

# EC centrifugal fan

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

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Amtsgericht (court of registration) Stuttgart · HRB 590142

## Nominal data

<b>Type</b>	<b>G1G140-AV17-02</b>	
<b>Motor</b>	<b>M1G055-CF</b>	
Nominal voltage	VDC	24
Nominal voltage range	VDC	16 .. 28
Method of obtaining data		fa
Speed (rpm)	min <sup>-1</sup>	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

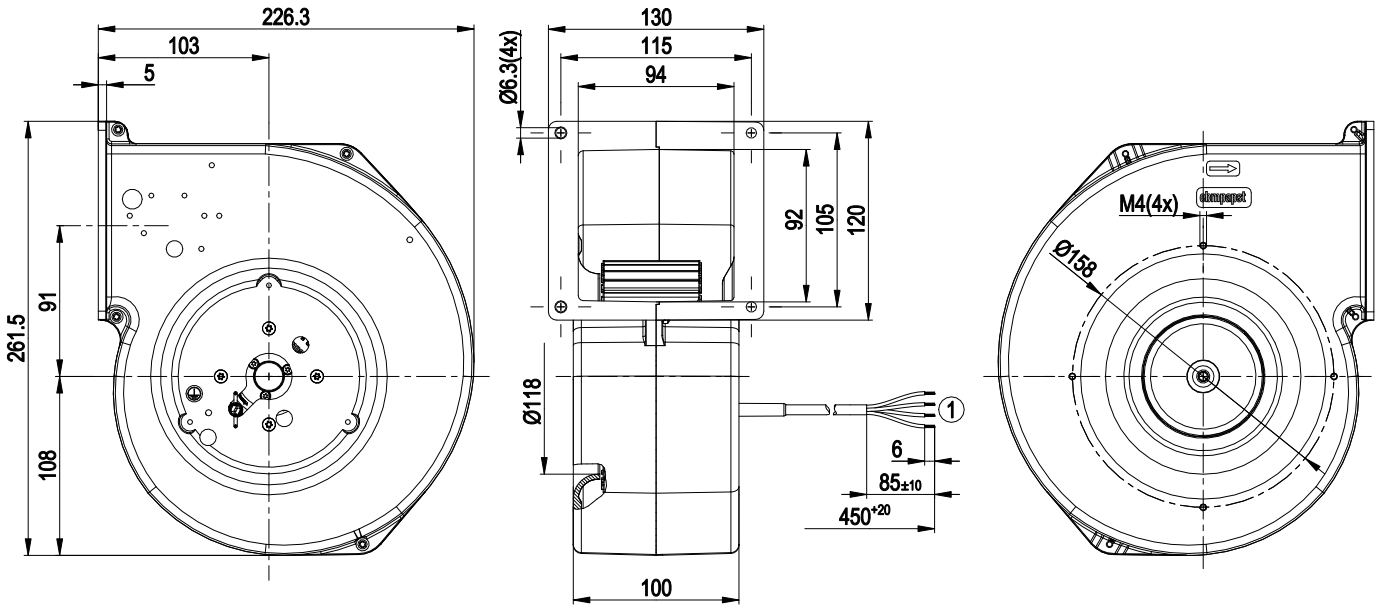
<b>Weight</b>	2.3 kg
<b>Fan size</b>	140 mm
<b>Rotor surface</b>	Painted black
<b>Impeller material</b>	Hot-dip galvanized sheet steel
<b>Housing material</b>	Die-cast aluminum
<b>Direction of rotation</b>	Clockwise, viewed toward rotor
<b>Degree of protection</b>	IP22; installation- and position-dependent
<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>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>	Axial
<b>Protection class</b>	I (with customer connection of protective earth)
<b>Conformity with standards</b>	EN 60335-1
<b>Approval</b>	EAC



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## Product drawing



1 Cable PVC AWG20, 4x crimped splices

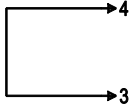
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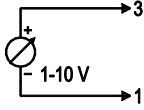
## Connection diagram

### Customer circuit

Full speed

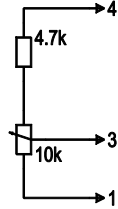


Adjustable speed

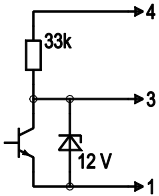


10 V → n = max  
1 V → n = min  
< 1 V → n = 0  
Safe start at Unom -30% from 4 V Ucontr.

Speed adjustable with fixed resistor

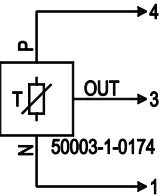


Speed adjustable via PWM 1-10 kHz



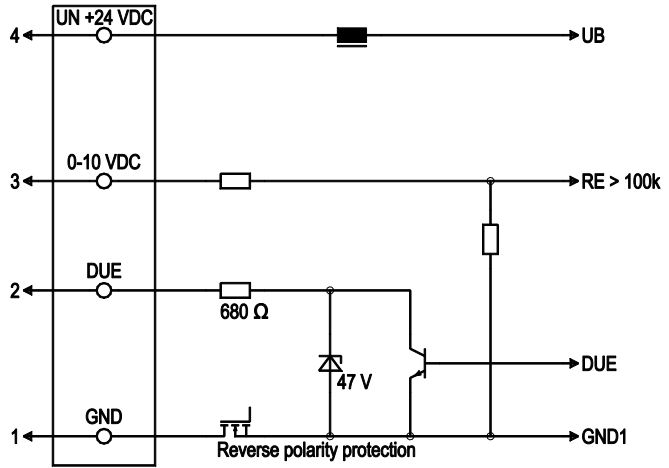
100% PWM → n = max  
10% PWM → n = min  
< 10% PWM → n = 0  
Safe start at Unom -30% from 40% PWM

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%

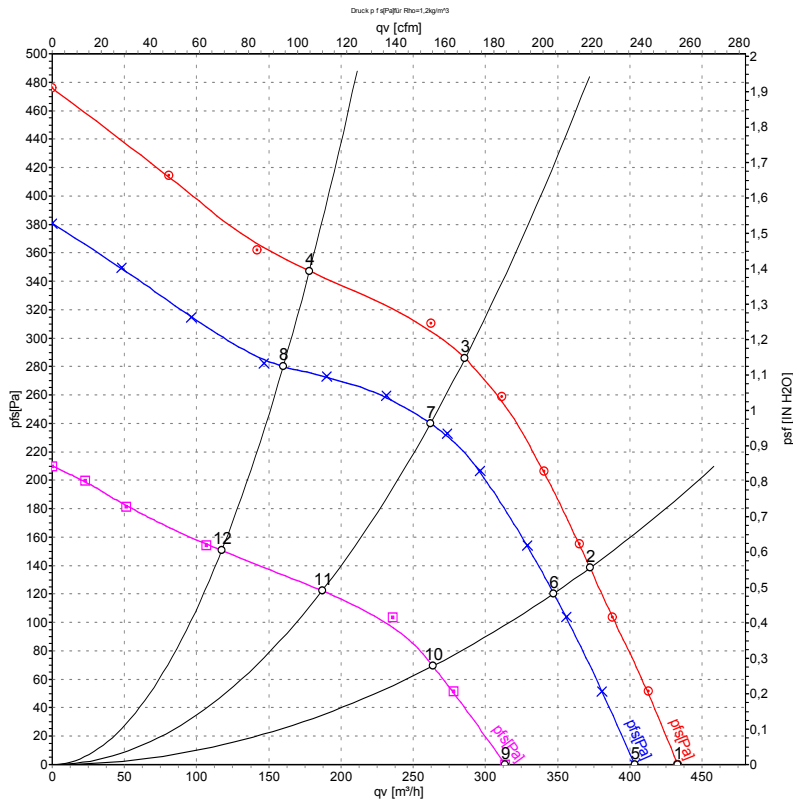


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## Curves: Air performance



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 <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	inH2O
1	28	1875	67	2.80	435	0	255	0.00
2	28	2020	63	2.58	370	138	220	0.55
3	28	2255	58	2.29	285	286	170	1.15
4	28	2525	47	1.85	180	347	105	1.39
5	24	1750	54	2.50	405	0	235	0.00
6	24	1880	51	2.35	345	120	205	0.48
7	24	2055	44	2.02	260	240	155	0.96
8	24	2275	35	1.60	160	280	95	1.12
9	16	1370	26	1.78	315	0	185	0.00
10	16	1445	23	1.60	265	70	155	0.28
11	16	1575	19	1.35	185	123	110	0.49
12	16	1695	15	1.14	115	150	70	0.60

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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