

EC centrifugal fan

forward-curved, single-intake
with housing (without flange)

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General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen

Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	G1G133-DE19-02	
Motor	M1G055-BD	
Nominal voltage	VDC	24
Nominal voltage range	VDC	16 .. 28
Method of obtaining data		fa
Speed (rpm)	min ⁻¹	2000
Power consumption	W	40
Current draw	A	1.9
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

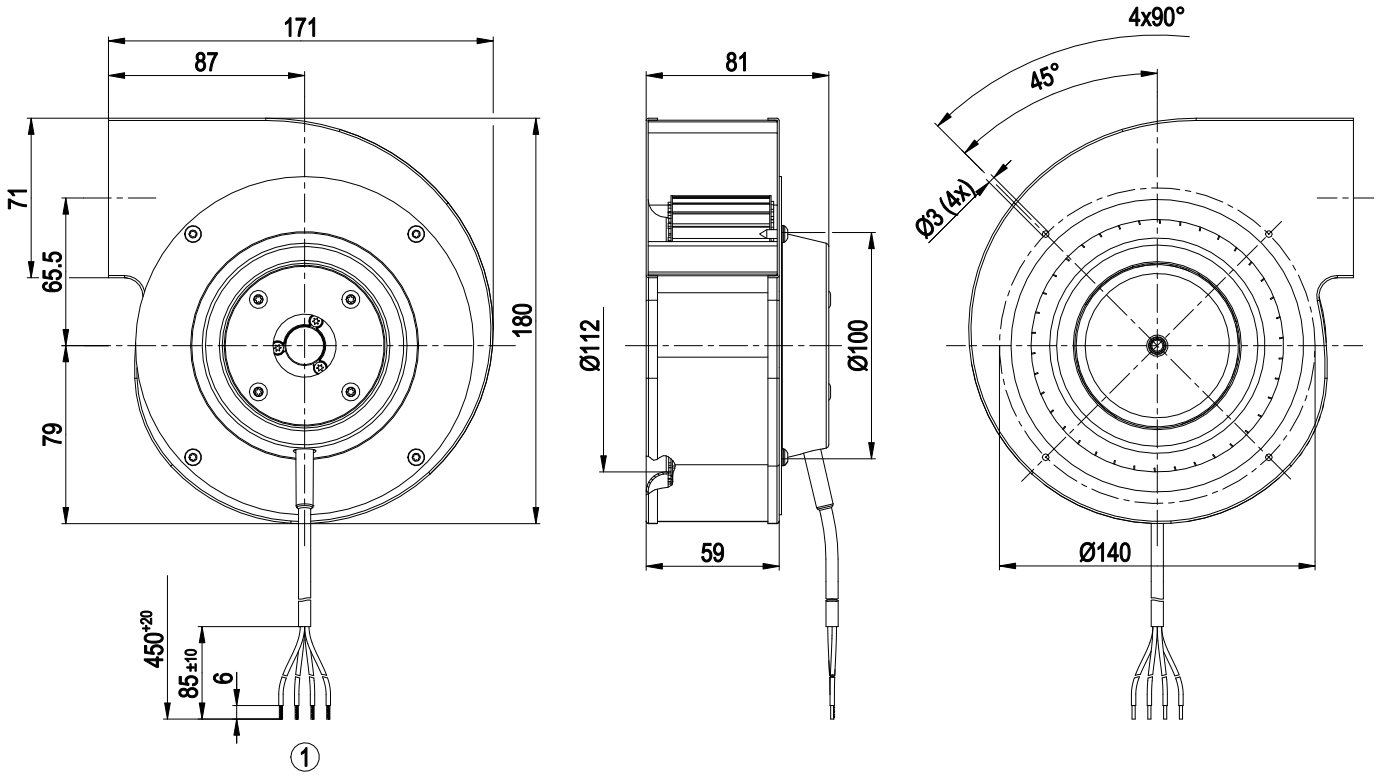
Weight	1.3 kg
Size	133 mm
Motor size	55
Rotor surface	Thick-film passivated
Impeller material	Sheet steel, galvanized
Housing material	Sheet steel, galvanized
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP22
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	F0; 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	<ul style="list-style-type: none"> - Tach output - Motor current limitation - Soft start - Control input 0-10 VDC / PWM
Motor protection	Reverse polarity and locked-rotor protection
With cable	Lateral
Conformity with standards	EN 60335-1
Approval	UL 1004-1; EAC; CSA C22.2 No. 77



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Product drawing



1	Cable PVC AWG20	4x splice
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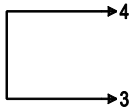
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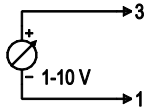
Connection diagram

Customer circuit

full speed

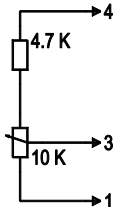


adjustable speed

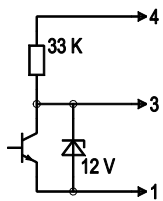


10 V → n = max
1 V → n = min
<1 V → n = 0
safe start
at Unom -30%
from 4 V Ucontr.

speed adjustable with fixed resistor

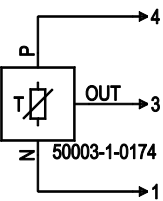


speed adjustable via PWM 1-10 kHz



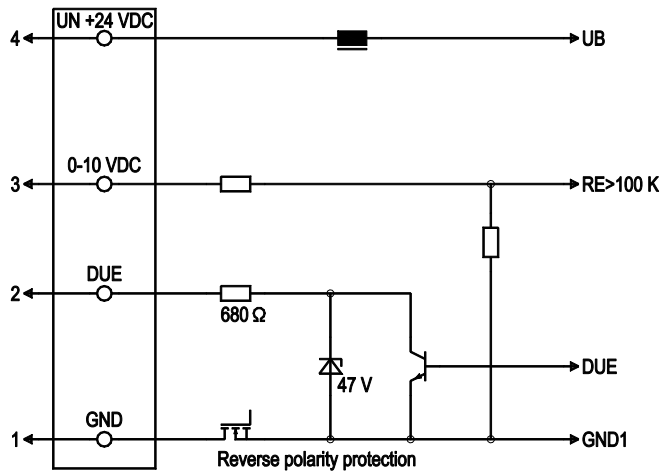
100% PWM → n = max
10% PWM → n = min
<10% PWM → n = 0
safe start
at Unom -30%
from 40% PWM

Set value requirement via temperature controller



Connection

Fan/Motor



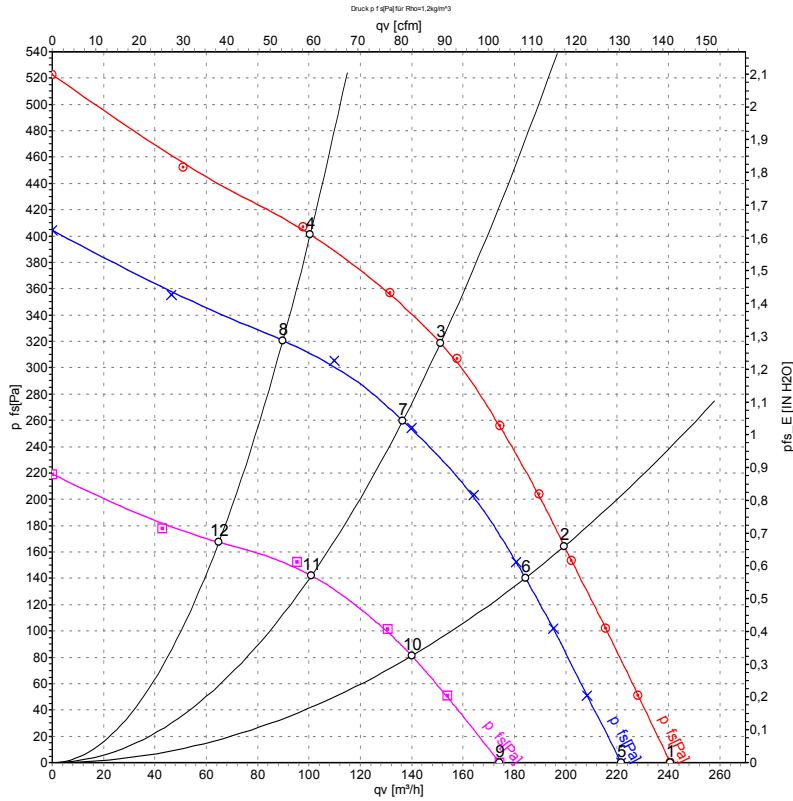
No.	Conn.	Designation	Color	Function/assignment
1	4	Un +24 VDC	red	Power supply 24 VDC, maximum ripple 3.5%
1	3	0-10 VDC	yellow	Control input Re > 100 K
1	2	DUE	white	Tach output, 2 pulses per revolution, Isink max = 10 mA
1	1	GND	blue	Reference ground



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Curves: Air performance



Measurement: LU-46596-1
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Measurement: LU-46597-1

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	2155	50	2.13	240	0	140	0.00
2	28	2385	45	1.87	200	164	120	0.66
3	28	2725	40	1.59	150	319	90	1.28
4	28	3020	33	1.30	100	403	60	1.62
5	24	2000	40	1.90	220	0	130	0.00
6	24	2210	36	1.68	185	140	110	0.56
7	24	2480	30	1.38	135	260	80	1.04
8	24	2700	25	1.14	90	320	55	1.28
9	16	1585	19	1.32	175	0	100	0.00
10	16	1715	16	1.13	140	81	80	0.33
11	16	1875	13	0.91	100	144	60	0.58
12	16	2020	10	0.77	65	167	40	0.67

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



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