

R3G220-RG19-01

EC centrifugal fan - RadiCal

backward-curved, single-intake

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Nominal data

Type	R3G220-RG19-01	
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	2790
Power consumption	W	115
Current draw	A	0.97
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	50

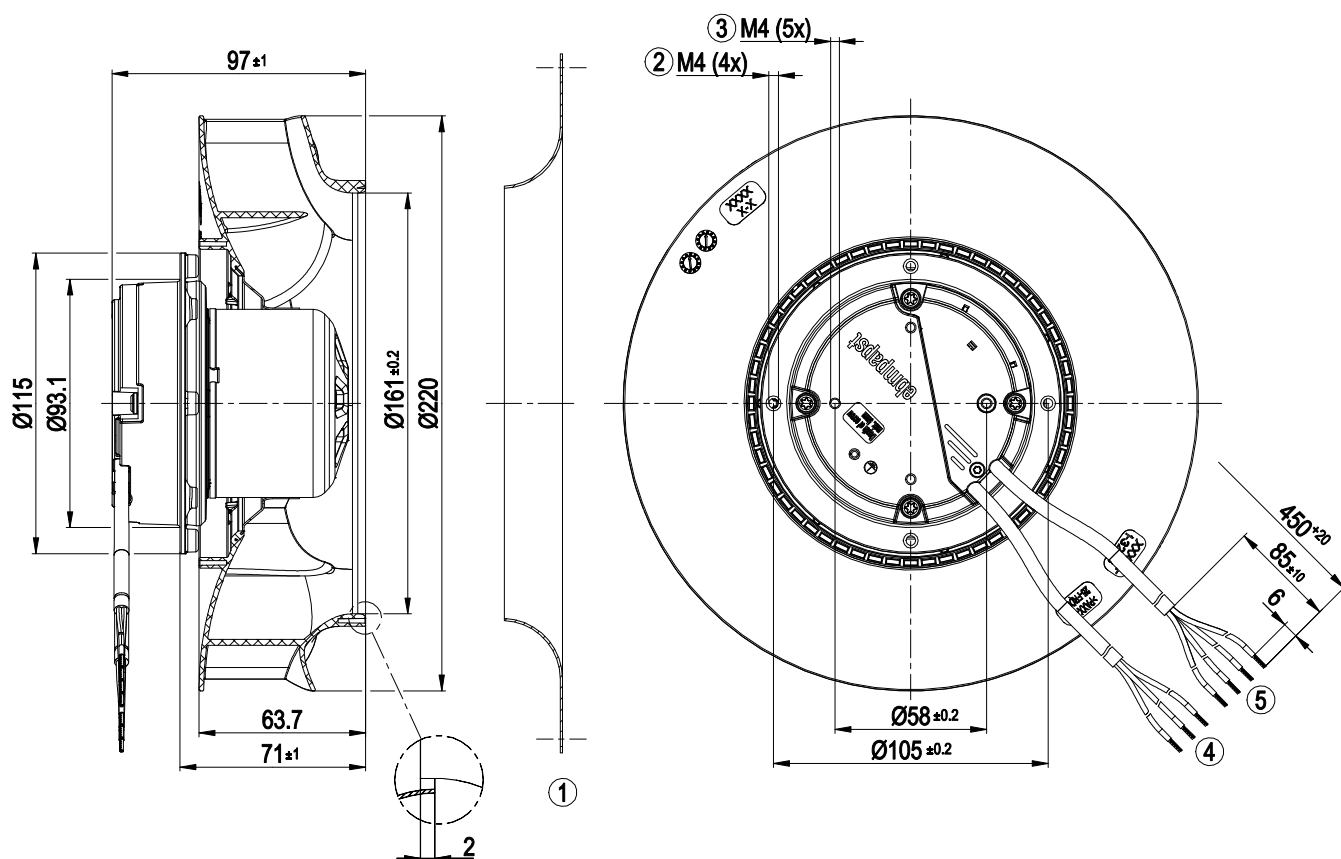
ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change



Technical description

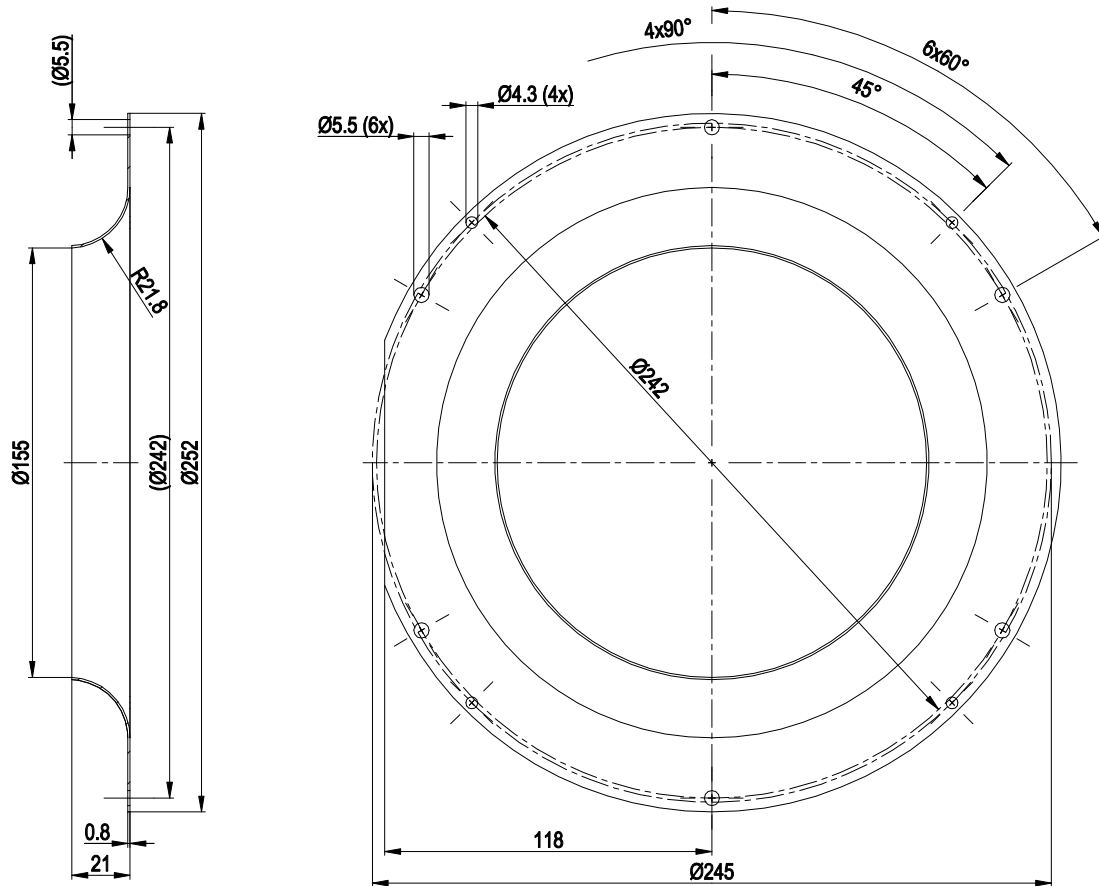
Weight	1.4 kg
Size	220 mm
Motor size	55
Rotor surface	Thick-film passivated
Electronics housing material	Die-cast aluminum
Impeller material	PP plastic
Number of blades	7
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) 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	- 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

Product drawing



1	Accessory part: inlet ring 09609-2-4013 not included in scope of delivery
2	Max. clearance for screw 5 mm
3	Max. clearance for screw 5 mm
4	Cable PVC 3G 0.5 mm ² 3x splice
5	Cable PVC 4x 0.25 mm ² 4x splice

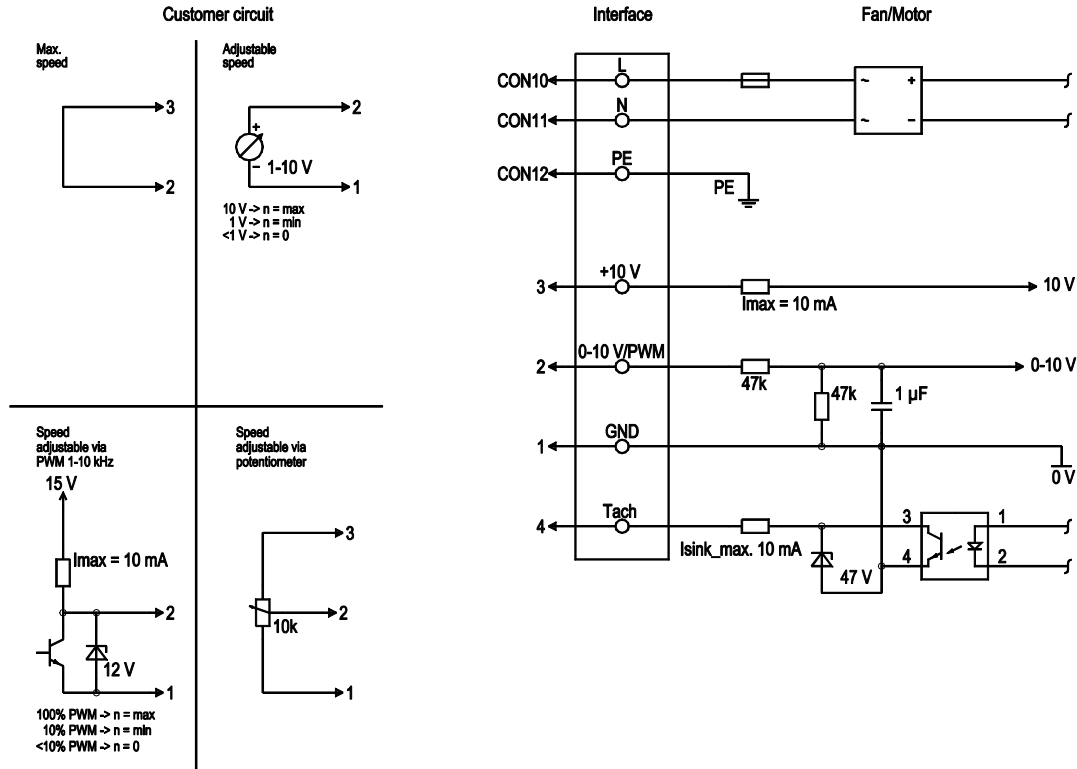
Accessory part



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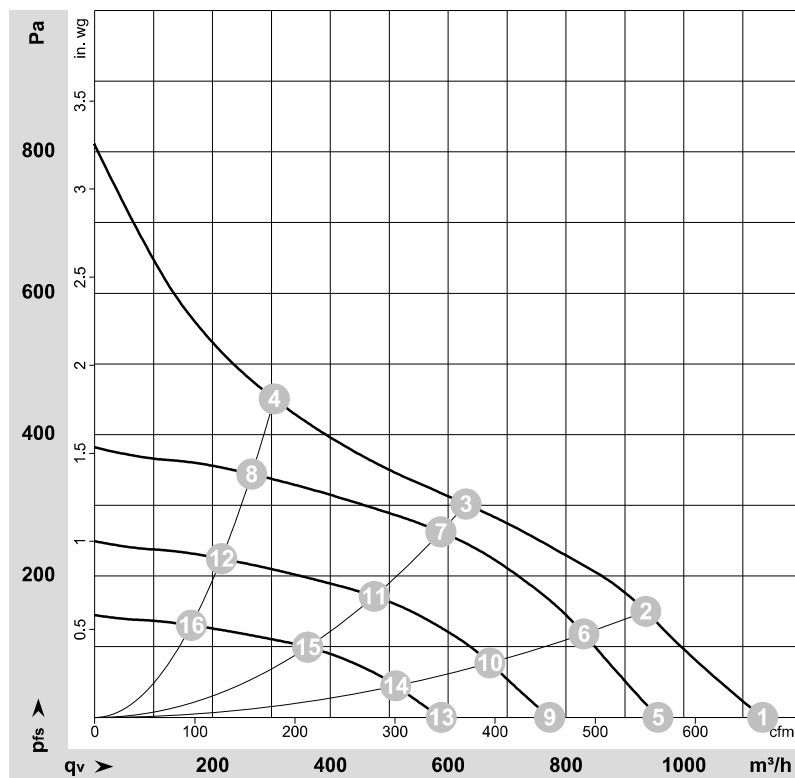
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Connection diagram



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, $R_i=100 \text{ k}\Omega$, SELV
	4	Tach	white	Tach output, open collector, 1 pulse per revolution, $I_{sink \text{ max}} = 10 \text{ mA}$, SELV
	3	+10 V	red	Fixed voltage output 10 VDC $\pm 3 \%$, $I_{max.} 10 \text{ mA}$, short-circuit-proof, power supply for ext. devices (e.g. pot), SELV
	1	GND	blue	Reference ground for control interface, SELV

Curves: Air performance 50 Hz



$$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$$

Measurement: LU-153395-1

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	3085	115	0.97	67	74	1135	0	665	0.00
2	1~	230	50	2930	115	0.97	62	69	935	150	550	0.60
3	1~	230	50	2790	115	0.97	59	66	630	300	370	1.20
4	1~	230	50	2965	115	0.97	63	70	305	450	180	1.81
5	1~	230	50	2600	70	0.65			955	0	565	0.00
6	1~	230	50	2600	81	0.76			830	119	490	0.48
7	1~	230	50	2600	94	0.88			590	263	345	1.06
8	1~	230	50	2600	78	0.72			265	345	155	1.39
9	1~	230	50	2100	37	0.34			770	0	455	0.00
10	1~	230	50	2100	43	0.40			670	77	395	0.31
11	1~	230	50	2100	50	0.47			475	171	280	0.69
12	1~	230	50	2100	41	0.38			215	225	125	0.90
13	1~	230	50	1600	16	0.15			590	0	345	0.00
14	1~	230	50	1600	19	0.18			510	45	300	0.18
15	1~	230	50	1600	22	0.21			360	99	215	0.40
16	1~	230	50	1600	18	0.17			165	131	95	0.53

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

