

D1G133-AB29-52

# EC centrifugal fan

forward-curved, dual-intake

with housing (flange)

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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 <sup>-1</sup>	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

<b>Weight</b>	2.8 kg
<b>Size</b>	133 mm
<b>Motor size</b>	74
<b>Electronics housing material</b>	Rotor: painted black
<b>Impeller material</b>	Sheet steel, galvanized
<b>Housing material</b>	Sheet steel, galvanized
<b>Motor suspension</b>	Motor vibration-damped on both sides
<b>Direction of rotation</b>	Clockwise, viewed toward rotor
<b>Degree of protection</b>	IP42
<b>Insulation class</b>	"B"
<b>Moisture (F) / Environmental (H) protection class</b>	F0; H0 - dry environment
<b>Max. permitted ambient temp. for motor (transport/storage)</b>	+ 80 °C
<b>Min. permitted ambient temp. for motor (transport/storage)</b>	- 40 °C
<b>Installation position</b>	Any
<b>Condensation drainage holes</b>	None
<b>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 limitation</li> <li>- Soft start</li> <li>- Control input 0-10 VDC / PWM</li> </ul>
<b>EMC immunity to interference</b>	According to EN 61000-6-2 (industrial environment)
<b>EMC interference emission</b>	According to EN 55022 (Class B)
<b>Motor protection</b>	Reverse polarity and locked-rotor protection
<b>With cable</b>	Variable
<b>Conformity with standards</b>	EN 60335-1
<b>Approval</b>	CSA C22.2 No. 77; EAC; UL 1004-1

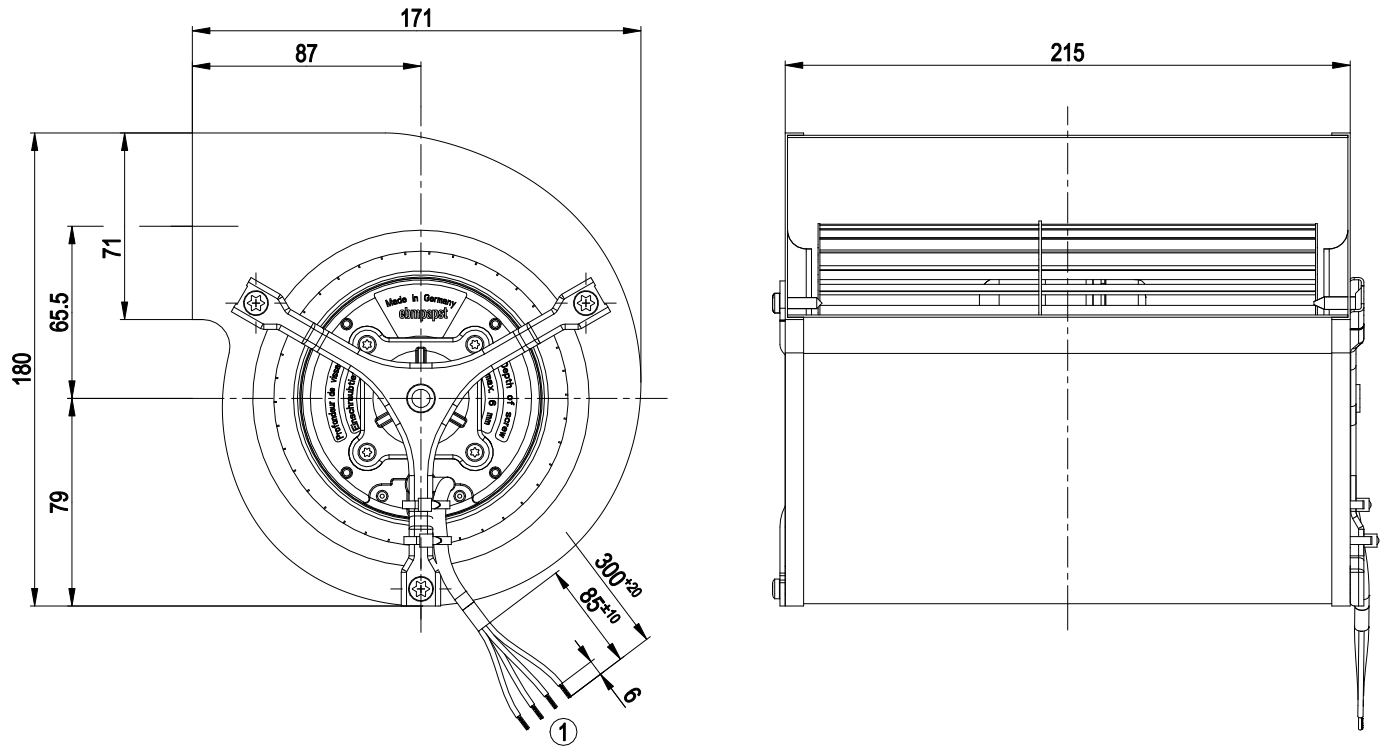


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## Product drawing



1 Cable PVC AWG20, 4x crimped splices



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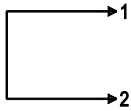
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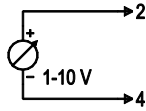
## Connection diagram

### Customer circuit

Full speed

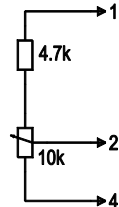


Adjustable speed

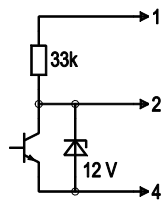


10 V → n = max  
1 V → n = min  
< 1 V → n = 0  
Safe start at Unom -30% from 4 V Ucontr.

Speed adjustable via potentiometer

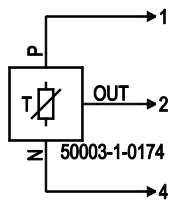


Speed adjustable via PWM 1-10 kHz



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

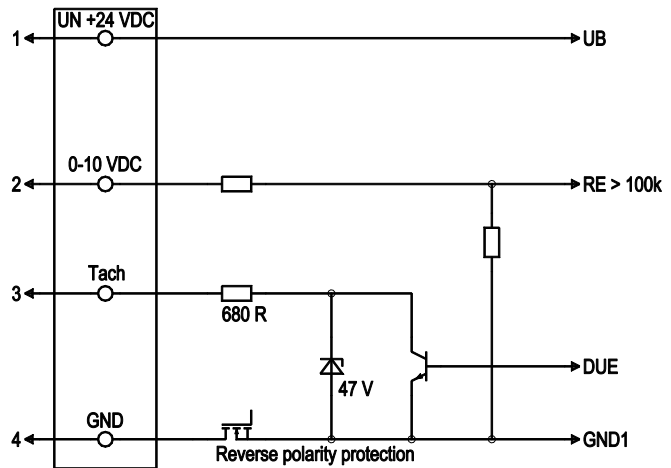
Set value requirement via temperature controller



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

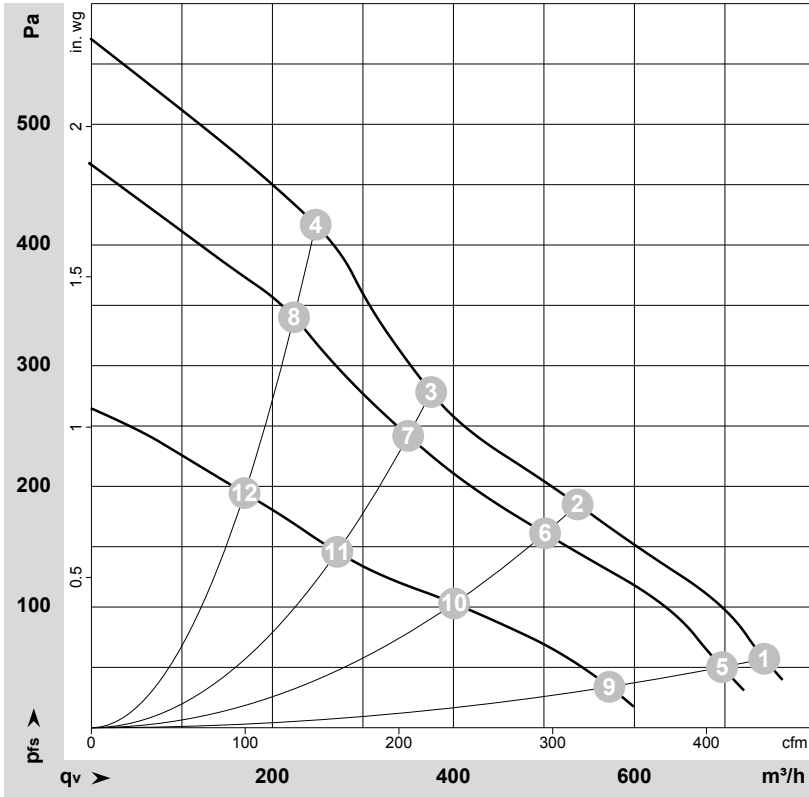


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## Curves: Air performance



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

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 <sub>ed</sub>	I	q <sub>v</sub>	p <sub>fs</sub>	q <sub>v</sub>	p <sub>fs</sub>
	V	min <sup>-1</sup>	W	A	m <sup>3</sup> /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<sub>ed</sub> = Power consumption · I = Current draw · q<sub>v</sub> = Air flow · p<sub>fs</sub> = Pressure increase

