

EC centrifugal fan

backward-curved, single-intake

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General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen

Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	R1G190-AC37-52	
Motor	M1G074-BF	
Nominal voltage	VDC	24
Nominal voltage range	VDC	16 .. 28
Method of obtaining data		fa
Speed (rpm)	min ⁻¹	3250
Power consumption	W	80
Current draw	A	3.7
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

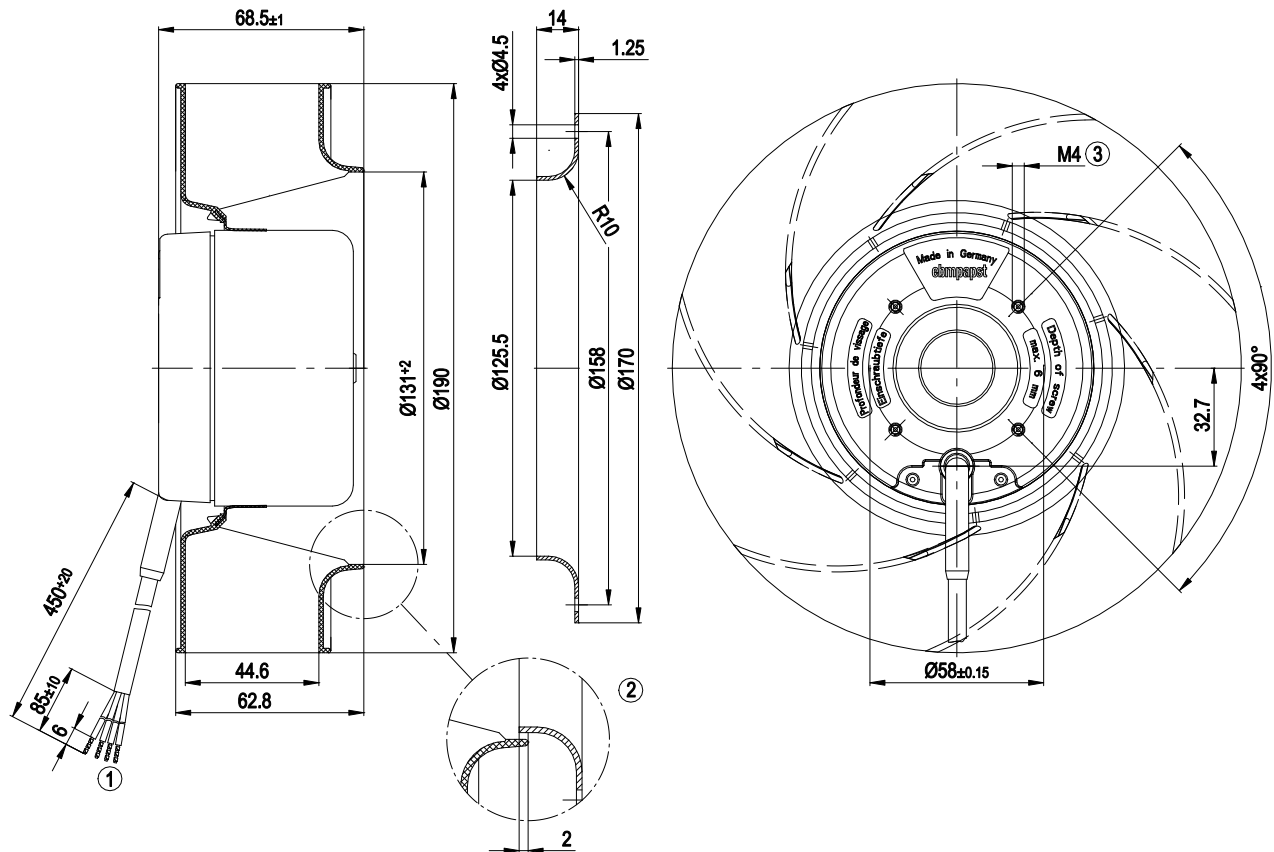
ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change



Technical description

Weight	1.3 kg
Fan size	190 mm
Rotor surface	Painted black
Impeller material	PA 6.6 plastic, glass-fiber reinforced
Number of blades	7
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP42
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	F0
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	Control input 0-10 VDC / PWM, tach output
EMC immunity to interference	According to EN 61000-6-2
EMC interference emission	According to EN 61000-6-3
Motor protection	Reverse polarity and locked-rotor protection
With cable	Variable
Conformity with standards	EN 60950-1
Approval	EAC; CSA C22.2 No. 77; UL 1004-1

Product drawing

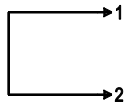


- | | |
|---|---|
| 1 | Cable AWG20, 4x crimped splices |
| 2 | Accessory part: inlet ring 09576-2-4013 not included in scope of delivery |
| 3 | Max. clearance for screw 6 mm |

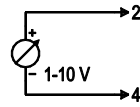
Connection diagram

Customer circuit

Full speed

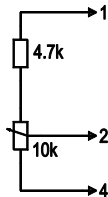


Adjustable speed

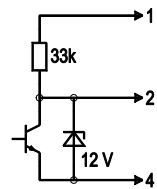


10 V → n = max
1 V → n = min
< 1 V → n = 0
Safe start
at Unom -30%
from 4 V Ucontr.

Speed adjustable via potentiometer

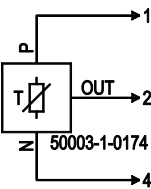


Speed adjustable via PWM 1-10 kHz



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

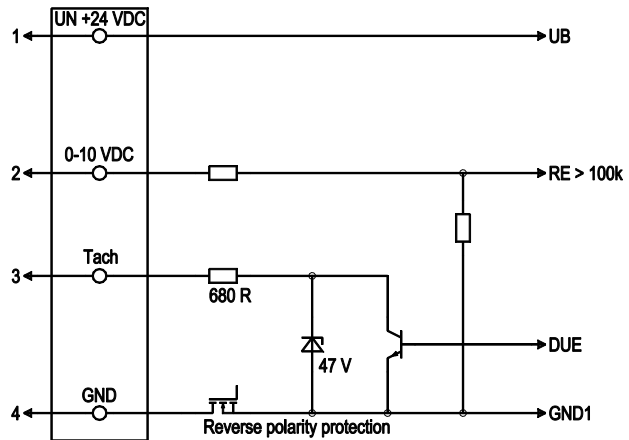
Set value requirement via temperature controller



T < 10 °C → n = 0
T > 45 °C → n = max

Connection

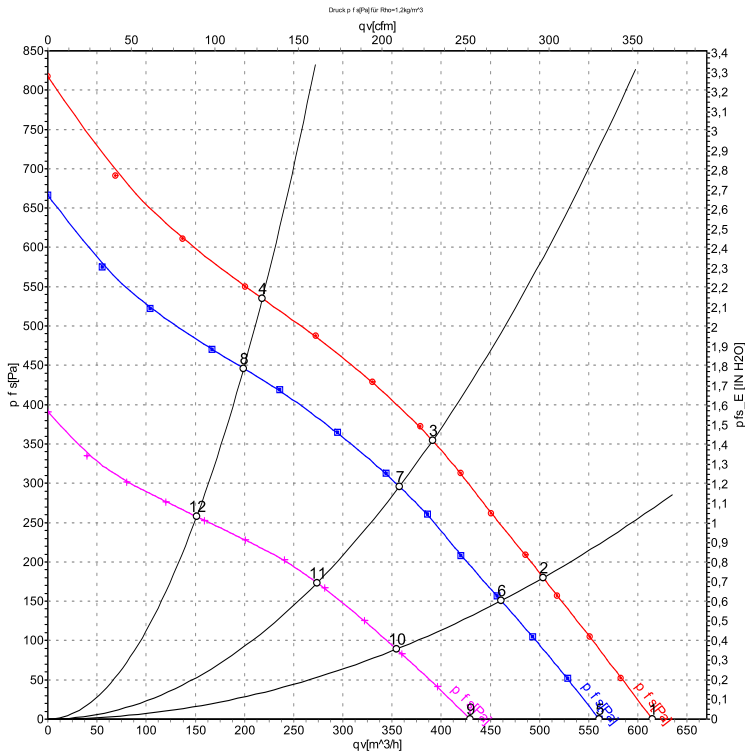
Fan / Motor



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-75809-1
 Measurement: LU-75808-1
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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	3630	103	4.14	615	0	360	0.00
2	28	3540	107	4.30	505	180	295	0.72
3	28	3600	104	4.19	390	354	230	1.42
4	28	3705	100	4.01	220	535	130	2.15
5	24	3250	80	3.70	560	0	330	0.00
6	24	3230	82	3.82	460	150	270	0.60
7	24	3290	80	3.71	360	300	210	1.20
8	24	3380	76	3.53	200	450	115	1.81
9	16	2515	38	2.72	430	0	250	0.00
10	16	2470	39	2.80	355	89	210	0.36
11	16	2515	38	2.70	275	174	160	0.70
12	16	2560	36	2.61	150	258	90	1.04

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



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