R1G220-RF01-01

EC centrifugal fan - RadiCal

backward-curved, single-intake

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Nominal data

Type	**R1G220-RF01-01**
Motor	**M1G055-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}	2700
Power consumption	W	100
Current draw	A	0.8
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	220 mm
Motor size	55
Rotor surface	Thick-film passivated
Impeller material	PP 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	- Tach output - Power limiter - Motor current limitation - Soft start - PWM control input - Control interface with SELV potential safely disconnected from the mains - Thermal overload protection for motor
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	Thermal overload protector (TOP) internally connected
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE

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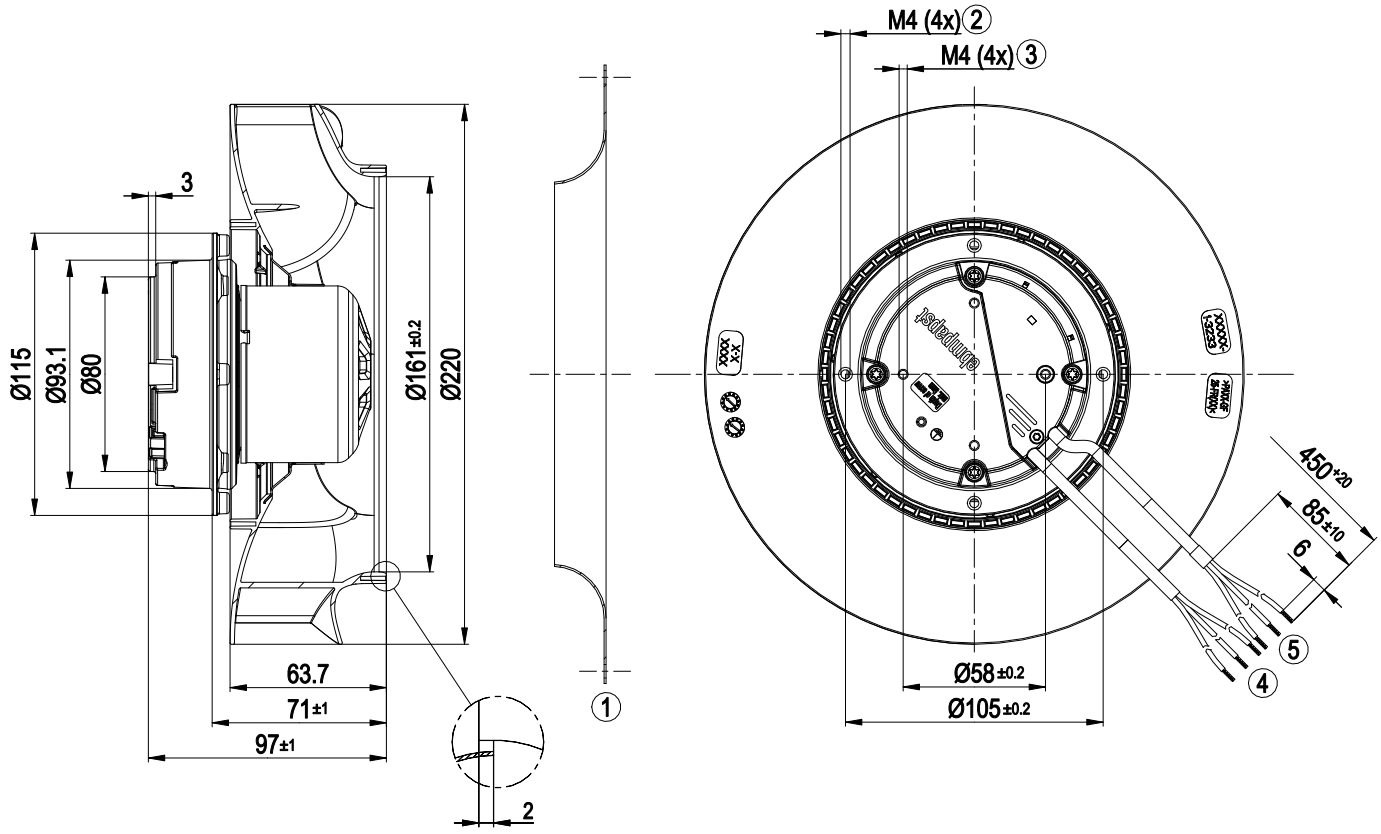
Product drawing



1	Accessory part: inlet ring 09609-2-4013 not included in scope of delivery
2	Max. clearance for screw 6 mm
3	Max. clearance for screw 5 mm
4	Cable PVC AWG20, 3x crimped splices
5	Cable PVC AWG22, 3x crimped splices

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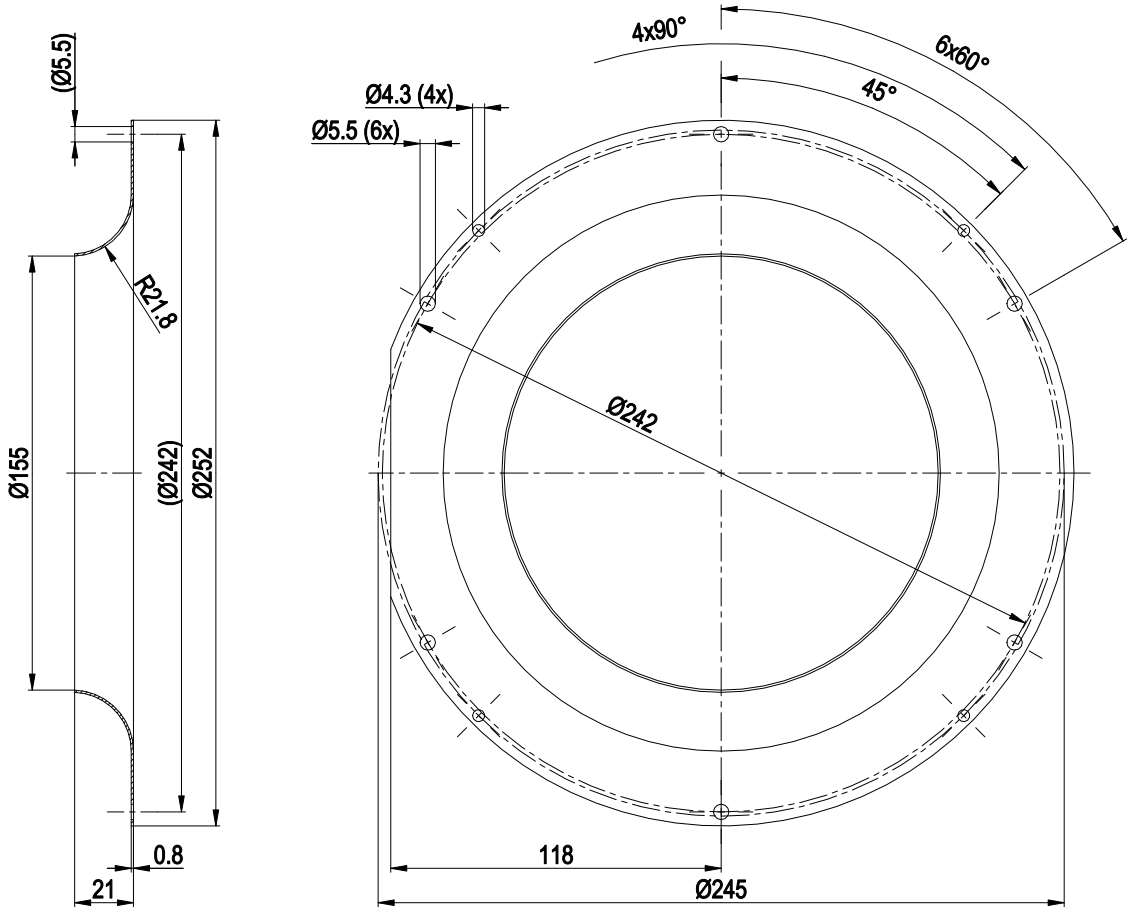
Accessory part



Inlet ring 09609-2-4013 not included in scope of delivery

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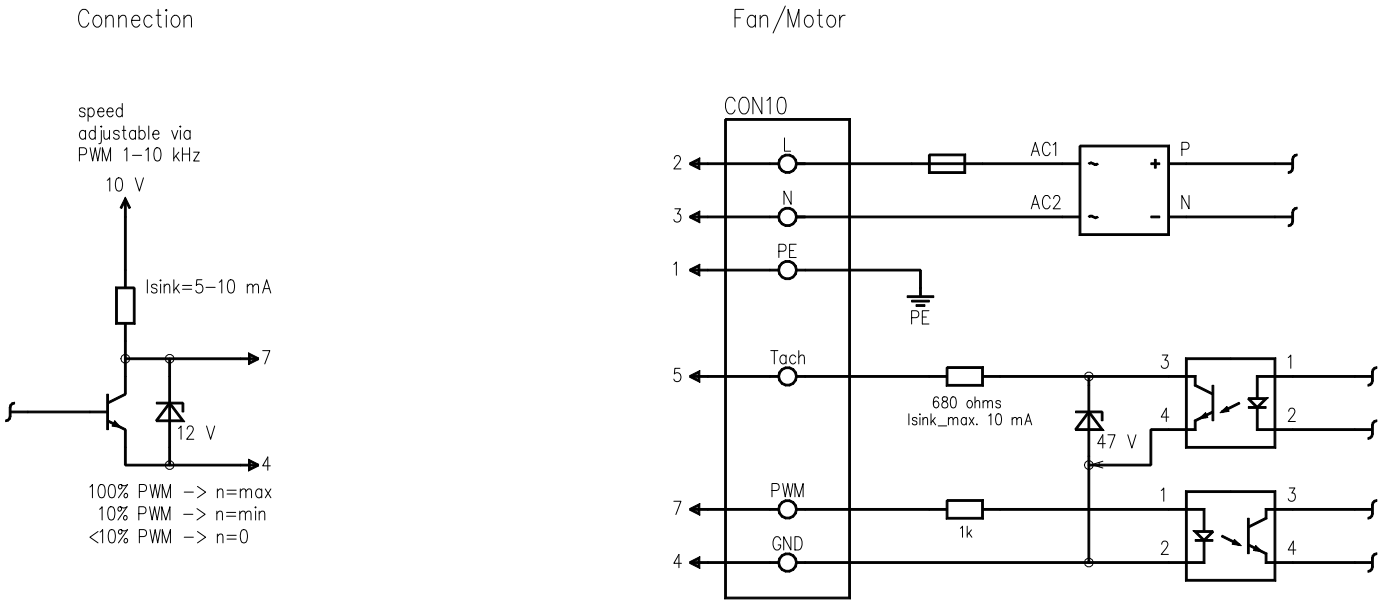
Connection diagram



No.	Conn.	Designation	Color	Function/assignment
2	L		black	Power supply, phase, see nameplate for voltage range
3	N		blue	Power supply, neutral conductor, see nameplate for voltage range
1	PE		green/yellow	Protective earth
7	PWM		yellow	Control input PWM, impedance 1 kΩ; SELV
5	Tacho		white	Tach output, open collector, 1 pulse per revolution, Isink max = 10 mA, SELV
4	GND		blue	Reference ground for control interface, SELV

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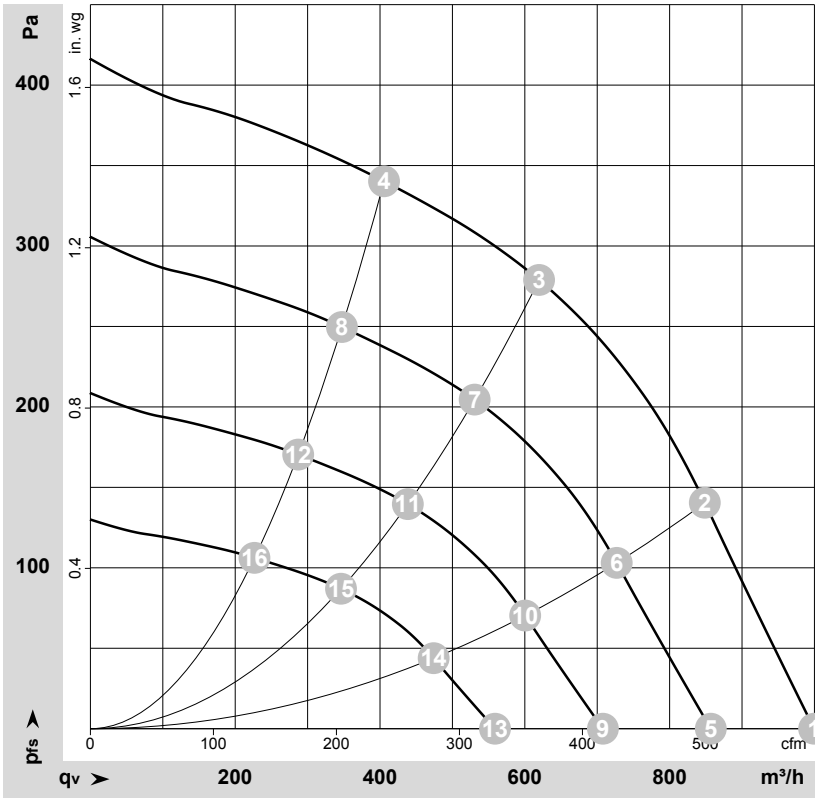
Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-189002-1

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~	230	50	2700	71	0.61	62	70	1000	0	590	0.00
2	1~	230	50	2700	86	0.73	60	67	850	140	500	0.56
3	1~	230	50	2700	100	0.80	59	67	620	280	365	1.12
4	1~	230	50	2700	91	0.77	60	68	405	340	240	1.36
5	1~	230	50	2300	45	0.38	59	66	855	0	505	0.00
6	1~	230	50	2300	54	0.46	56	63	725	103	430	0.41
7	1~	230	50	2300	62	0.52	55	63	530	205	315	0.82
8	1~	230	50	2300	57	0.48	56	64	345	250	205	1.00
9	1~	230	50	1900	25	0.22	54	61	710	0	415	0.00
10	1~	230	50	1900	31	0.26	51	59	600	70	355	0.28
11	1~	230	50	1900	35	0.29	50	58	440	140	260	0.56
12	1~	230	50	1900	32	0.27	51	59	285	170	170	0.68
13	1~	230	50	1500	12	0.11	48	55	560	0	330	0.00
14	1~	230	50	1500	15	0.13	45	53	475	44	280	0.18
15	1~	230	50	1500	17	0.15	44	52	345	87	205	0.35
16	1~	230	50	1500	16	0.13	45	53	225	106	135	0.43

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

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