

G1G108-AB41-02

EC centrifugal fan

forward-curved, single-intake
with housing (flange)



G1G108-AB41-02 ebmpapst Datasheet

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Nominal data

Type	G1G108-AB41-02	
Motor	M1G055-BD	
Nominal voltage	VDC	48
Nominal voltage range	VDC	36 .. 57
Frequency	Hz	-
Speed (rpm)	min ⁻¹	3000
Power consumption	W	42
Current draw	A	1.0
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change



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Technical description

Weight	1.4 kg
Size	108 mm
Motor size	55
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	Sheet steel, galvanized
Housing material	Die-cast aluminum
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP22
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H0 - dry environment
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Any
Condensation drainage holes	None
Mode	S1
Motor bearing	Ball bearing
Technical features	<ul style="list-style-type: none"> - Tach output - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Reverse polarity protection
With cable	Axial
Protection class assignment	<p>III; Requires supply with safety extra-low voltage SELV.</p> <p>This component for installation may have several local protection classes. This information relates to this component's basic design.</p> <p>The final protection class is based on the component's intended installation and connection. If there is a PE connection point on the housing, it must not be visible after installation.</p>
Conformity with standards	EN 62368-1
Approval	EAC

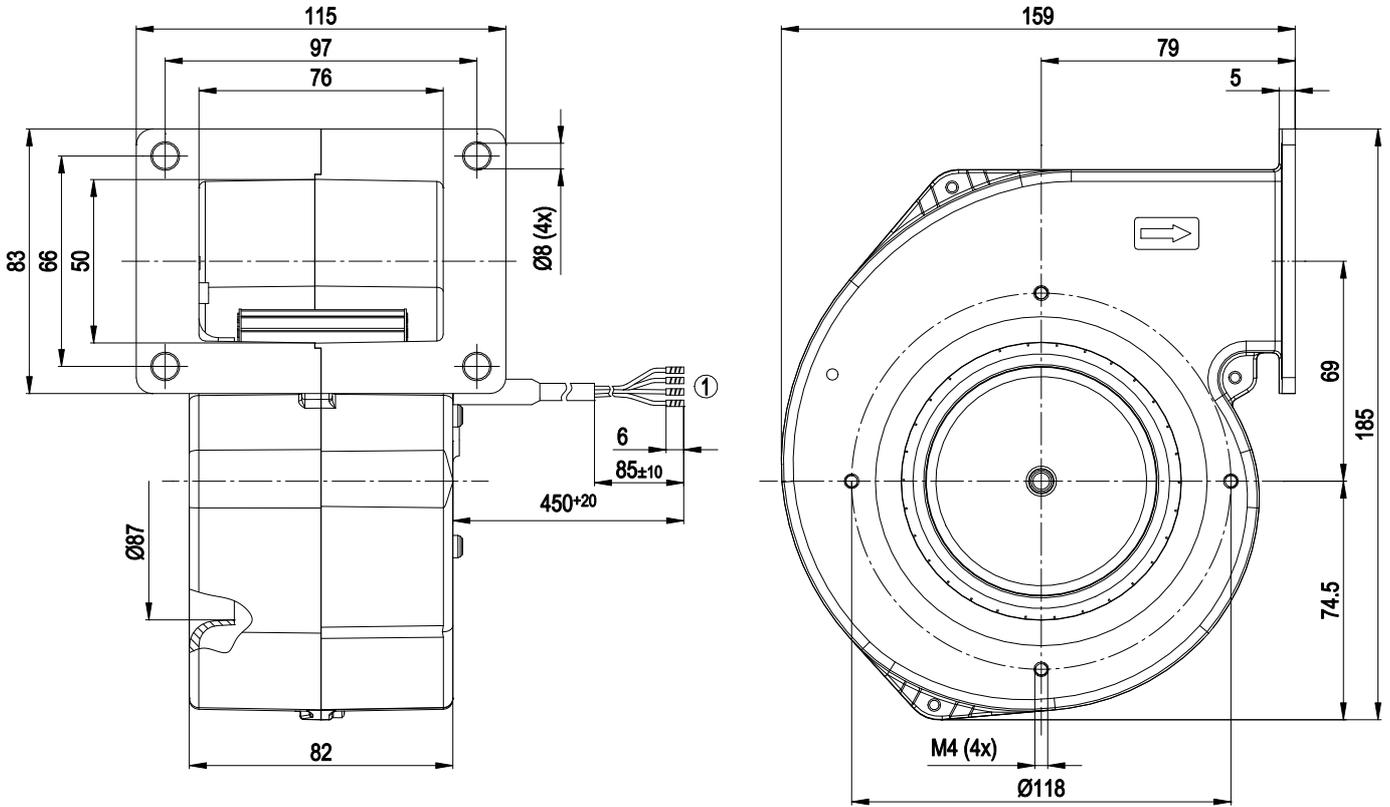


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Product drawing



1 Cable PVC AWG20, 4x crimped splices



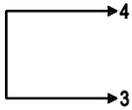
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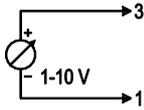
Connection diagram

Customer circuit

Full speed

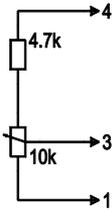


Adjustable speed

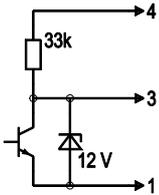


10 V → n = max
1 V → n = min
< 1 V → n = 0
Safe start at Unom -30% from 4 V Ucontr.

Speed adjustable with fixed resistor

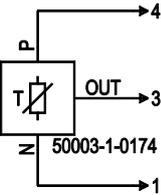


Speed adjustable via PWM 1-10 kHz



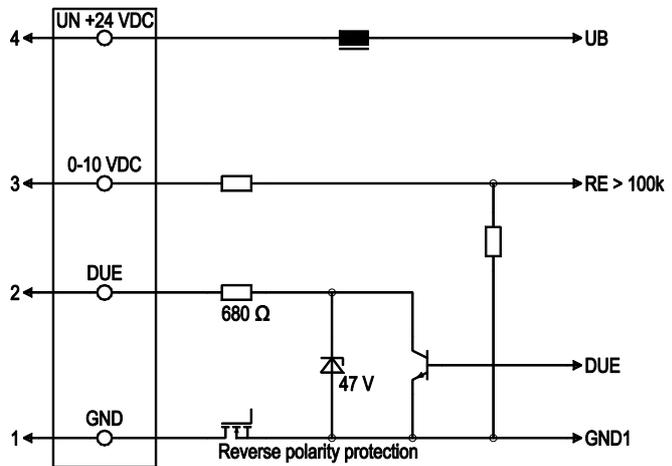
100% PWM → n = max
10% PWM → n = min
< 10% PWM → n = 0
Safe start at Unom -30% from 40% PWM

Set value requirement via temperature controller



Connection

Fan / Motor



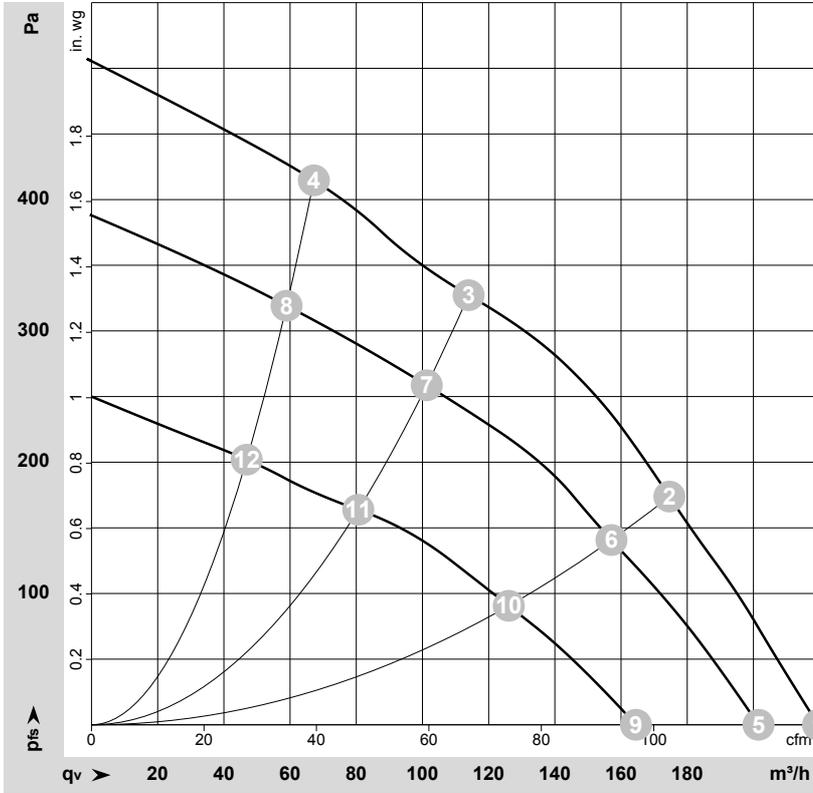
No.	Conn.	Designation	Color	Function/assignment
1	1	GND	blue	Reference ground
1	2	Tach	white	Tach output, 2 pulses per revolution, Isink max = 10 mA
1	3	0-10 VDC	yellow	Control input Re > 100k
1	4	Un +24 VDC	red	Power supply 24 VDC, maximum ripple 3.5%



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Curves: Air performance



$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-53526-1
Measurement: LU-53525-1
Measurement: LU-53527-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebmpapst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

Measured values

	U	n	P _{ed}	I	q _v	p _{fs}	q _v	p _{fs}
	V	min ⁻¹	W	A	m ³ /h	Pa	cfm	in. wg
1	57	3200	52	1.04	220	0	130	0.00
2	57	3520	47	0.92	175	174	105	0.70
3	57	3875	40	0.76	115	327	65	1.31
4	57	4100	34	0.66	65	415	40	1.67
5	48	3000	42	1.00	200	0	120	0.00
6	48	3170	34	0.79	155	140	90	0.56
7	48	3450	28	0.64	100	260	60	1.04
8	48	3620	24	0.56	60	320	35	1.28
9	36	2425	23	0.70	165	0	95	0.00
10	36	2595	19	0.59	125	91	75	0.37
11	36	2780	16	0.50	80	164	50	0.66
12	36	2905	14	0.45	45	203	30	0.81

U = Voltage · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · q_v = Air flow · p_{fs} = Pressure increase

