Product Data Sheet RER101-36/14N/2HHA-184

ebmpapst

The engineer's choice



GREEN TECH

RER101-36/14N/2HHA-184

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6.1 General 10

1 General

Fan type	Blower without chassis with intake nozzle	
Rotating direction looking at rotor	Clockwise	
Airflow direction	Air in axially, Air out radially	
Bearing system	Ball bearing	
Mounting position	Any	

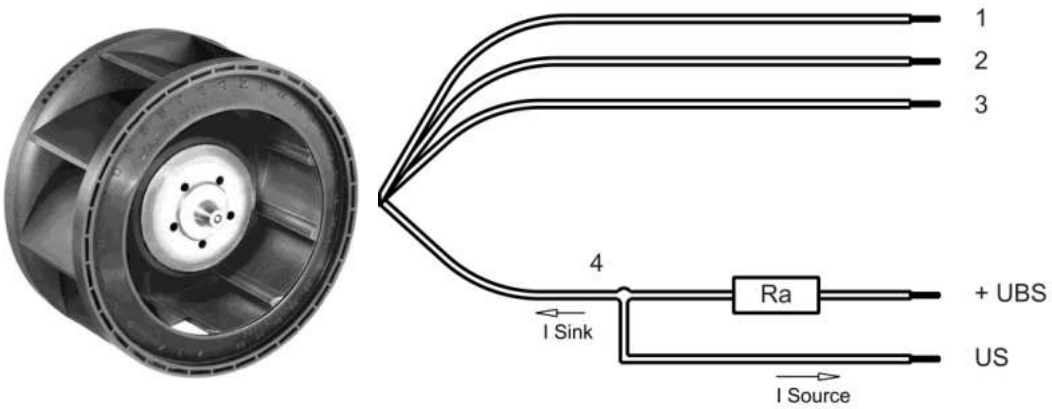
2 Mechanics

2.1 General

Depth	36,0 mm	
Diameter	101,0 mm	
Mass	0,300 kg	
Housing material		
Impeller material	Plastic	

2.2 Connections

Electrical connection	Wires	
Lead wire length Tolerance	L = 310 mm +- 10,0 mm	
Wire size (AWG)	22	
Insulation diameter	1,70 mm	
Contact	See drawing	



	Colour	Operation
Wire 1	red	+ UB
Wire 2	blue	- GND
Wire 3	violet	CONTR
Wire 4	white	Tacho

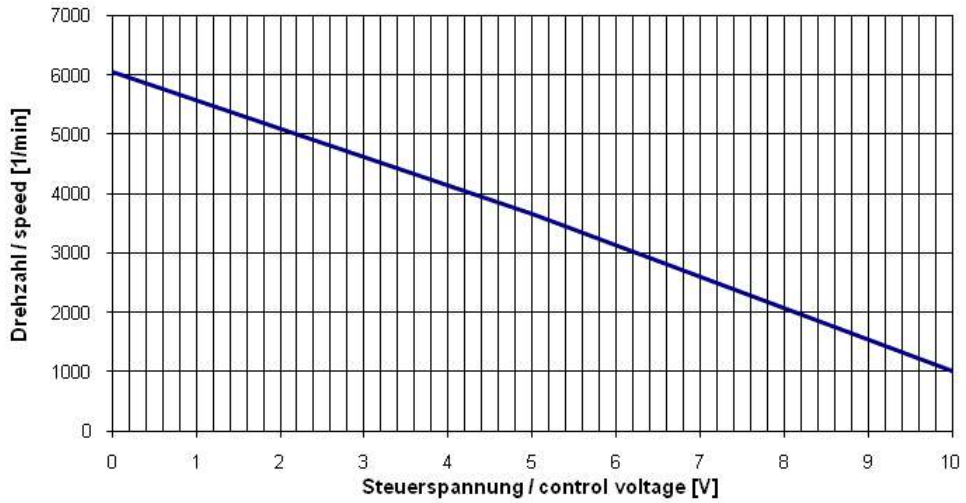
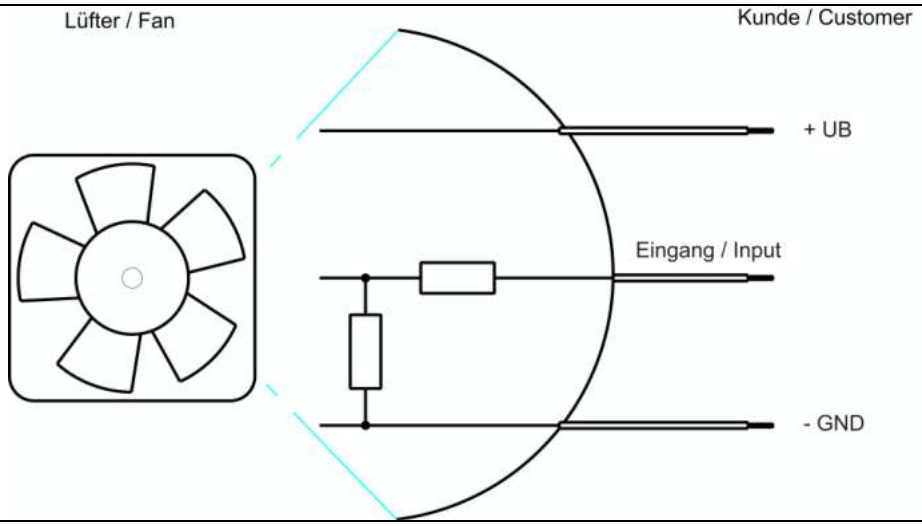
The auxilliaries shown on the schematic diagram (which are required for the intended use) are not part of our delivery.

3 Operating Data

3.1 Operating Data - Electrical Interface - Input

Control input	Analog

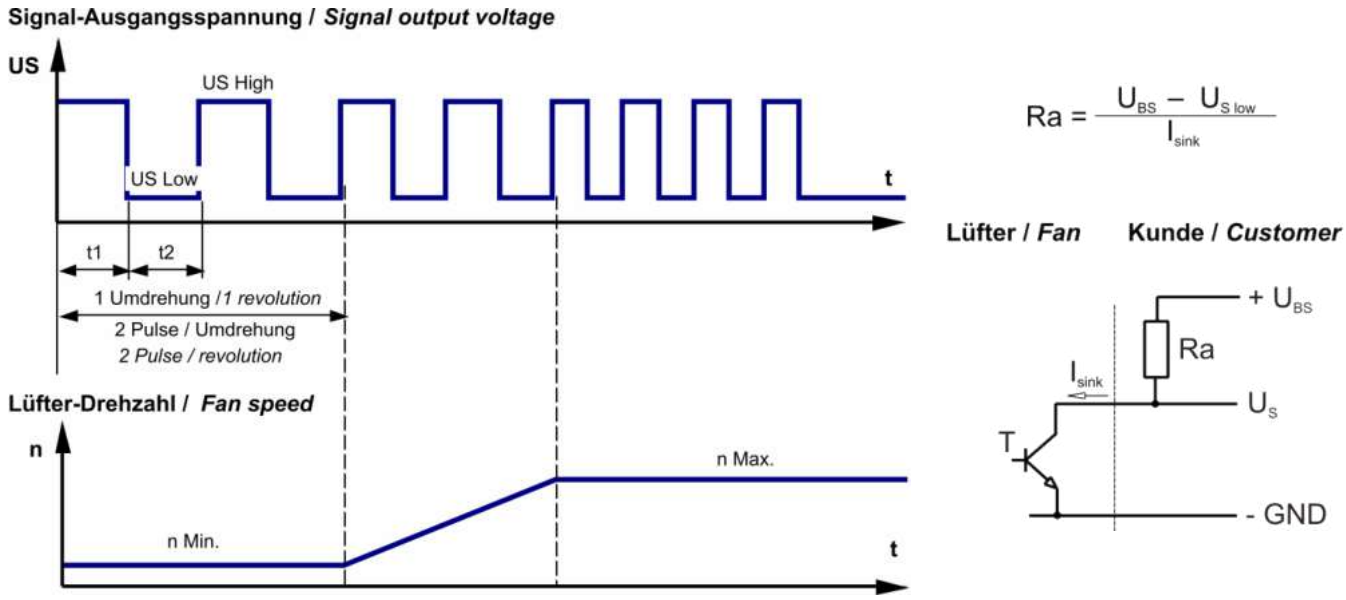
Features

Characteristics	
Schematics	

3.2 Electrical Operating Data

3.3 Operating Data - Electrical Interface - Output

Tacho type	/2 (open collector)

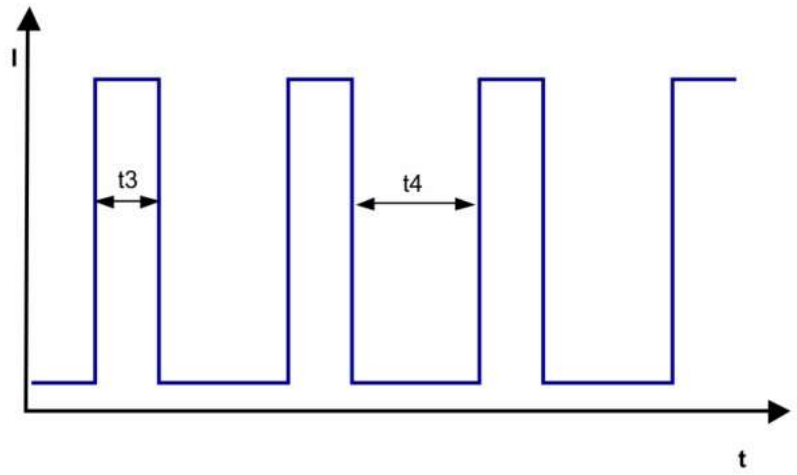


Features	Note	Values
Tacho operating voltage (UBS)		Min.: 4,0 V Max.: 30,0 V
Tacho signal Low	I sink: 2 mA	<= 0,3 V
Tacho signal High	I source: 1 mA	30,0 V
Maximum sink current		<= 10 mA
External resistor	External resistor Ra from UBS to US required. All voltages measured to GND.	
Tacho frequency	(2 x n) / 60	
Tacho isolated from motor	No	
Slew rate		=> 0,5 V/us

Alarm type	None

3.4 Electrical Features

Electronic function	Speed-Controlled	
Reversed polarity protection Max. residual current at Un	Rectifying diode IF <= 100 uA	
Locked rotor protection	Auto restart	
Locked rotor current at Un	approx. 3.000 mA	
Clock signal t3/t4 at locked rotor	Typical: 1,0 s / 20,0 s	



3.5 Aerodynamics

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.
The information is only valid under the specified test conditions and may be changed by the installation conditions. If there are deviations from the standard test conditions, the characteristic values must be checked under the installed conditions.

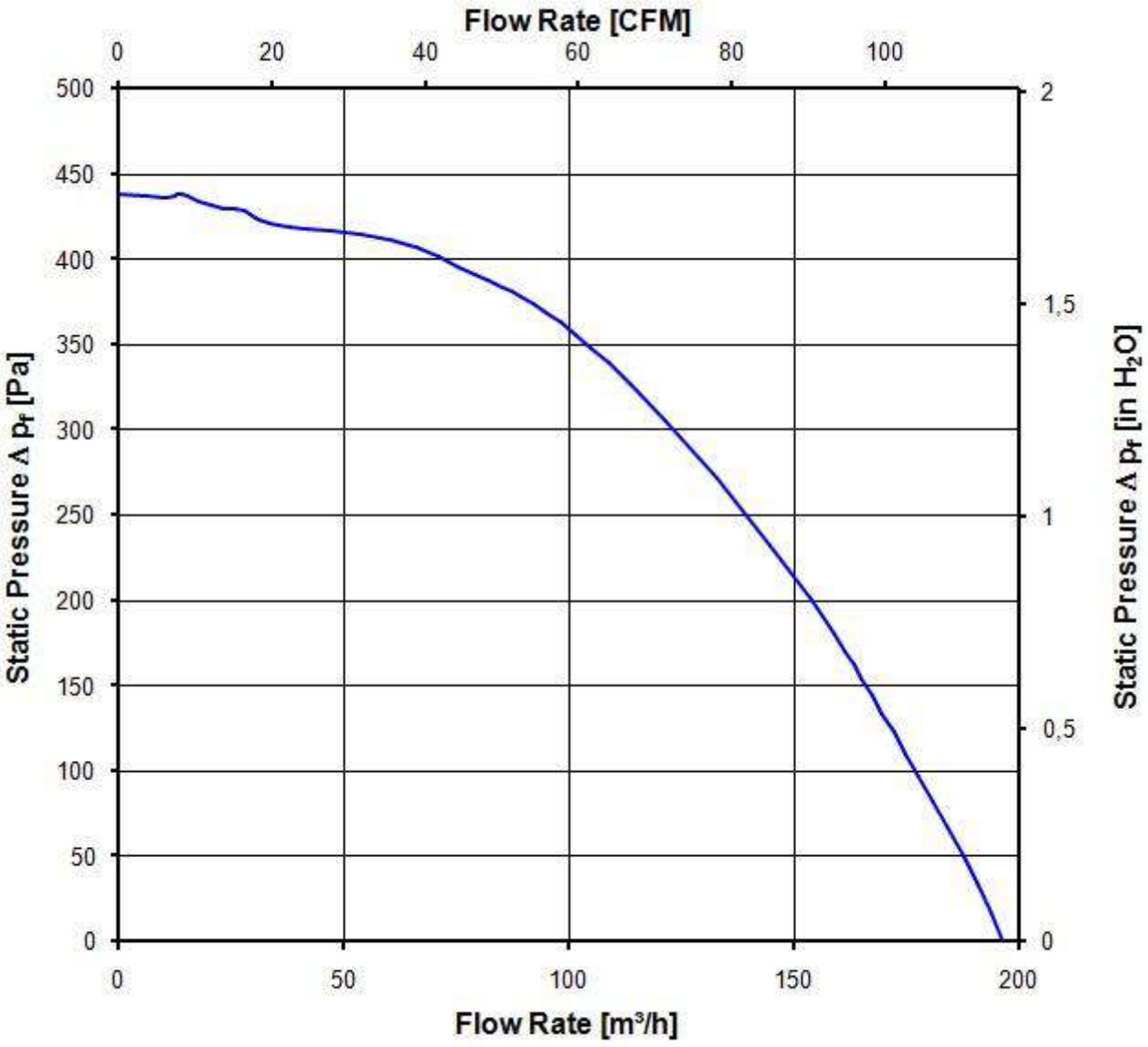
Measurement setup:	Measured between two steel plates
Steel plate:	148 mm x 148 mm
Intake nozzle:	D: 66 mm; R: 7 mm
Distance between bottom and top plate:	
Overlapping impeller / nozzle:	1 mm

a.) Operation condition:

at free air flow	

Max. free-air flow (Δp = 0 / $\dot{V}$ = max.)	192,0 m3/h	
Max. static pressure (Δp = max. / $\dot{V}$ =0)	440 Pa	

at free air flow	
at free air flow	


Flow Rate [CFM]
0
20
40
60
80
100
500
450
400
350
300
250
200
150
100
50
0
Static Pressure Δ pf [Pa]
2
1,5
1
0,5
0
Static Pressure Δ pf [in H2O]
0
50
100
150
200
Flow Rate [m³/h]

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:

at free air flow	

Optimal operating point	40,0 m3/h @ 374 Pa	
Sound power level at the optimal operating point	7,5 bel(A)	
Sound pressure level at free air flow, measured in rubber bands		
at free air flow		
at free air flow		

4 Environment

4.1 General

Min. permitted ambient temperature TU min.	-20 °C	
Max. permitted ambient temperature TU max.	70 °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	
Dust requirements	None	
Salt fog 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.

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	
clearance / creepage distance	1,0 mm / 1,2 mm	
Protection class	III	

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	No
CSA	Canadian Standards Association	Yes / CSA audited by UL according to C22.2 No. 113 Fans and Ventilators
CCC	China Compulsory Certification	No

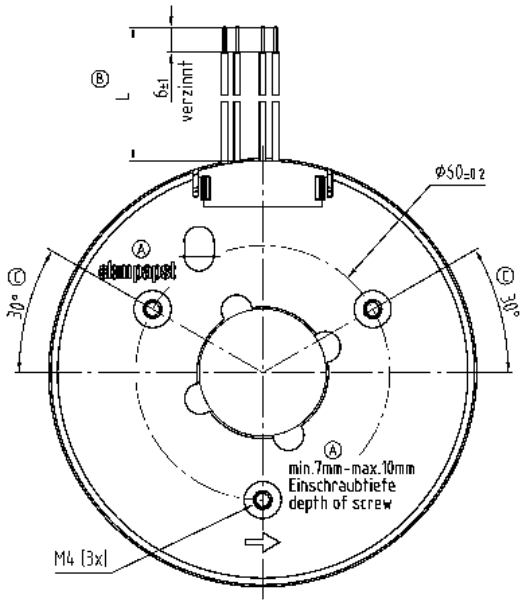
6 Reliability

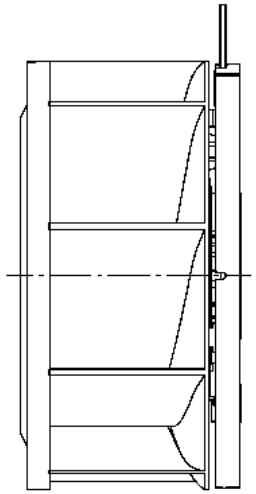
6.1 General

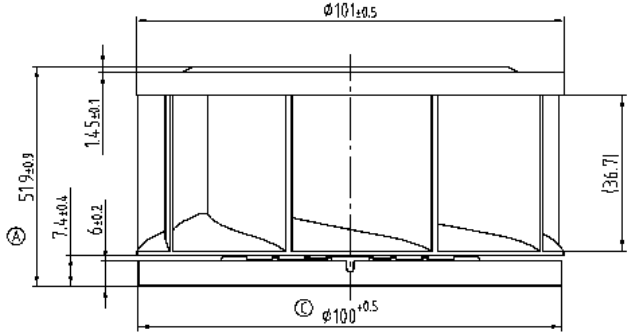
Life expectancy L10 at TU = 40 °C	60.000 h	
Life expectancy L10 at TU max.	30.000 h	
Life expectancy L10 Delta (40 °C)	120.000 h	

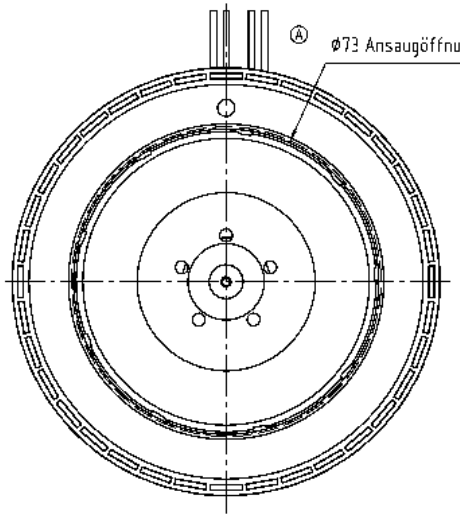
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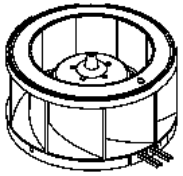
Ⓑ Länge L und Anzahl der Litzen siehe Spezifikation











			ebmpapst	Werkstoff/Material:	Volumen/Volume [m³]
SAP-Status/Scale	Kund.-Ver./Change-Nr.	Art/CAD-Server-Version	CAD Umgebung/ CAD Environment		Gewicht/Mass [g]
		Bibliothek/Lib	Name/Name		
Toleranzen/Tolerances:		Bearb./ Drawn		Artikel/Title:	Ⓐ
Allgemeintoleranz/Gen. tolerances		Gepr./ Checked			
		Freig./ Release			
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