

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>Fan size</b>	133 mm
<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
<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>	EAC; UL 1004-1; CSA C22.2 No. 77

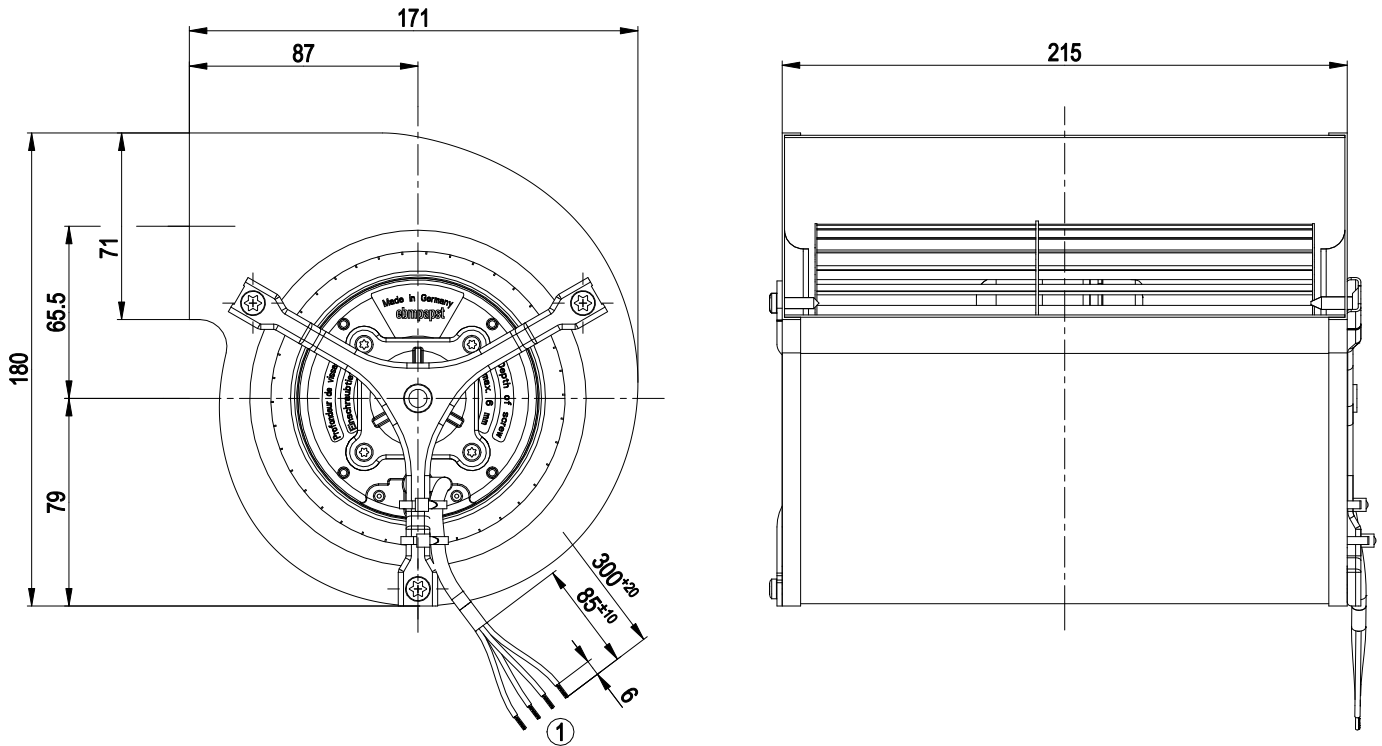


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## Product drawing



1 Cable PVC AWG20, 4x crimped splices



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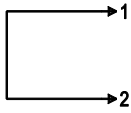
forward-curved, dual-intake

with housing (flange)

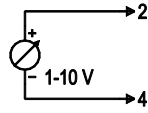
## Connection diagram

### Customer circuit

Full speed

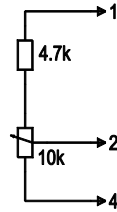


Adjustable speed

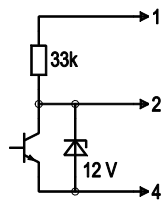


10 V → n = max  
1 V → n = min  
< 1 V → n = 0  
Safe start at Unom -30% from 4 V Ucontr.

Speed adjustable via potentiometer

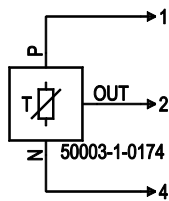


Speed adjustable via PWM 1-10 kHz



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

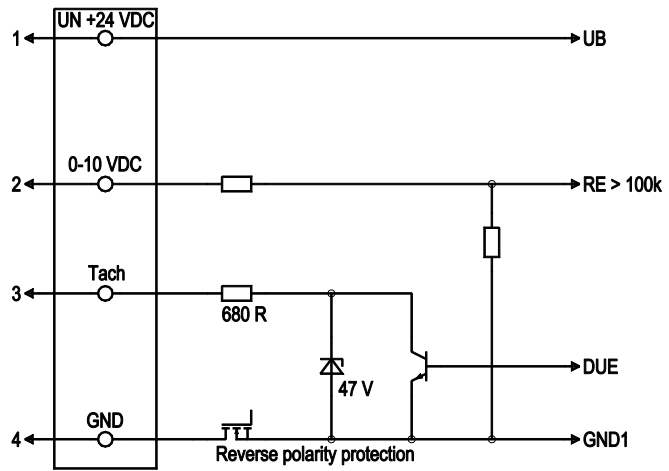
Set value requirement via temperature controller



T < 10 °C → n = 0  
T > 45 °C → n = max

### Connection

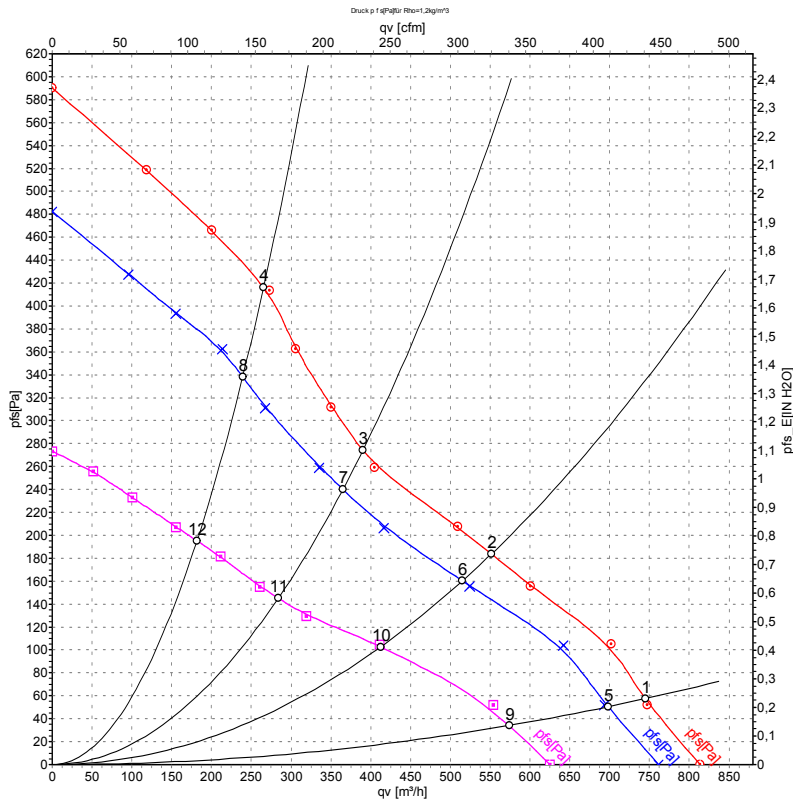
### Fan / Motor



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



## Curves: Air performance



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 ebm-papst. 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	qv	p <sub>fs</sub>	qv	p <sub>fs</sub>
	V	min <sup>-1</sup>	W	A	m <sup>3</sup> /h	Pa	CFM	inH <sub>2</sub> O
1	28	1895	135	6.24	745	55	440	0.22
2	28	2275	117	5.10	550	184	325	0.74
3	28	2610	108	4.47	390	273	230	1.10
4	28	2995	100	3.99	265	419	155	1.68
5	24	1780	105	5.60	700	50	410	0.20
6	24	2130	96	4.68	515	160	305	0.64
7	24	2440	89	4.17	365	240	215	0.96
8	24	2755	75	3.47	240	340	140	1.36
9	16	1505	62	4.35	575	38	340	0.15
10	16	1735	51	3.53	410	104	240	0.42
11	16	1920	43	2.98	285	145	165	0.58
12	16	2115	35	2.49	180	195	105	0.78

U = Power supply · n = Speed (rpm) · P<sub>ed</sub> = Power consumption · I = Current draw · qv = Air flow · p<sub>fs</sub> = Pressure increase



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