EC centrifugal fan - RadiCal

backward-curved, single-intake

R3G175-RC11-19 ebmpapst Datasheet
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Nominal data

Type	**R3G175-RC11-19**
Motor	**M3G055-BI**

Phase		1~
Nominal voltage	VAC	115
Nominal voltage range	VAC	100 .. 130
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min^{-1}	3400
Power consumption	W	65
Current draw	A	1
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

Weight	1.1 kg
Size	175 mm
Motor size	55
Rotor surface	Thick-film passivated
Electronics housing material	Die-cast aluminum
Impeller material	PA plastic
Number of blades	7
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H1
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, open rotor
Mode	S1
Motor bearing	Ball bearing; (sealed, without air gap)
Technical features	- Output 10 VDC, max. 1.1 mA - Tach output - Power limiter - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Thermal overload protection for electronics/motor
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC interference emission	According to EN 61000-6-4 (industrial environment)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	Electronic motor protection
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60034-1; EN 60204-1; EN 60335-1; CE
Approval	CSA C22.2 No. 77 + CAN/CSA-E60730-1; UL 1004-7 + 60730-1

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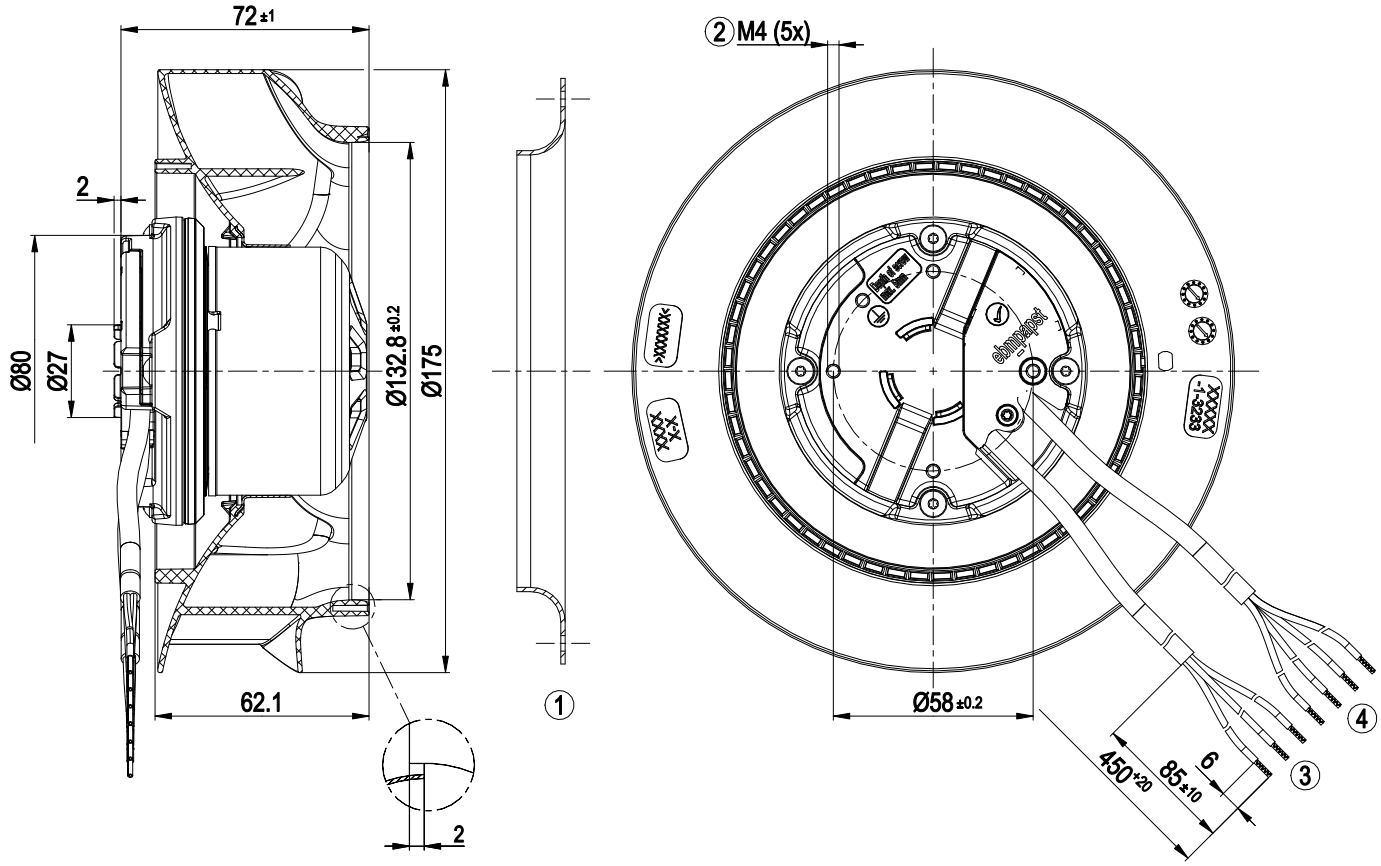
Product drawing



1	Accessory part: inlet ring 09576-2-4013 not included in scope of delivery
2	Max. clearance for screw 5 mm
3	Cable PVC AWG20
	3x splice
4	Cable PVC AWG22
	4x splice

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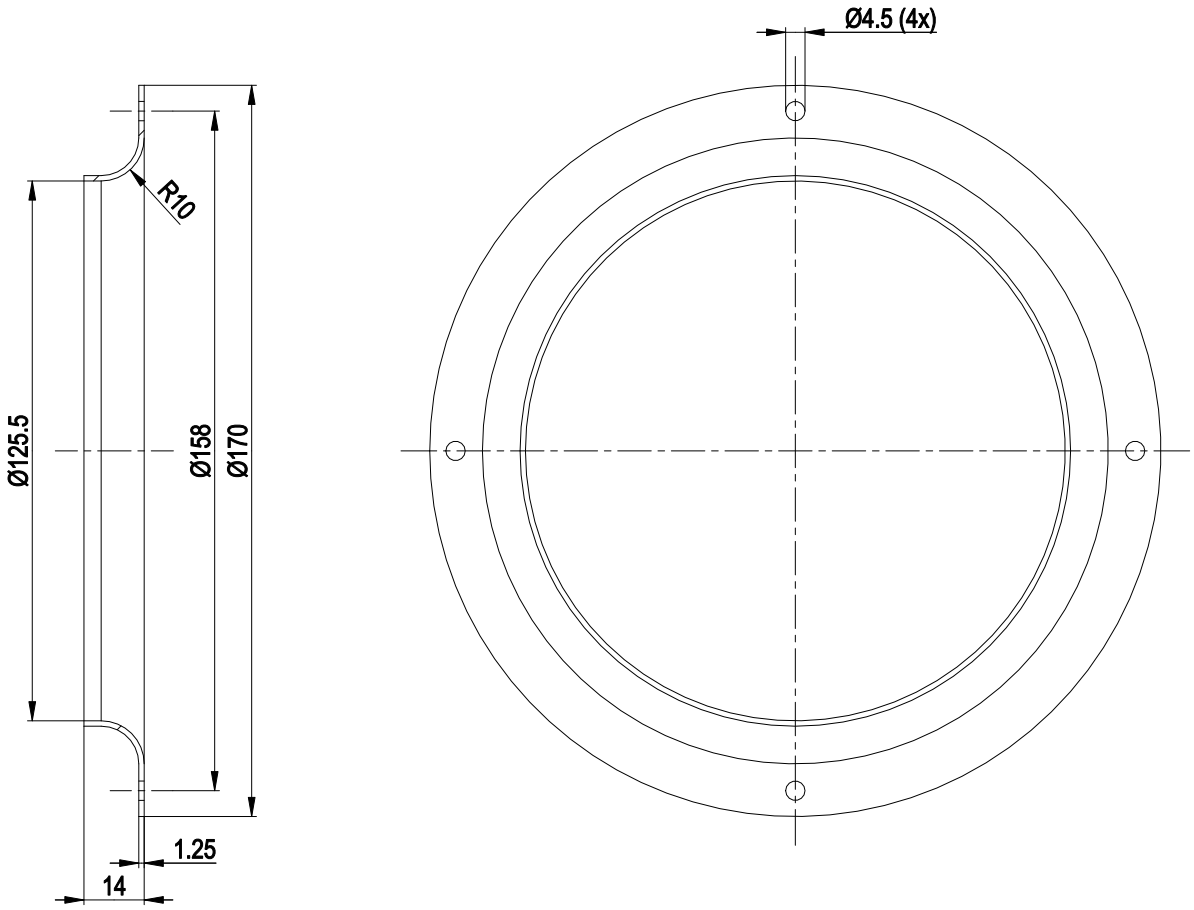
Accessory part



1	Accessory part: inlet ring 09576-2-4013 not included in scope of delivery

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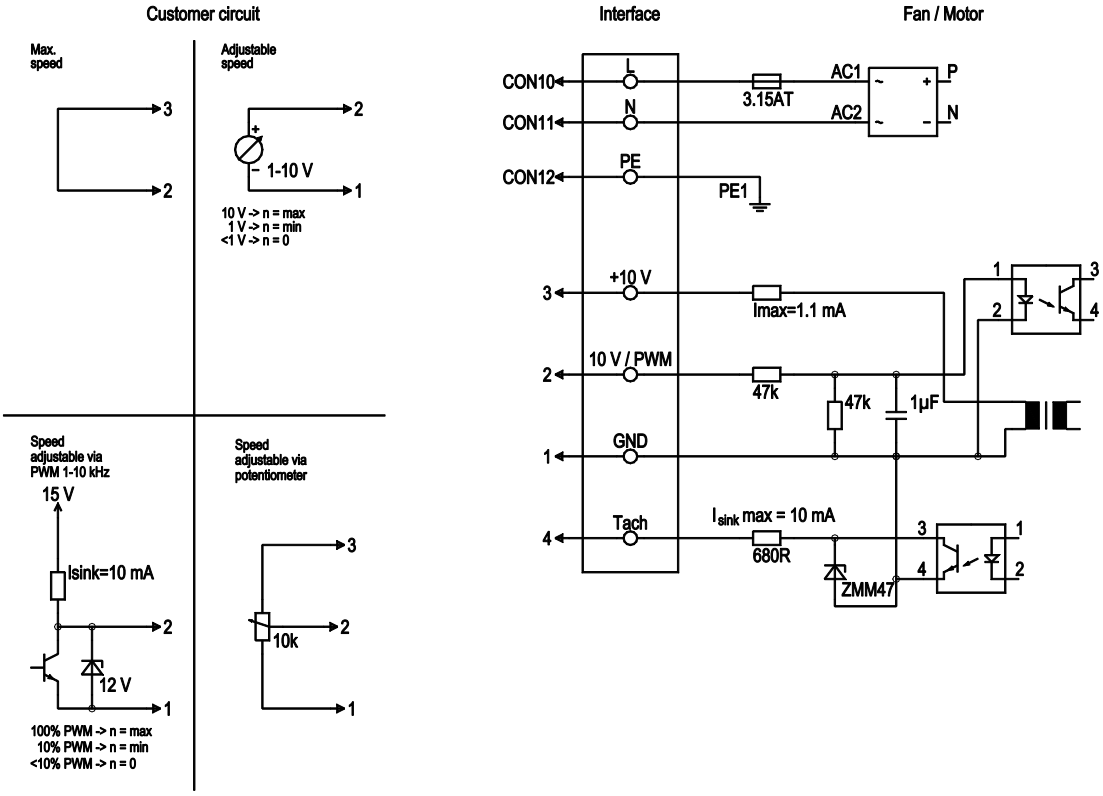
Connection diagram



No.	Conn.	Designation	Color	Function/assignment
	CON10	L	black	Power supply 115 VAC, 50-60 Hz, see nameplate for voltage range
	CON11	N	blue	Neutral conductor
	CON12	PE	green/yellow	Protective earth
	1	GND	blue	GND connection for control interface
	2	0- 10V PWM	yellow	Control input 0-10 V or PWM, electrically isolated
	3	10V/ max 1.1mA	red	Voltage output 10 VDC 1.1 mA, electrically isolated, short-circuit-proof
	4	Tach	white	Tach output: Open collector, 1 pulse per revolution, electrically isolated, Isink max = 10 mA

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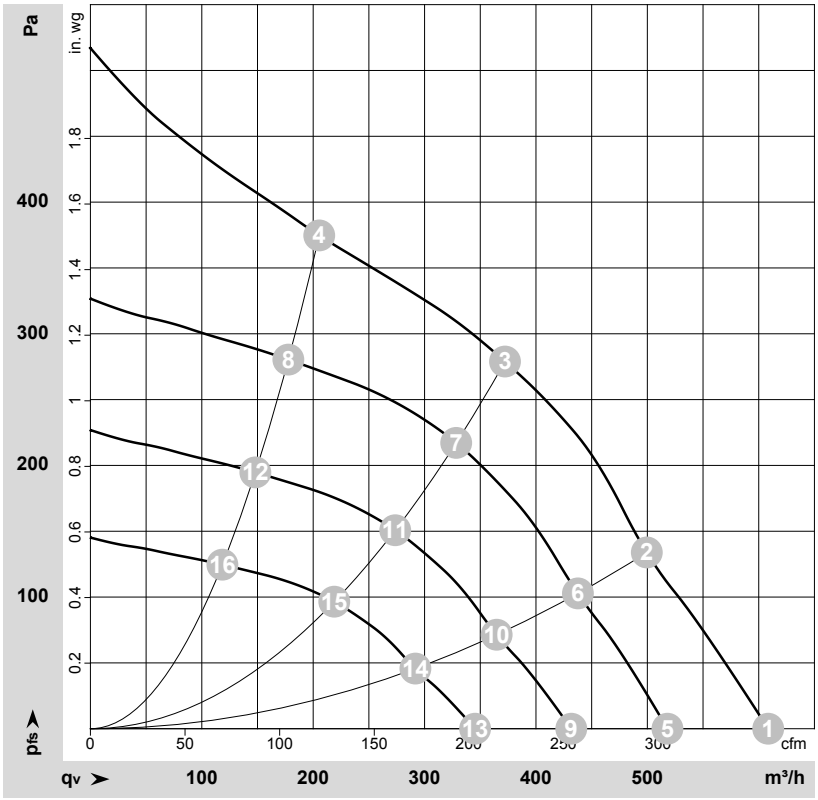
Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-200199-1

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

	Wired	U	f	n	P_{ed}	I	LpA_{in}	LwA_{in}	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	1~	115	50	3525	58	0.92	68	76	610	0	360	0.00
2	1~	115	50	3420	64	1.00	62	69	500	130	295	0.52
3	1~	115	50	3400	65	1.00	56	64	370	280	220	1.12
4	1~	115	50	3465	61	0.96	60	68	205	375	120	1.51
5	1~	115	50	3000	36	0.57	64	72	520	0	305	0.00
6	1~	115	50	3000	43	0.67	58	66	440	101	260	0.41
7	1~	115	50	3000	45	0.70	52	60	330	218	195	0.88
8	1~	115	50	3000	40	0.62	56	64	180	280	105	1.12
9	1~	115	50	2500	21	0.33	60	67	430	0	255	0.00
10	1~	115	50	2500	25	0.39	54	61	365	70	215	0.28
11	1~	115	50	2500	26	0.40	48	56	275	151	160	0.61
12	1~	115	50	2500	23	0.36	52	60	150	195	85	0.78
13	1~	115	50	2000	11	0.17	54	61	345	0	205	0.00
14	1~	115	50	2000	13	0.20	48	56	290	45	170	0.18
15	1~	115	50	2000	13	0.21	42	50	220	97	130	0.39
16	1~	115	50	2000	12	0.18	46	54	120	125	70	0.50

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
q_V = Air flow · p_{fs} = Pressure increase