

EC centrifugal fan

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

G1G108-AB17-06 ebmpapst Datasheet

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Nominal data

Type	G1G108-AB17-06	
Motor	M1G055-BD	
Nominal voltage	VDC	24
Nominal voltage range	VDC	16 .. 28
Method of obtaining data		fa
Speed (rpm)	min ⁻¹	2900
Power consumption	W	38
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

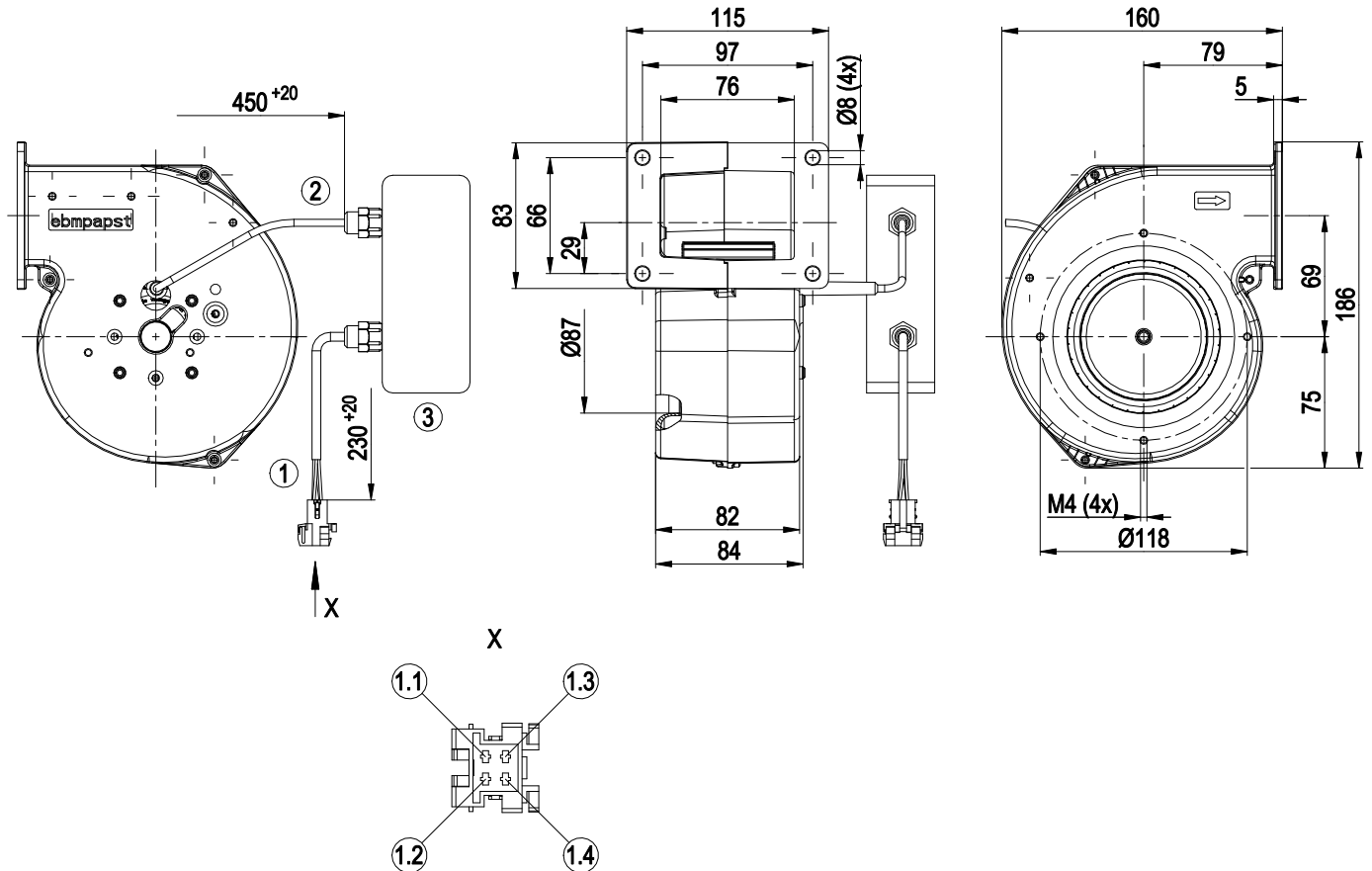
Weight	1.5 kg
Fan size	108 mm
Rotor surface	Painted black
Impeller material	Sheet steel, galvanized
Housing material	Die-cast aluminum
Number of blades	30
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP22
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	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	- Tach output - Motor current limitation - Soft start - Control input 0-10 VDC / PWM
EMC regulations	According to ECE R10 Rev. 3
Motor protection	Reverse polarity and locked-rotor protection
With cable	Axial
Conformity with standards	EN 60335-1
Approval	E1



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Product drawing



1	Cable PVC AWG20 with 4-pole connector housing TE 929505-1, 4x flat plug TE 927892-1
1.1	red (+)
1.2	blue (-)
1.3	white (S)
1.4	yellow (control input)
2	Cable PVC AWG20
3	Housing for external electronics, PA plastic

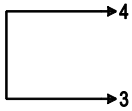
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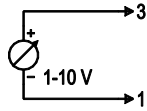
Connection diagram

Customer circuit

Full speed

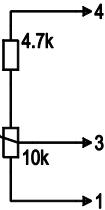


Adjustable speed

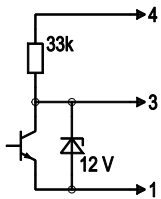


10 V → n = max
1 V → n = min
< 1 V → n = 0
Safe start
at Unom -30%
from 4 V Ucontr.

Speed adjustable with fixed resistor

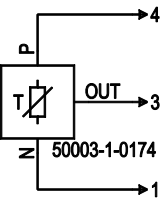


Speed adjustable via PWM 1-10 kHz



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

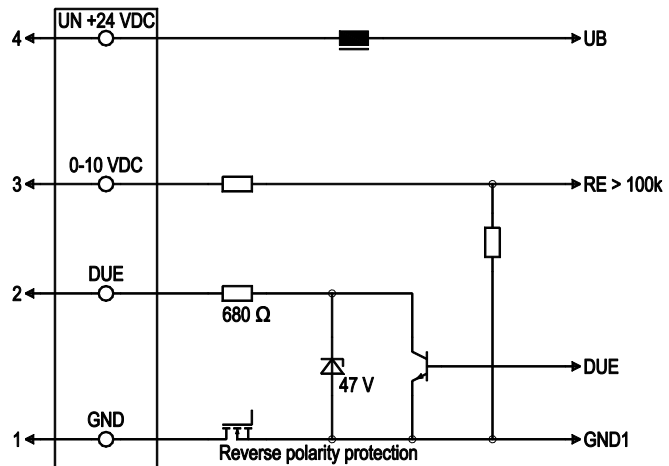
Set value requirement via temperature controller



50003-1-0174

Connection

Fan / Motor

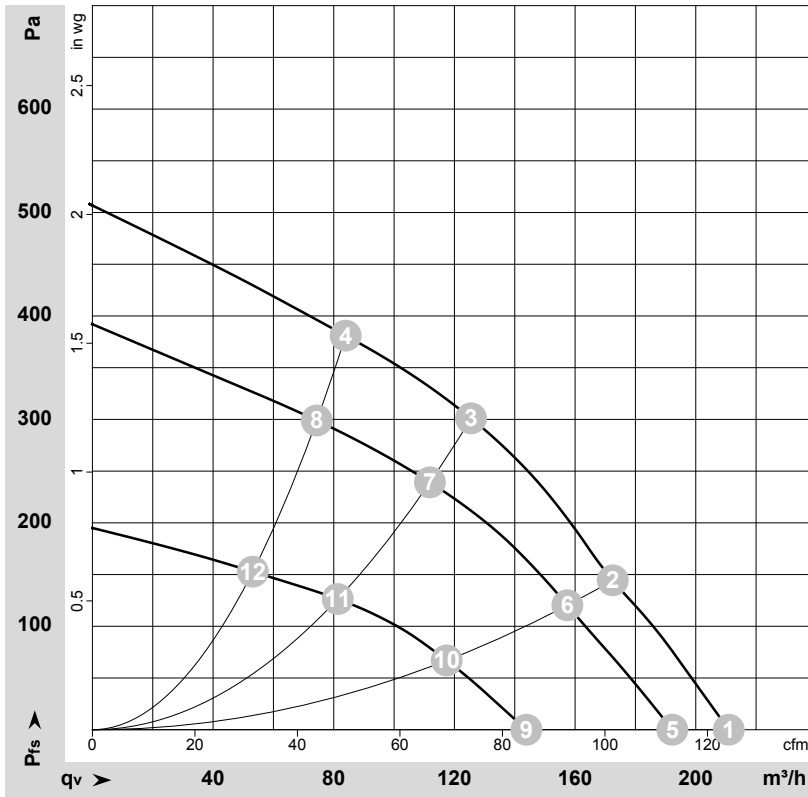


No.	Conn.	Designation	Color	Function/assignment
1	1	GND	blue	Reference ground
1	2	Tach	white	Tach output, 2 pulses per revolution, Isink max = 10 mA
1	3	0-10 VDC	yellow	Control input Re > 100k
1	4	Un +24 VDC	red	Power supply 24 VDC, maximum ripple 3.5%

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Curves: Air performance



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

Measurement: LU-33506-1
Measurement: LU-33505-1
Measurement: LU-33507-1

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 _{ed}	I	q _v	p _{fs}	q _v	p _{fs}
	V	min ⁻¹	W	A	m ³ /h	Pa	cfm	inH ₂ O
1	28	3170	49	2.05	210	0	125	0.00
2	28	3430	45	1.82	170	143	100	0.57
3	28	3820	40	1.58	125	302	75	1.21
4	28	4055	35	1.38	85	381	50	1.53
5	24	2900	38	1.81	190	0	115	0.00
6	24	3135	35	1.63	155	120	90	0.48
7	24	3415	29	1.35	110	240	65	0.96
8	24	3590	26	1.18	75	300	45	1.20
9	16	2230	17	1.18	145	0	85	0.00
10	16	2360	15	1.03	115	67	70	0.27
11	16	2505	12	0.86	80	127	50	0.51
12	16	2610	10.0	0.78	55	153	30	0.61

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

