

D1G133-DC17-52

# EC centrifugal fan

forward curved, dual inlet  
with housing (without flange)



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## Nominal data

Type	D1G133-DC17-52	
Motor	M1G074-CF	
Nominal voltage	VDC	48
Nominal voltage range	VDC	36 .. 57
Frequency	Hz	-
Type of data definition		fa
Speed	min <sup>-1</sup>	1580
Power input	W	118
Current draw	A	3.0
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



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## Technical features

<b>Mass</b>	3.39 kg
<b>Size</b>	133 mm
<b>Surface of rotor</b>	Coated in black
<b>Material of impeller</b>	Sheet steel, hot-galvanised
<b>Housing material</b>	Sheet steel, hot-galvanised
<b>Motor suspension</b>	Motor anti-vibration mounted on both sides
<b>Direction of rotation</b>	Clockwise, seen on rotor
<b>Type of protection</b>	IP 42
<b>Insulation class</b>	"B"
<b>Humidity class</b>	F0
<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>- Control input 0-10 VDC / PWM</li> <li>- Tach output</li> <li>- Motor current limit</li> <li>- Soft start</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>	Variable
<b>Product conforming to standard</b>	EN 60950-1
<b>Approval</b>	CSA C22.2 Nr.77; EAC; UL 1004-1

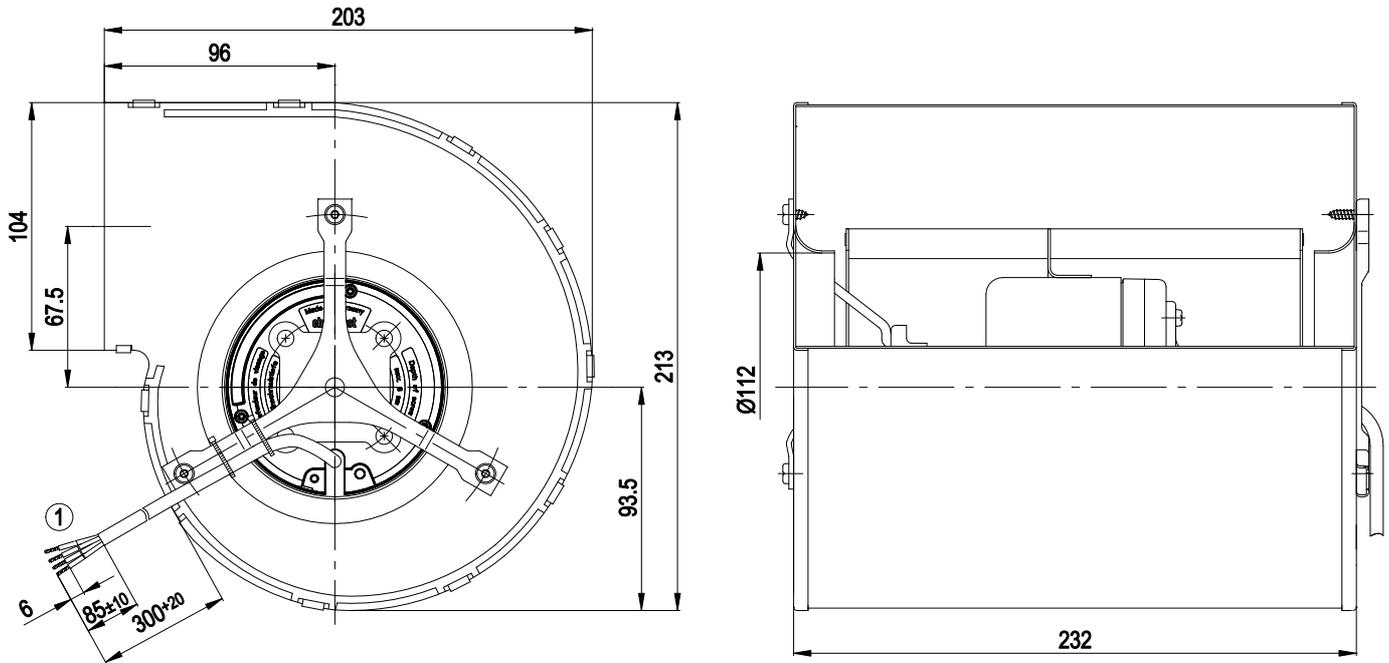


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## Product drawing



1 Connection line PVC AWG20, 4x brass lead tips crimped



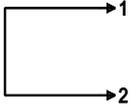
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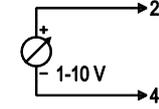
## Connection screen

### Customer circuit

#### Full speed

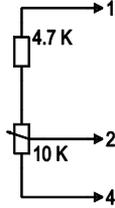


#### Speed setting

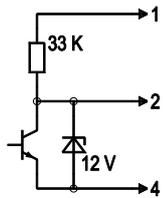


10 V → n = max  
1 V → n = min  
<1 V → n = 0  
Safe start  
at Unom -30 %  
from 4 V Ucontr.

#### Speed setting via potentiometer

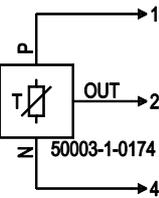


#### Speed setting via PWM 1-10 kHz



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

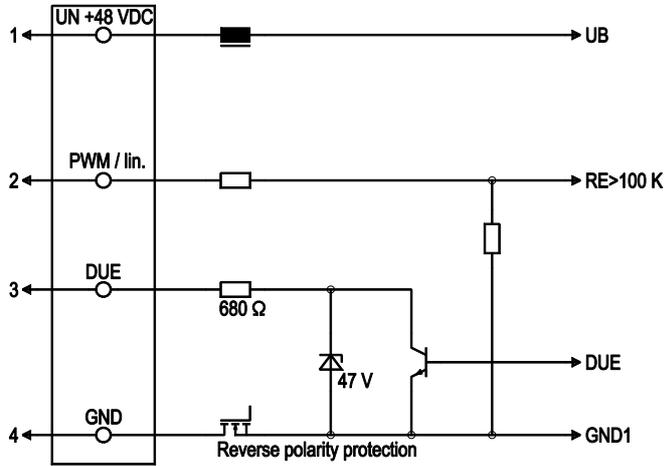
#### Set value via temperature controller



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

### Connection

### Fan / motor



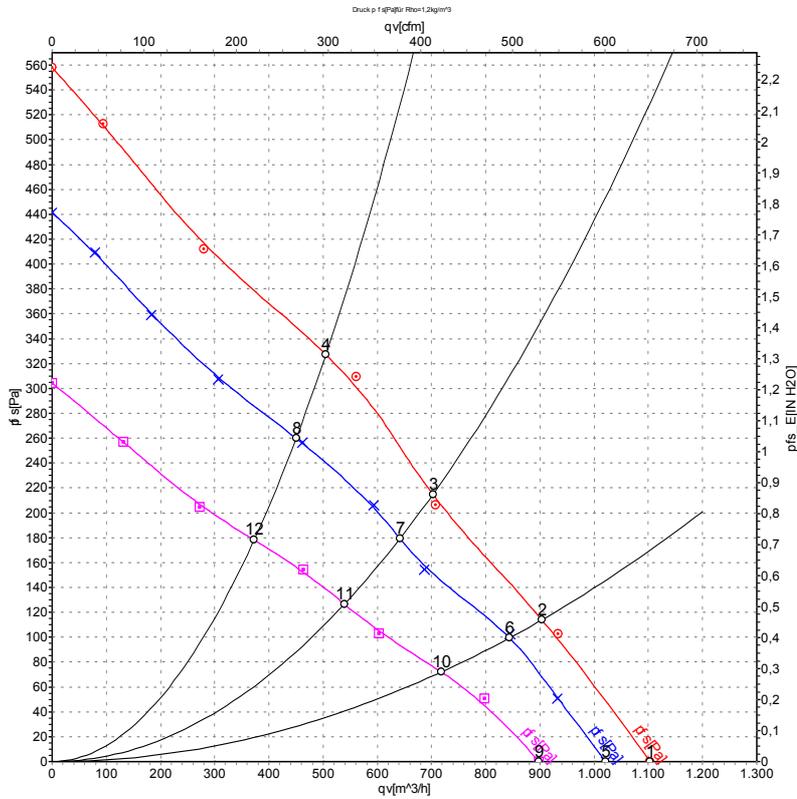
No.	Conn.	Designation	Colour	Function / assignment
1	1	Un +48 VDC	red	Power supply 48 VDC, residual ripple 3.5 %
1	2	PWM / lin	yellow	PWM / lin. control input, 0-10 V
1	3	Tach	white	Speed monitoring output, 3 pulses per rotation, Isink max = 10 mA
1	4	GND	blue	Reference mass



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## Charts: Air flow



Measurement: LU-51340  
Measurement: LU-51339  
Measurement: LU-51341

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: L<sub>WA</sub> measured as per ISO 13347 / L<sub>pA</sub> 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	57	1700	145	3.32	1105	0
2	57	1925	134	2.94	905	117
3	57	2200	125	2.63	705	210
4	57	2520	114	2.34	505	330
5	48	1580	118	3.00	1020	0
6	48	1785	108	2.65	845	100
7	48	2040	99	2.40	640	180
8	48	2275	83	2.02	450	260
9	36	1405	79	2.50	900	0
10	36	1575	70	2.23	720	72
11	36	1725	59	1.90	540	126
12	36	1890	50	1.64	375	178

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

