

# 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>G1G160-BH29-52</b>	
<b>Motor</b>	<b>M1G074-BF</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	105
Current draw	A	5.8
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

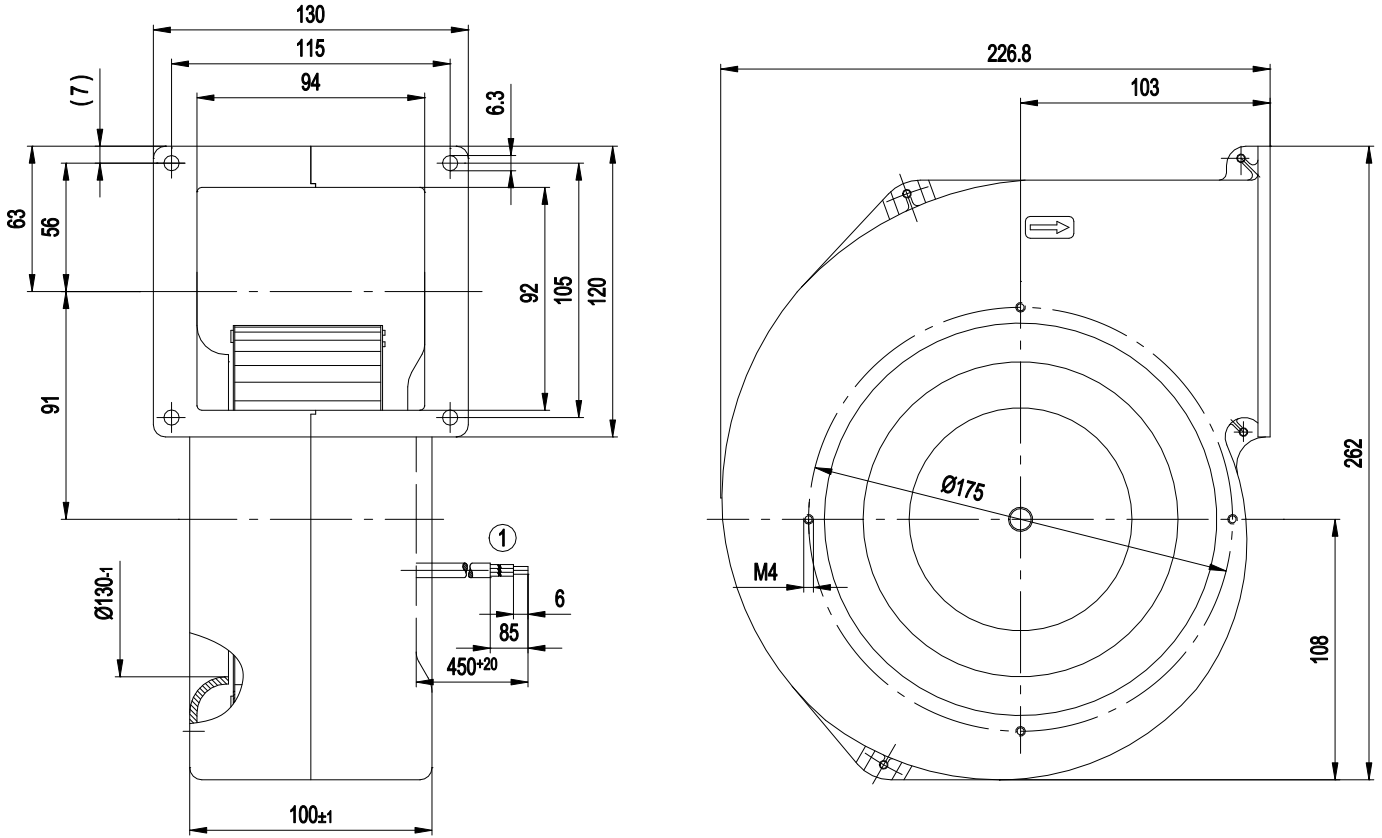
<b>Weight</b>	2.82 kg
<b>Fan size</b>	160 mm
<b>Rotor surface</b>	Painted black
<b>Impeller material</b>	Sheet steel, galvanized
<b>Direction of rotation</b>	Clockwise, viewed toward rotor
<b>Degree of protection</b>	IP42
<b>Insulation class</b>	"B"
<b>Moisture (F) / Environmental (H) protection class</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>Condensation drainage holes</b>	None
<b>Mode</b>	S1
<b>Motor bearing</b>	Ball bearing
<b>Technical features</b>	- Tach output - Motor current limitation - Soft start - Control input 0-10 VDC / PWM
<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>Conformity with standards</b>	EN 60950-1
<b>Approval</b>	EAC; UL 1004-1; CSA C22.2 No. 77



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## Product drawing



1 Cable AWG 20, 4x crimped splices



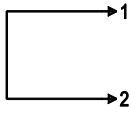
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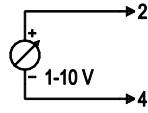
## Connection diagram

### Customer circuit

Full speed

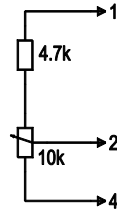


Adjustable speed

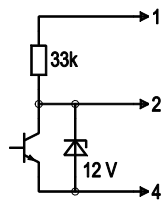


10 V → n = max  
1 V → n = min  
< 1 V → n = 0  
Safe start at Unom - 30% from 4 V Ucontr.

Speed adjustable via potentiometer

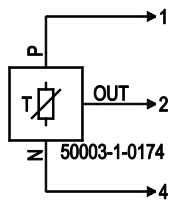


Speed adjustable via PWM 1-10 kHz



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

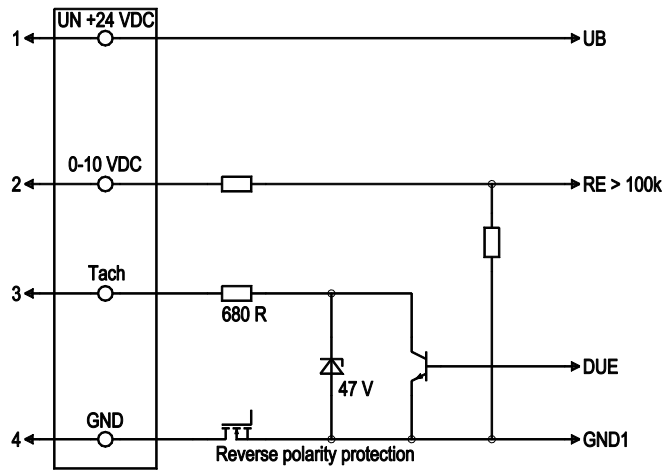
Set value requirement via temperature controller



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

### Connection

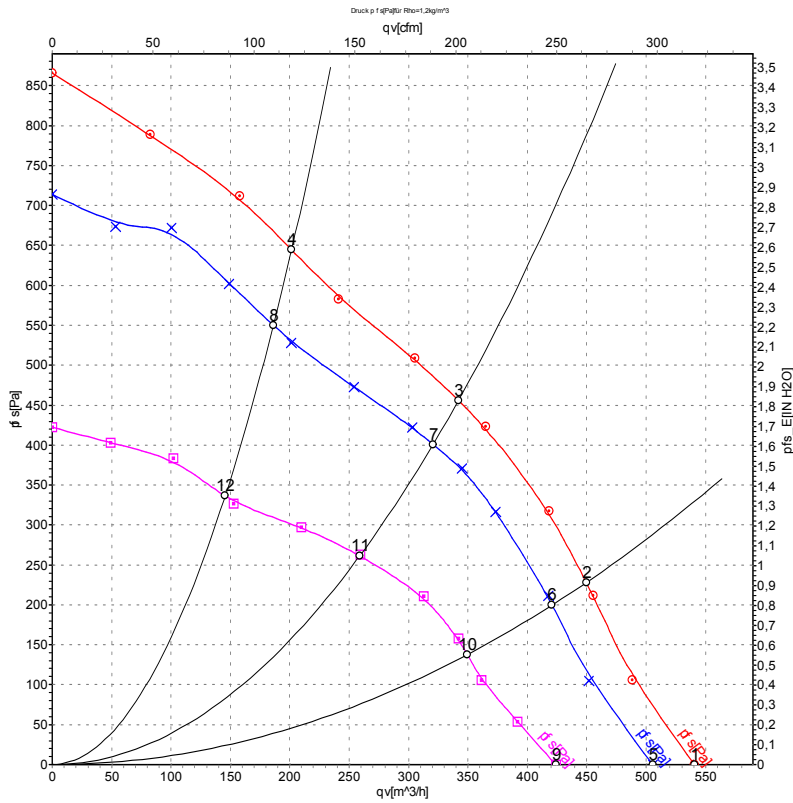
### Fan / Motor



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



## Curves: Air performance



Measurement: LU-59980-1  
 Measurement: LU-59979-1  
 Measurement: LU-59981-1

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	inH <sub>2</sub> O
1	28	1870	134	6.43	540	0	320	0.00
2	28	2115	121	5.54	450	229	265	0.92
3	28	2420	110	4.82	340	456	200	1.83
4	28	2825	102	4.20	200	645	120	2.59
5	24	1750	105	5.80	505	0	300	0.00
6	24	1990	99	5.02	420	200	250	0.80
7	24	2275	91	4.43	320	400	190	1.61
8	24	2655	83	3.86	185	550	110	2.21
9	16	1485	63	4.48	425	0	250	0.00
10	16	1670	57	4.01	350	138	205	0.55
11	16	1860	49	3.42	260	263	150	1.06
12	16	2085	41	2.85	145	334	85	1.34

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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