EC centrifugal fan - RadiCal

backward-curved, single-intake

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Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	**R3G175-RG19-12**
Motor	**M3G055-CF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min^{-1}	3750
Power consumption	W	87
Current draw	A	0.74
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

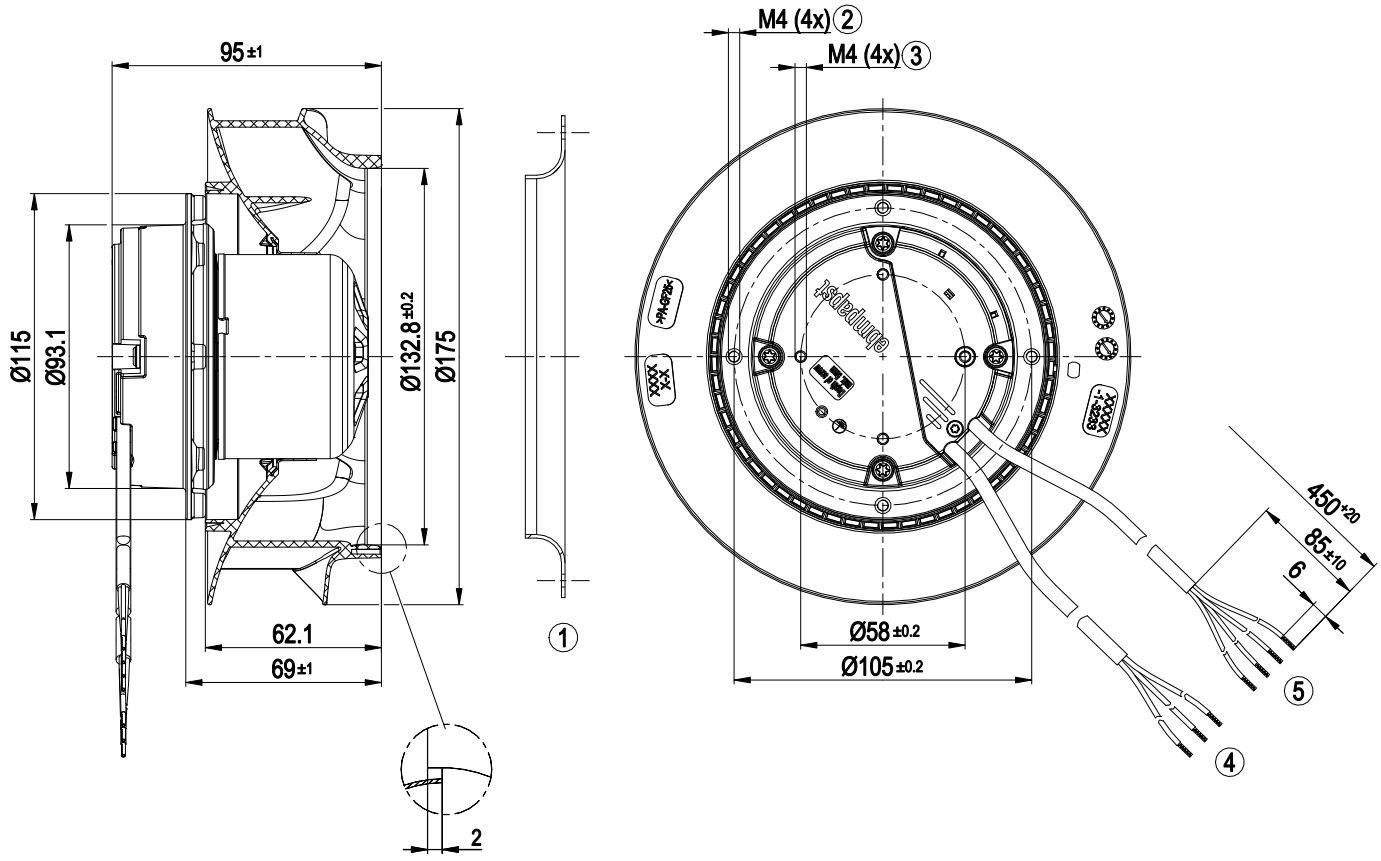
Weight	1.4 kg
Size	175 mm
Motor size	55
Rotor surface	Thick-film passivated
Impeller material	PA plastic
Number of blades	7
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H1
Max. permitted ambient temp. 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
Technical features	- Output 10 VDC, max. 10 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 - Overvoltage detection - Thermal overload protection for electronics/motor - Line undervoltage detection
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC circuit feedback	According to EN 61000-3-2/3
EMC interference emission	According to EN 61000-6-3 (household 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 60335-1; CE

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Product drawing



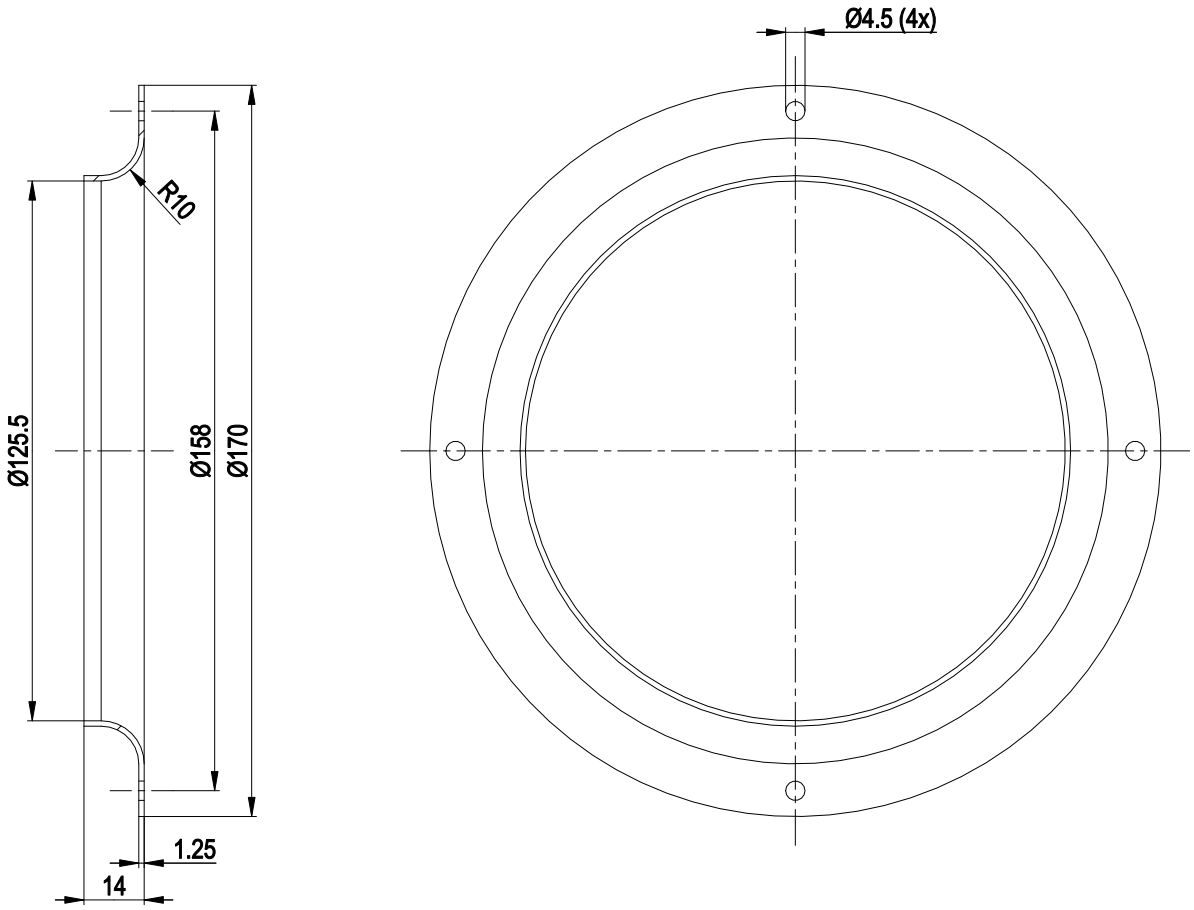
1	Accessory part: inlet ring 09576-2-4013 not included in scope of delivery
2	Max. clearance for screw 6 mm
3	Max. clearance for screw 5 mm
4	Cable PVC 3G 0.5 mm²
	3x splice
5	Cable PVC 4x 0.25 mm²
	4x splice

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Accessory part



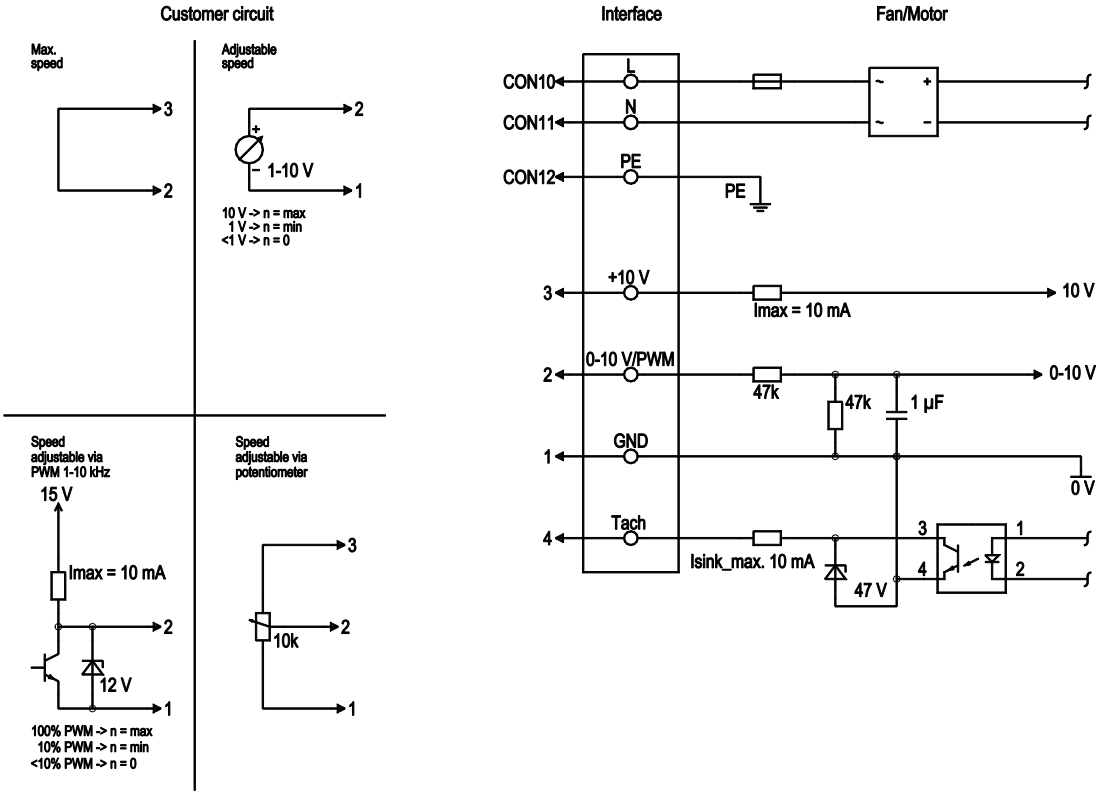
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Connection diagram



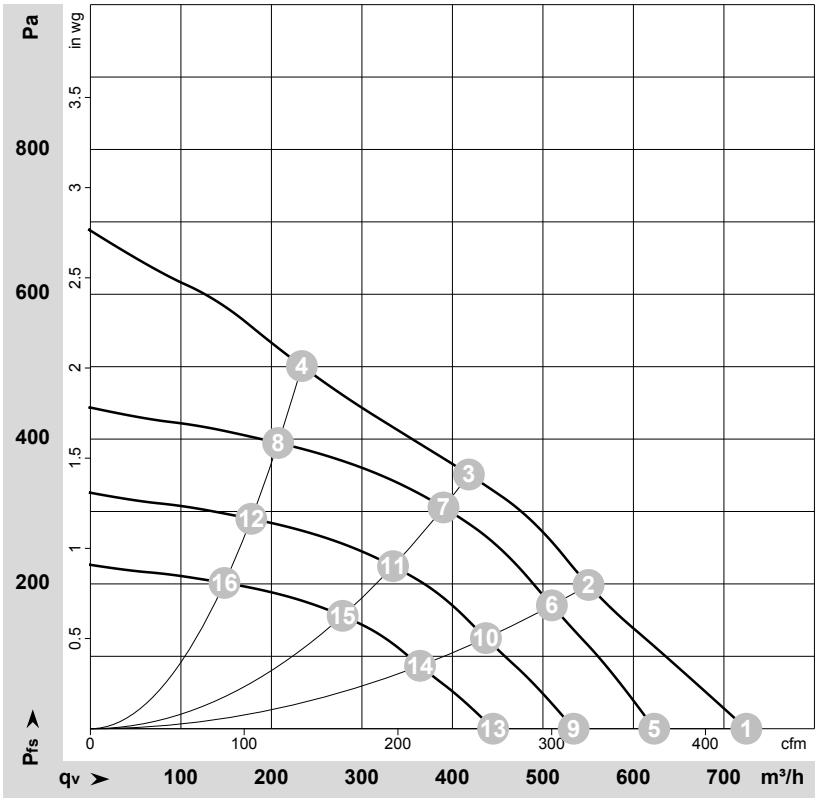
No.	Conn.	Designation	Color	Function/assignment
	CON10	L	brown	Supply connection, power supply, phase, see nameplate for voltage range
	CON11	N	blue	Supply connection, power supply, neutral conductor, see nameplate for voltage range
	CON12	PE	green/yellow	Ground connection
	2	0- 10V PWM	yellow	0-10 V / PWM control input, Ri=100 kΩ, SELV
	4	Tach	white	Tach output, open collector, 1 pulse per revolution, Isink max = 10 mA, SELV
	3	+10 V	red	Fixed voltage output 10 VDC +/-3 %, Imax. 10 mA, short-circuit-proof, power supply for ext. devices (e.g. pot), SELV
	1	GND	blue	Reference ground for control interface, SELV

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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-178594-1

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	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	230	50	4070	87	0.74	70	78	725	0	425	0.00
2	230	50	3775	87	0.74	64	71	550	200	325	0.80
3	230	50	3750	87	0.74	59	67	420	350	245	1.41
4	230	50	3940	87	0.74	65	73	235	500	140	2.01
5	230	50	3500	56	0.47	66	75	625	0	365	0.00
6	230	50	3500	69	0.59	62	69	510	170	300	0.68
7	230	50	3500	71	0.60	57	65	390	307	230	1.23
8	230	50	3500	61	0.52	62	70	205	395	120	1.59
9	230	50	3000	35	0.30	62	71	535	0	315	0.00
10	230	50	3000	43	0.37	58	65	435	125	255	0.50
11	230	50	3000	44	0.38	53	61	335	226	195	0.91
12	230	50	3000	38	0.33	58	66	180	290	105	1.16
13	230	50	2500	20	0.17	58	66	445	0	260	0.00
14	230	50	2500	25	0.21	53	61	365	87	215	0.35
15	230	50	2500	26	0.22	49	57	280	157	165	0.63
16	230	50	2500	22	0.19	53	61	150	201	85	0.81

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

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