

D1G133-AB29-52

EC centrifugal fan

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

D1G133-AB29-52 ebmpapst Datasheet

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Nominal data

Type	D1G133-AB29-52	
Motor	M1G074-BF	
Nominal voltage	VDC	24
Method of obtaining data		fa
Speed (rpm)	min ⁻¹	1780
Power consumption	W	105
Current draw	A	5.6
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	2.8 kg
Size	133 mm
Motor size	74
Electronics housing material	Rotor: painted black
Impeller material	Sheet steel, galvanized
Housing material	Sheet steel, galvanized
Motor suspension	Motor vibration-damped on both sides
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP42
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
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC interference emission	According to EN 55022 (Class B)
Motor protection	Reverse polarity and locked-rotor protection
With cable	Variable
Protection class assignment	<p>III; Requires supply with safety extra-low voltage SELV.</p> <p>This component to be built-in can have several local protection classes.</p> <p>This specification relates to the basic design of this component.</p> <p>The final protection class is based on the intended installation and connection of the components.</p>
Conformity with standards	EN 60335-1
Approval	CSA C22.2 No. 77; EAC; UL 1004-1

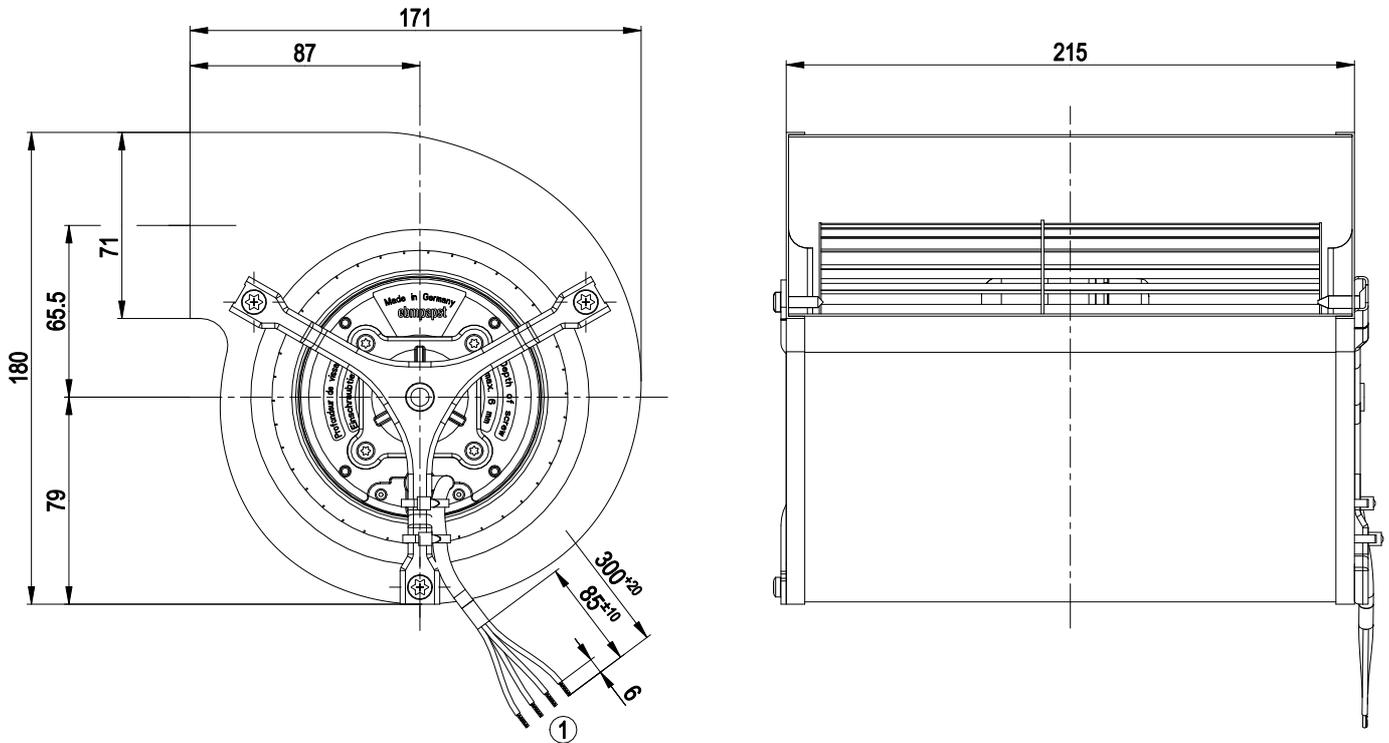


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Product drawing



1 Cable PVC AWG20, 4x crimped splices



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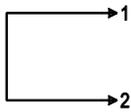
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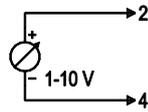
Connection diagram

Customer circuit

Full speed

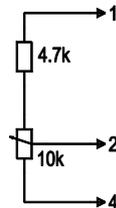


Adjustable speed

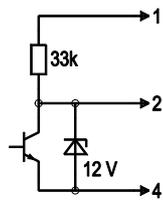


10 V → n = max
1 V → n = min
< 1 V → n = 0
Safe start at Unom -30% from 4 V Ucontr.

Speed adjustable via potentiometer

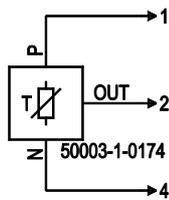


Speed adjustable via PWM 1-10 kHz



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

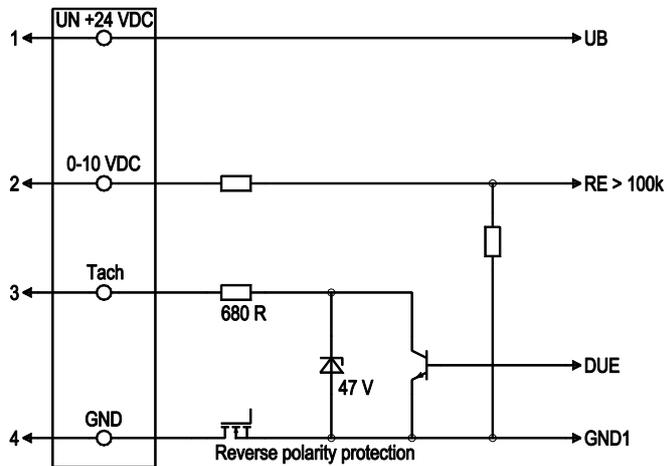
Set value requirement via temperature controller



T < 10 °C → n = 0
T > 45 °C → n = max

Connection

Fan / Motor



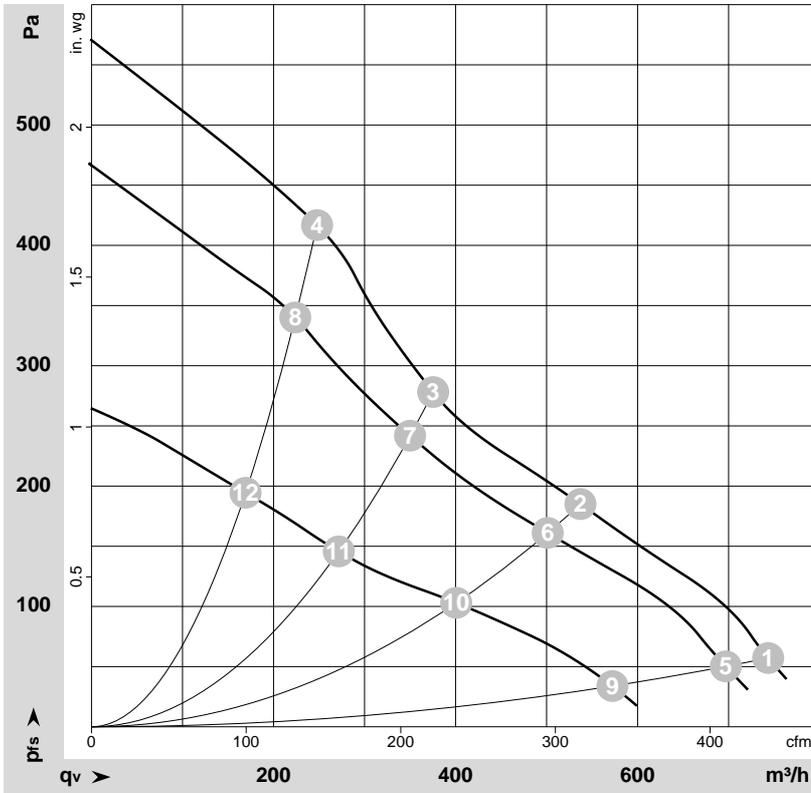
No.	Conn.	Designation	Color	Function/assignment
1	1	Un +24 VDC	red	Power supply 24 VDC, maximum ripple 3.5 %
1	2	0-10 VDC	yellow	Control input Re > 100k
1	3	Tach	white	Tach output, 3 pulses per revolution, Isink max = 10 mA
1	4	GND	blue	Reference ground



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Curves: Air performance



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

Measurement: LU-48008-1
Measurement: LU-48007-1
Measurement: LU-48009-1

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	28	1900	135	6.23	745	55	435	0.22
2	28	2300	116	5.04	535	185	315	0.74
3	28	2655	107	4.41	375	278	220	1.12
4	28	3050	97	3.87	250	417	145	1.67
5	24	1780	105	5.60	695	50	410	0.20
6	24	2160	95	4.63	500	160	295	0.64
7	24	2470	88	4.12	350	240	205	0.96
8	24	2815	73	3.35	225	340	130	1.36
9	16	1505	62	4.34	570	37	335	0.15
10	16	1750	50	3.48	400	104	235	0.42
11	16	1940	42	2.92	270	145	160	0.58
12	16	2150	34	2.42	170	194	100	0.78

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

