

R1G133-AE19-02 ebmpapst Datasheet

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Nominal data

Type	R1G133-AE19-02	
Motor	M1G055-BD	
Nominal voltage	VDC	24
Nominal voltage range	VDC	16 .. 28
Method of obtaining data		fa
Status		prelim.
Speed (rpm)	min ⁻¹	2000
Power consumption	W	40
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

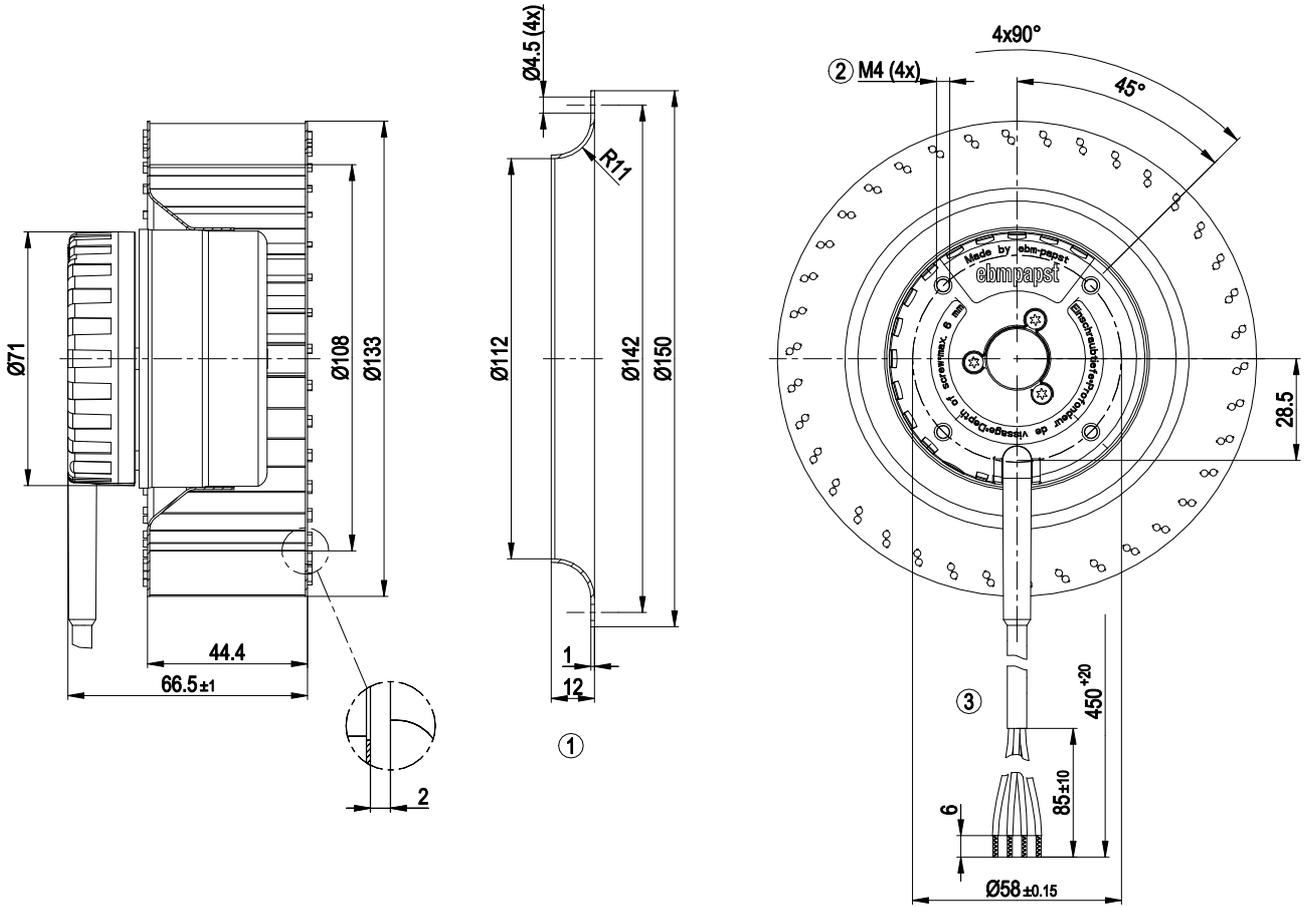
ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change



Technical description

Weight	0.7 kg
Size	133 mm
Motor size	55
Rotor surface	Thick-film passivated
Electronics housing material	Die-cast aluminum
Impeller material	Sheet steel, galvanized
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP22
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
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 - Reverse polarity protection
With cable	Variable
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 62368-1
Approval	EAC

Product drawing

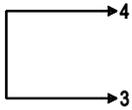


- | | |
|---|---|
| 1 | Accessory part: Inlet ring 09572-2-4013 not included in scope of delivery |
| 2 | Max. clearance for screw 6 mm |
| 3 | Cable PVC AWG20, 4x crimped splices |

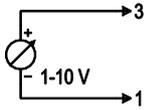
Connection diagram

Customer circuit

Full speed

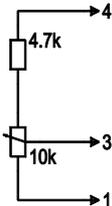


Adjustable speed

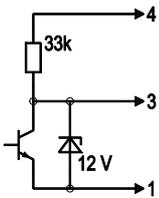


10 V → n = max
1 V → n = min
< 1 V → n = 0
Safe start at Unom -30% from 4 V Ucontr.

Speed adjustable with fixed resistor

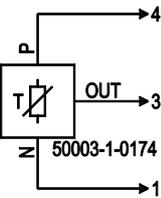


Speed adjustable via PWM 1-10 kHz



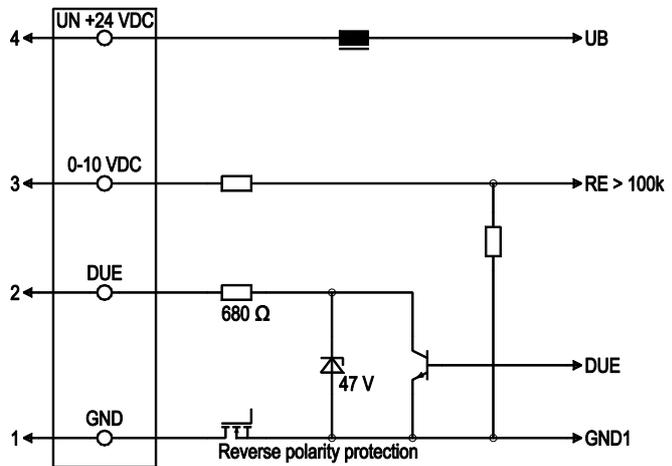
100% PWM → n = max
10% PWM → n = min
< 10% PWM → n = 0
Safe start at Unom -30% from 40% PWM

Set value requirement via temperature controller



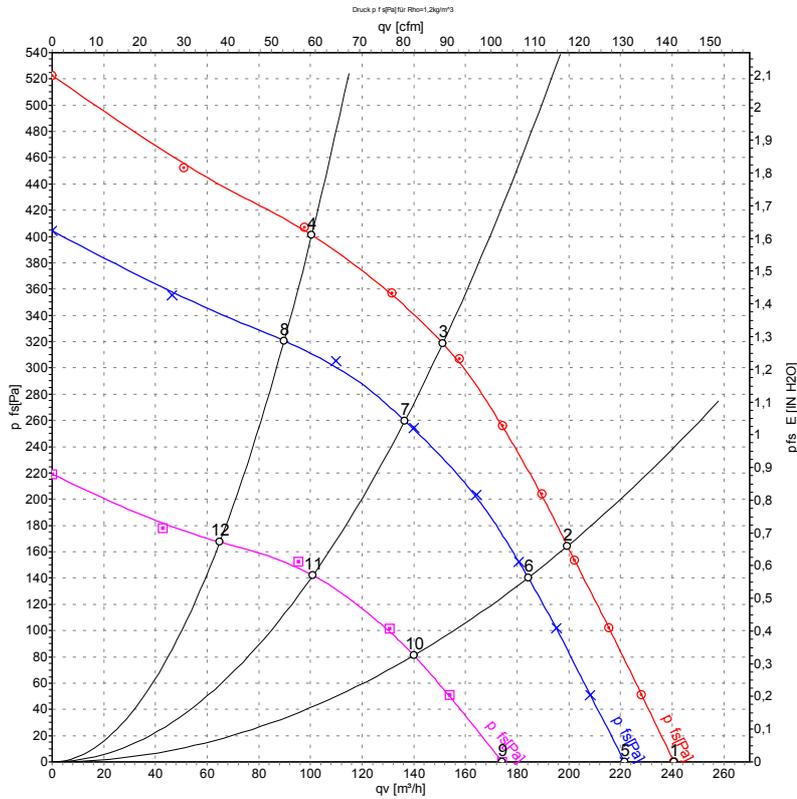
Connection

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%

Curves: Air performance



Measurement: LU-46596-1
 Measurement: LU-46595-1
 Measurement: LU-46597-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebmpapst. 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

