

# EC centrifugal fan

backward curved, single inlet

R1G220-AB13-13 ebmpapst Datasheet

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## Nominal data

<b>Type</b>	<b>R1G220-AB13-13</b>	
<b>Motor</b>	<b>M1G074-BF</b>	
Nominal voltage	VDC	48
Nominal voltage range	VDC	36 .. 57
Type of data definition		fa
Speed	min <sup>-1</sup>	2750
Power input	W	70
Current draw	A	1.6
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	+60

ml = max. load · me = max. efficiency · fa = running at free air · cs = customer specs · cu = customer unit  
 Subject to alterations



## Technical features

<b>Mass</b>	1.5 kg
<b>Size</b>	220 mm
<b>Surface of rotor</b>	Coated in black
<b>Material of impeller</b>	PA plastic
<b>Number of blades</b>	11
<b>Direction of rotation</b>	Clockwise, seen on rotor
<b>Type of protection</b>	IP 44; Depending on installation and position
<b>Insulation class</b>	"B"
<b>Humidity class</b>	F4-1
<b>Max. permissible ambient motor temp. (transp./ storage)</b>	+ 80 °C
<b>Min. permissible ambient motor temp. (transp./storage)</b>	- 40 °C
<b>Mounting position</b>	Any
<b>Condensate discharge holes</b>	None
<b>Operation mode</b>	S1
<b>Motor bearing</b>	Ball bearing
<b>Technical features</b>	<ul style="list-style-type: none"> <li>- Tach output</li> <li>- Motor current limit</li> <li>- Soft start</li> <li>- PWM control input</li> </ul>
<b>EMC interference immunity</b>	Acc. to EN 61000-6-2 (industrial environment)
<b>EMC interference emission</b>	Acc. to EN 55022 (Class B)
<b>Motor protection</b>	Reverse polarity and locked-rotor protection
<b>Cable exit</b>	Axial
<b>Product conforming to standard</b>	EN 60950-1

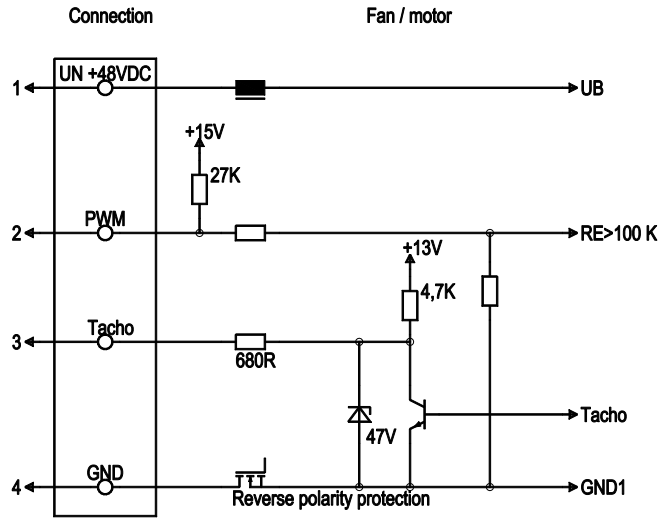
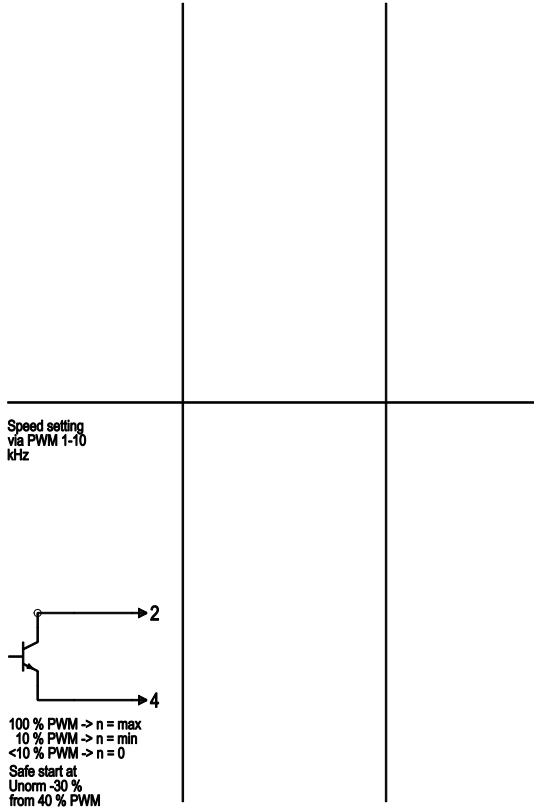


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## Connection screen

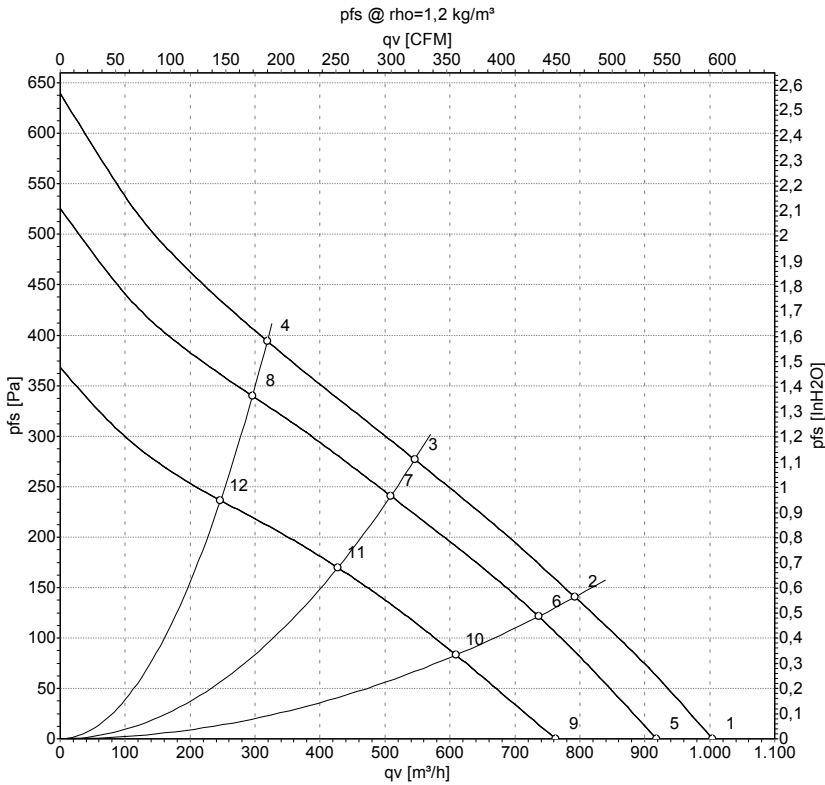
circuit



Line	No.	Signal	Colour	Function / assignment
	1	Un +48 VDC	red	Power supply 48 VDC, for voltage range refer to rating plate, residual ripple 3.5%
	2	PWM	yellow	PWM control input
	3	Tach	white	Tacho output, 3 pulses per revolution, Isink max = 10 mA
	4	GND	Blue	Reference ground



## Charts: Air flow



Measurement: LU-47466  
 Measurement: LU-47465  
 Measurement: LU-47467

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

## Measured values

	U	n	P <sub>ed</sub>	I	qv	p <sub>fs</sub>
	V	min <sup>-1</sup>	W	A	m <sup>3</sup> /h	Pa
1	56	3005	90	1.80	1005	0
2	56	2815	94	1.93	790	140
3	56	2700	96	1.99	545	277
4	56	2795	95	1.94	320	394
5	48	2750	70	1.60	920	0
6	48	2605	75	1.75	735	120
7	48	2520	79	1.85	510	240
8	48	2590	75	1.76	295	340
9	36	2285	41	1.28	760	0
10	36	2175	45	1.40	610	83
11	36	2120	47	1.46	425	170
12	36	2180	45	1.39	245	236

U = Supply voltage · n = Speed · P<sub>ed</sub> = Power input · I = Current draw · qv = Air flow · p<sub>fs</sub> = Pressure increase

