

G1G108-AB17-02

# EC centrifugal fan

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



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## Nominal data

Type	G1G108-AB17-02	
Motor	M1G055-BD	
Nominal voltage	VDC	24
Nominal voltage range	VDC	16 .. 28
Frequency	Hz	-
Method of obtaining data		fa
Speed (rpm)	min <sup>-1</sup>	3000
Power consumption	W	42
Current draw	A	2.0
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

<b>Weight</b>	1.4 kg
<b>Size</b>	108 mm
<b>Motor size</b>	55
<b>Rotor surface</b>	Painted black
<b>Electronics housing material</b>	Die-cast aluminum
<b>Impeller material</b>	Sheet steel, hot-dip galvanized
<b>Housing material</b>	Die-cast aluminum
<b>Direction of rotation</b>	Clockwise, viewed toward rotor
<b>Degree of protection</b>	IP22
<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 61000-6-3 (household environment)
<b>Motor protection</b>	Reverse polarity and locked-rotor protection
<b>With cable</b>	Axial
<b>Conformity with standards</b>	EN 60950-1
<b>Approval</b>	UL 1004-1; CSA C22.2 No. 77; EAC

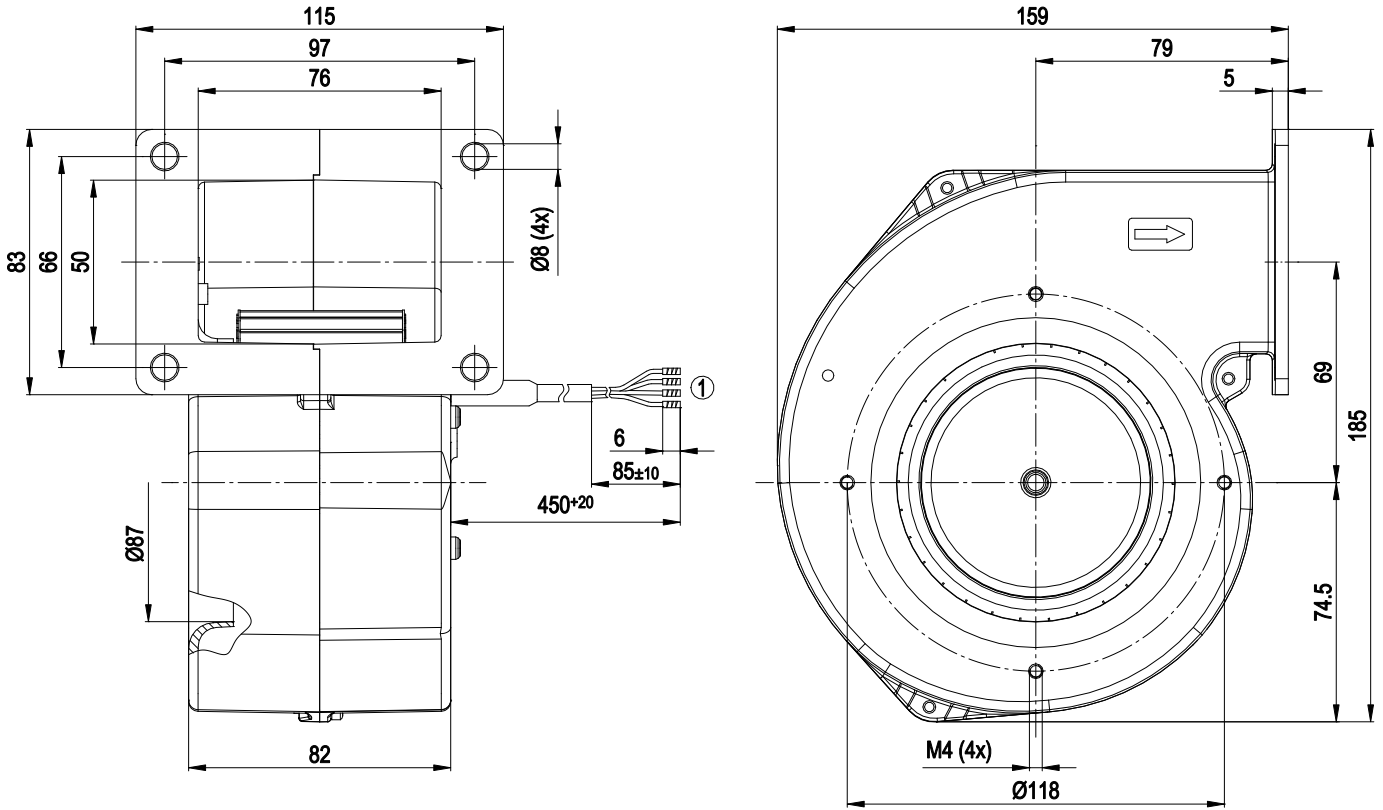


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## Product drawing



1 Cable PVC AWG20, 4x crimped splices



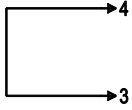
# EC centrifugal fan

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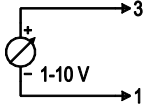
## Connection diagram

### Customer circuit

Full speed

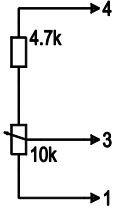


Adjustable speed

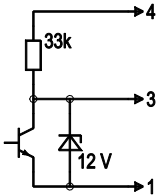


10 V → n = max  
1 V → n = min  
< 1 V → n = 0  
Safe start at Unom -30% from 4 V Ucontr.

Speed adjustable with fixed resistor

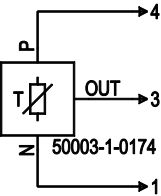


Speed adjustable via PWM 1-10 kHz



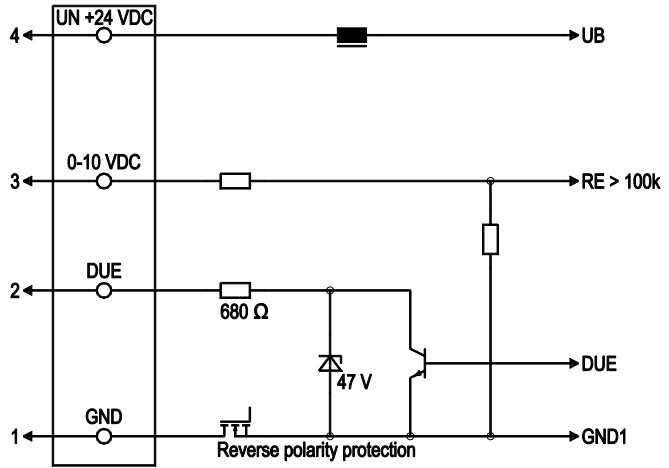
100% PWM → n = max  
10% PWM → n = min  
< 10% PWM → n = 0  
Safe start at Unom -30% from 40% PWM

Set value requirement via temperature controller



### Connection

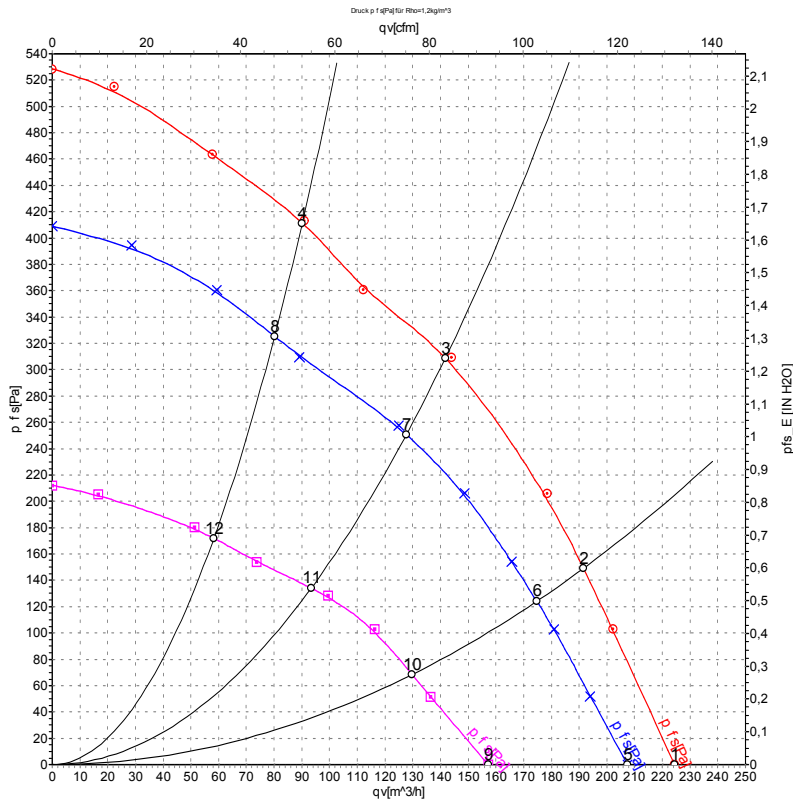
### Fan / Motor



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%



## Curves: Air performance



Measurement: LU-47851-1  
 Measurement: LU-47850-1  
 Measurement: LU-47852-1

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	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	3235	55	2.26	225	0	130	0.00
2	28	3480	51	2.06	190	149	115	0.60
3	28	3800	44	1.76	140	313	85	1.26
4	28	4055	38	1.49	90	414	55	1.66
5	24	3000	42	2.00	205	0	120	0.00
6	24	3170	39	1.80	175	125	105	0.50
7	24	3415	33	1.50	130	250	75	1.00
8	24	3625	28	1.28	80	325	45	1.30
9	16	2290	19	1.33	155	0	90	0.00
10	16	2400	17	1.19	130	68	75	0.27
11	16	2540	14	1.00	95	134	55	0.54
12	16	2670	12	0.88	60	172	35	0.69

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



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