

G1G140-AV17-02

EC centrifugal fan

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

G1G140-AV17-02 ebmpapst Datasheet

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Nominal data

Type	G1G140-AV17-02	
Motor	M1G055-CF	
Nominal voltage	VDC	24
Nominal voltage range	VDC	16 .. 28
Method of obtaining data		fa
Speed (rpm)	min ⁻¹	1750
Power consumption	W	54
Current draw	A	2.5
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

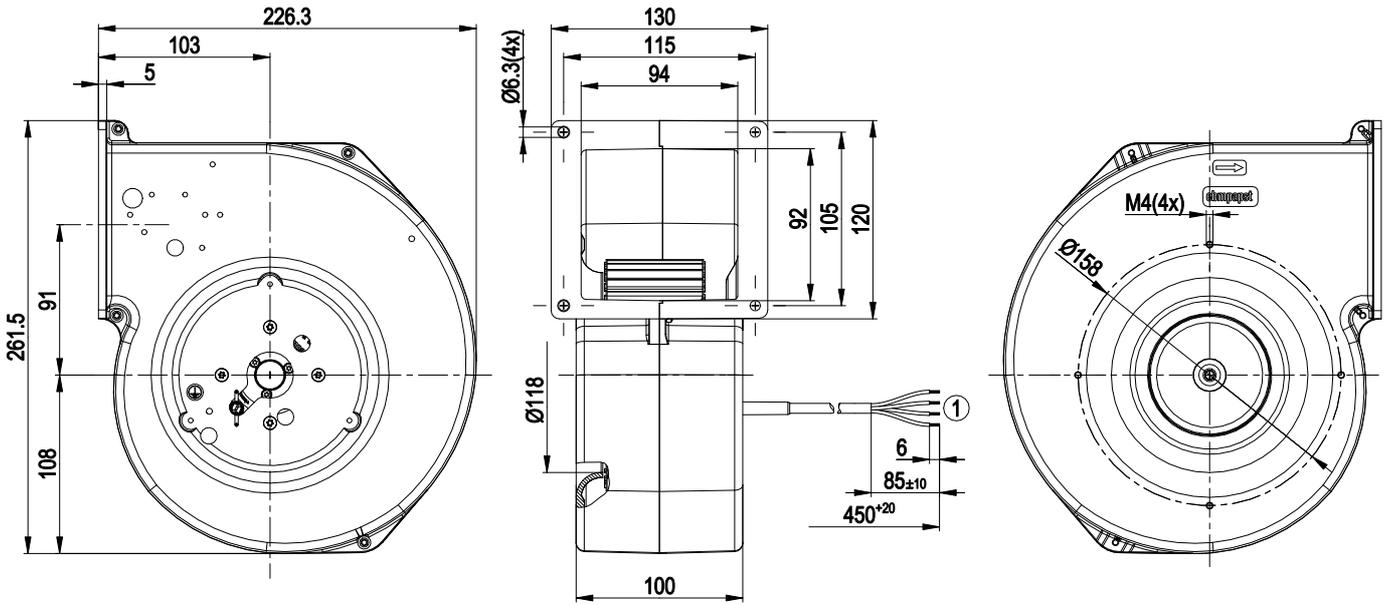
Weight	2.46 kg
Size	140 mm
Motor size	55
Rotor surface	Painted black
Impeller material	Sheet steel, galvanized
Housing material	Die-cast aluminum
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP22; installation- and position-dependent
Insulation class	"B"
Moisture (F) / Environmental (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
Mode	S1
Motor bearing	Ball bearing
Technical features	<ul style="list-style-type: none"> - Tach output - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Reverse polarity protection
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC interference emission	According to EN 55022 (Class B)
With cable	Axial
Protection class assignment	<p>III; Requires supply with safety extra-low voltage SELV.</p> <p>This component for installation may have several local protection classes. This information relates to this component's basic design.</p> <p>The final protection class is based on the component's intended installation and connection. If there is a PE connection point on the housing, it must not be visible after installation.</p>
Conformity with standards	EN 60034-1; EN 60204-1; EN 60335-1
Approval	EAC



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Product drawing



1 Cable PVC AWG20, 4x crimped splices



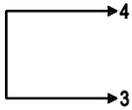
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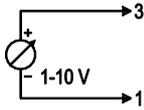
Connection diagram

Customer circuit

Full speed

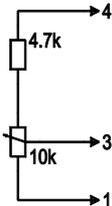


Adjustable speed

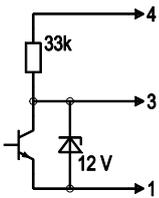


10 V → n = max
1 V → n = min
< 1 V → n = 0
Safe start at Unom -30% from 4 V Ucontr.

Speed adjustable with fixed resistor

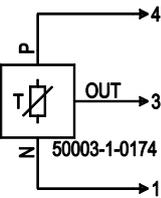


Speed adjustable via PWM 1-10 kHz



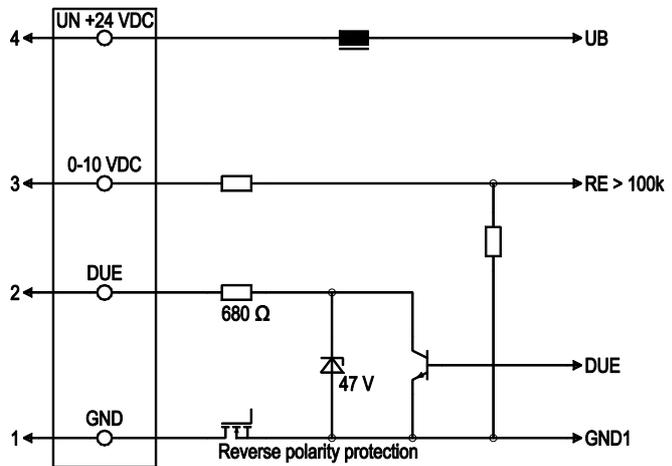
100% PWM → n = max
10% PWM → n = min
< 10% PWM → n = 0
Safe start at Unom -30% from 40% PWM

Set value requirement via temperature controller



Connection

Fan / Motor



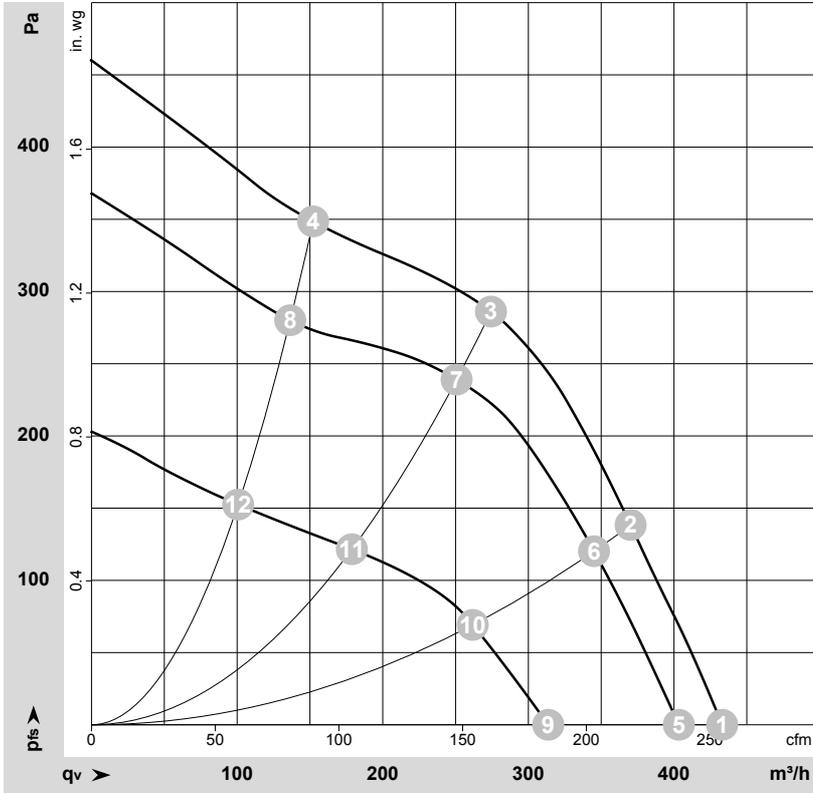
No.	Conn.	Designation	Color	Function/assignment
1	1	GND	blue	Reference ground
1	2	Tach	white	Tach output, 2 pulses per revolution, Isink max = 10 mA
1	3	0-10 VDC	yellow	Control input Re > 100k
1	4	Un +24 VDC	red	Power supply 24 VDC, maximum ripple 3.5%



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Curves: Air performance



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

Measurement: LU-50746-1
Measurement: LU-50744-1
Measurement: LU-50747-1

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	in. wg
1	28	1875	67	2.80	435	0	255	0.00
2	28	2025	63	2.57	370	138	220	0.55
3	28	2285	57	2.25	275	288	160	1.16
4	28	2590	44	1.75	150	346	90	1.39
5	24	1750	54	2.50	405	0	235	0.00
6	24	1885	51	2.34	345	120	205	0.48
7	24	2075	43	1.98	250	240	150	0.96
8	24	2320	33	1.52	135	280	80	1.12
9	16	1370	26	1.78	315	0	185	0.00
10	16	1450	23	1.59	260	69	155	0.28
11	16	1590	18	1.32	180	122	105	0.49
12	16	1725	14	1.10	100	152	60	0.61

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

