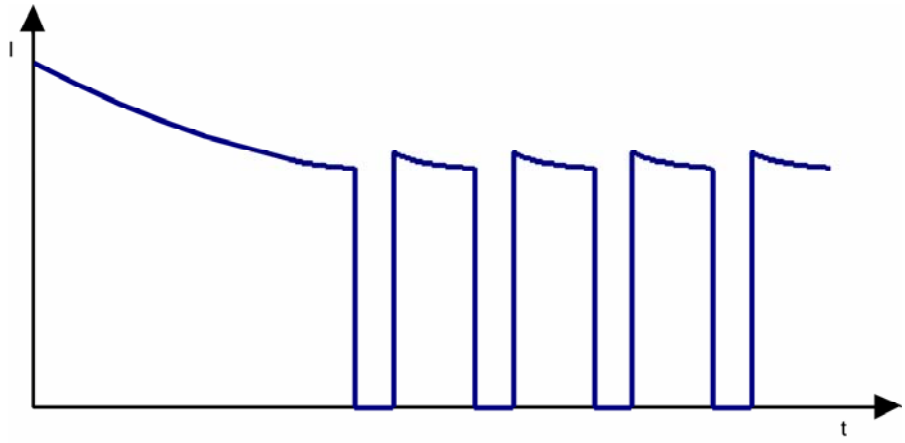
Features	Condition	Symbol	Values	
Frequency	Δp = 0	f	50 Hz	60 Hz
Nominal voltage Tolerance	Δp = 0	U_N	230,0 V + 6,0 % - 10,0 %	230,0 V + 6,0 % - 10,0 %
Power consumption Tolerance	Δp = 0	P	47,0 W + 5,0 % - 10,0 %	50,0 W + 5,0 % - 10,0 %
Speed Tolerance	Δp = 0	n	2.750 1/min +- 3,0 %	3.050 1/min +- 3,0 %

3.2 Operating Data - Electrical Interface -Output

Tacho type	None

3.3 Electrical Features

Locked rotor protection	Thermal circuit breaker
Locked rotor current at Un	



3.4 Aerodynamic

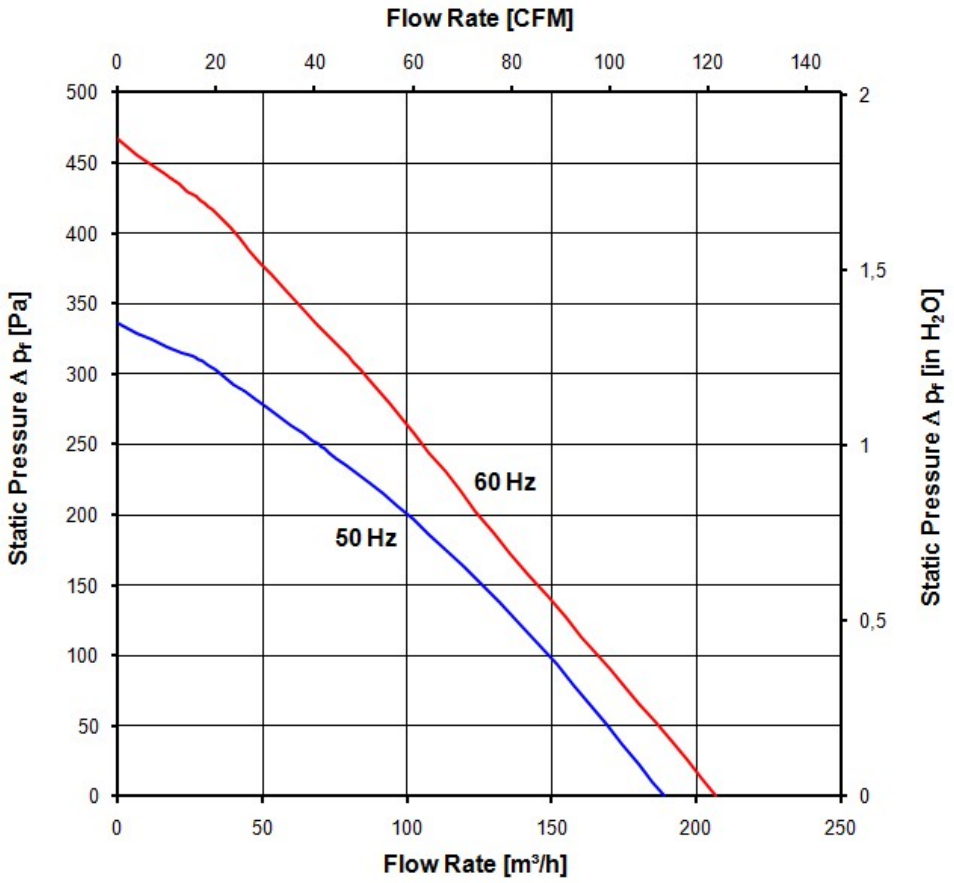
Measurement conditions: Measured with a double chamber intake rig acc. to DIN EN ISO 5801.
Normal air density = 1,2 kg/m3; Temperature 23°C +/- 3°C;
In the intake and outlet area should not be any solid obstruction within 0,5 m.

a.) Operation condition:
2.750 1/min at free air flow Frequency: 50 Hz

Max. free-air flow (Δp = 0 / V̇ = max.)	188,0 m3/h
Max. static pressure (Δp = max. / V̇ =0)	335 Pa

b.) Operation condition:
3.050 1/min at free air flow Frequency: 60 Hz

Max. free-air flow (Δp = 0 / V̇ = max.)	206,0 m3/h
Max. static pressure (Δp = max. / V̇ =0)	465 Pa


Flow Rate [CFM]
0
20
40
60
80
100
120
140
500
450
400
350
300
250
200
150
100
50
0
2
1,5
1
0,5
0
Static Pressure Δ pf [Pa]
Static Pressure Δ pf [in H2O]
60 Hz
50 Hz
0
50
100
150
200
250
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:
2.750 1/min at free air flow Frequency: 50 Hz

Optimal operating point	65,0 m3/h @ 230 Pa	
Sound power level at the optimal operating point	6,5 bel(A)	
Sound pressure level at free air flow, measured in rubber bands		

b.) Operation condition:
3.050 1/min at free air flow Frequency: 60 Hz

Optimal operating point	74,0 m3/h @ 287 Pa	
Sound power level at the optimal operating point	6,9 bel(A)	
Sound pressure level at free air flow, measured in rubber bands		

4 Environment

4.1 General

Min. permitted ambient temperature TU min.	-30 °C / 50 Hz -30 °C / 60 Hz	
Max. permitted ambient temperature TU max.	70 °C / 50 Hz 80 °C / 60 Hz	
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.	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

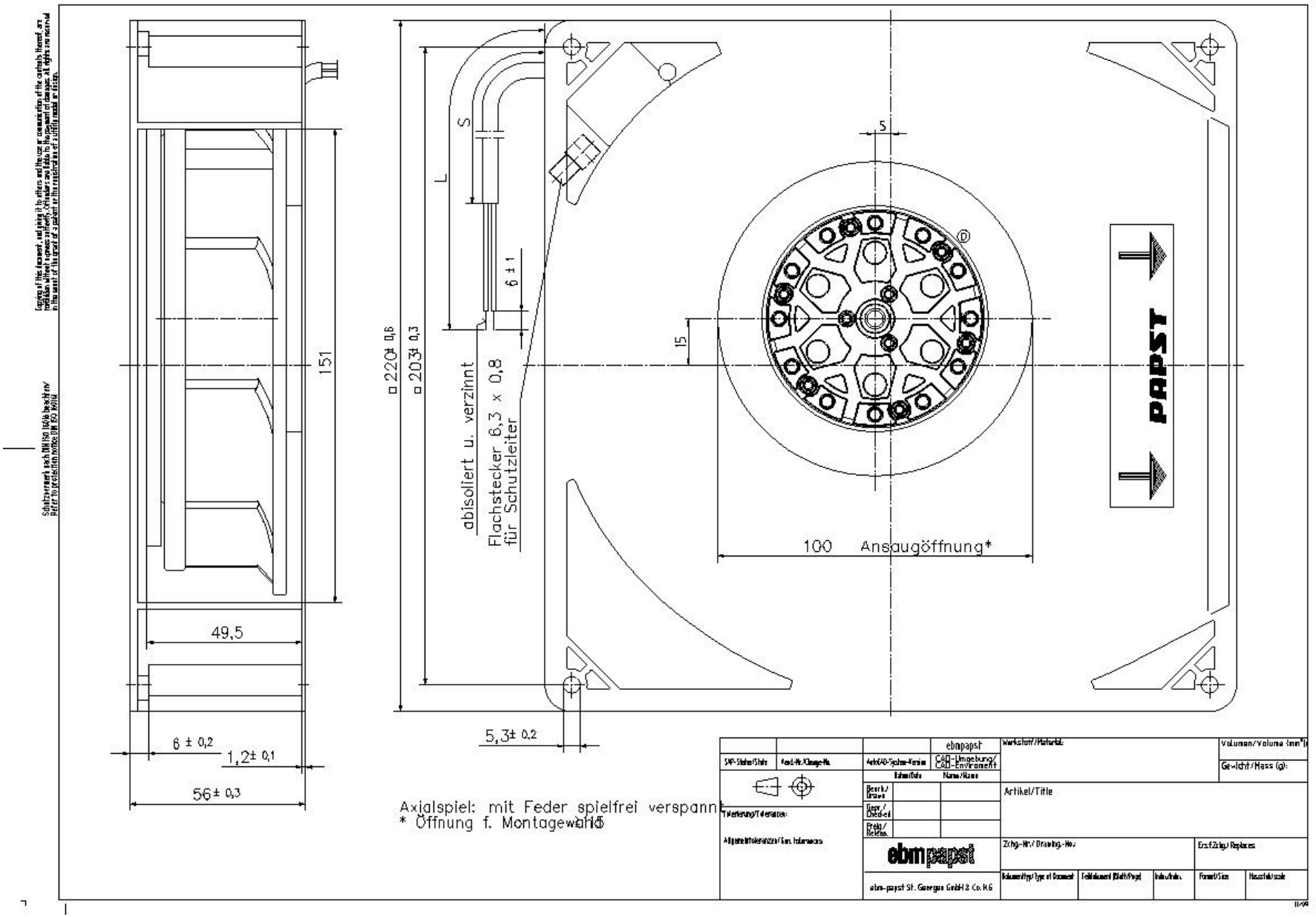
CE	Yes
UL	Yes / UL507, Electric Fans
VDE	Yes / Approval acc. to EN 60950 (VDE 0805) - Information technology equipment
CSA	Yes / C22.2 No. 113 Fans and Ventilators
CCC	Yes / GB 12350 Safety Requirements for small Power Motors

The approval tests are observed to:
U approval max.: 230 V / f: 60 Hz @ TU approval max.: 80 °C

6 Reliability

6.1 General

Life expectancy L10 at TU = 40 °C	30.000 h / 50 Hz 27.500 h / 60 Hz	
Life expectancy L10 at TU max.	15.000 h / 50 Hz 12.500 h / 60 Hz	


151
49,5
6 ± 0,2
1,2± 0,1
56± 0,3
S
L
6 ± 1
abisoliert u. verzinnt
Flachstecker 6,3 x 0,8
für Schutzleiter
□ 220± 0,6
□ 203± 0,3
5,3± 0,2
5
15
100 Ansaugöffnung*
PAPST
Axialspiel: mit Feder spielfrei verspannt
* Öffnung f. Montagewand
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