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**Nominal data**

<b>Type</b>	<b>R3G220-RD53-03</b>	
<b>Motor</b>	<b>M3G055-CF</b>	
Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Method of obtaining data		ml
Speed	min <sup>-1</sup>	3230
Power consumption	W	168
Current draw	A	1.4
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	45

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

**Data according to ErP Directive**

		Actual	Req. 2015			
01 Overall efficiency $\eta_{es}$	%	56.6	43.1	09 Power consumption $P_{ed}$	kW	0.16
02 Measurement category		A		09 Air flow $q_v$	m <sup>3</sup> /h	805
03 Efficiency category		Static		09 Pressure increase $p_{fs}$	Pa	366
04 Efficiency grade N		75.5	62	10 Speed n	min <sup>-1</sup>	3210
05 Variable speed drive		Yes		11 Specific ratio*		1.00

Data obtained at optimum efficiency level.

The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

\* Specific ratio =  $1 + p_{fs} / 100\,000\text{ Pa}$

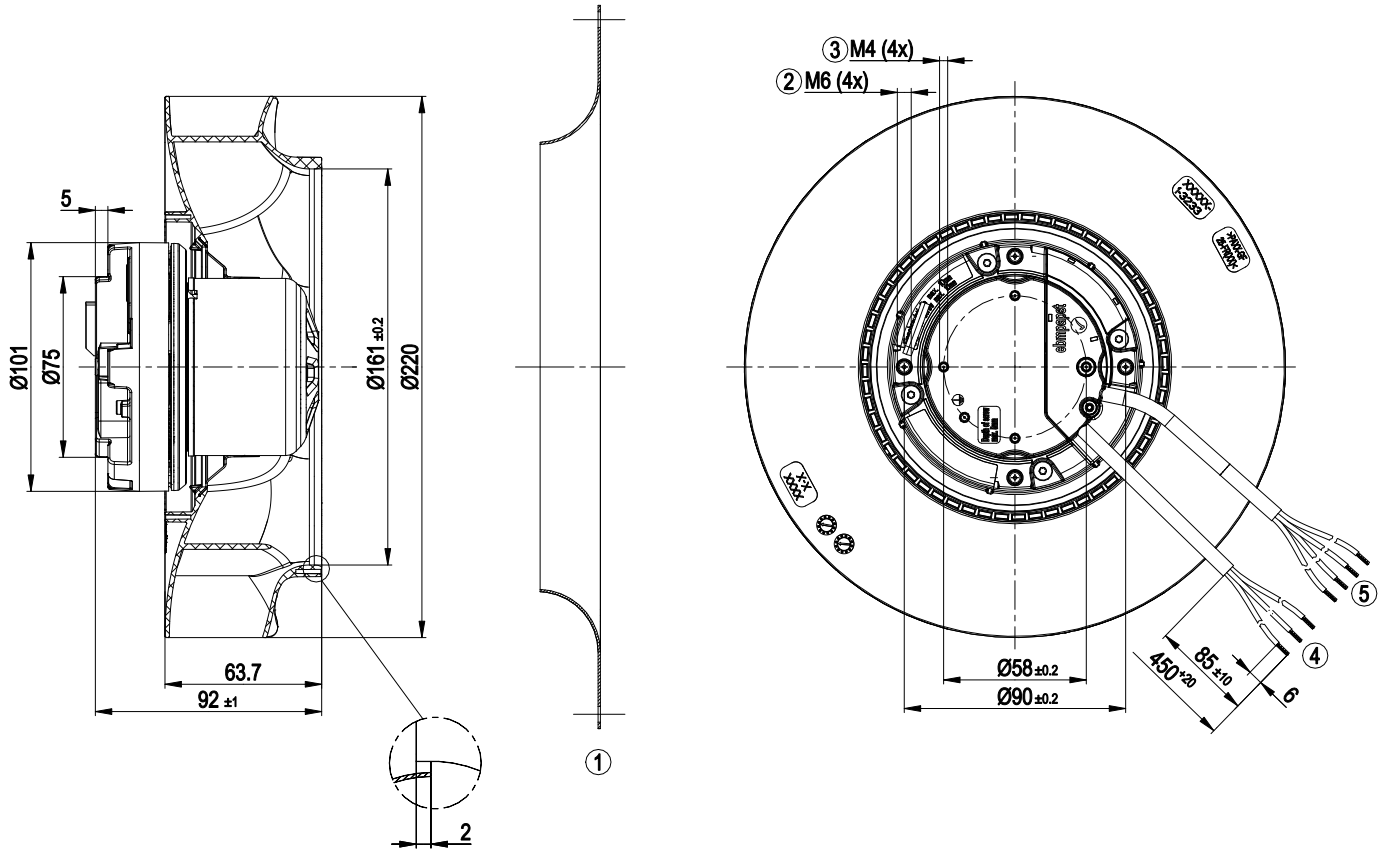
LU-153697



## Technical description

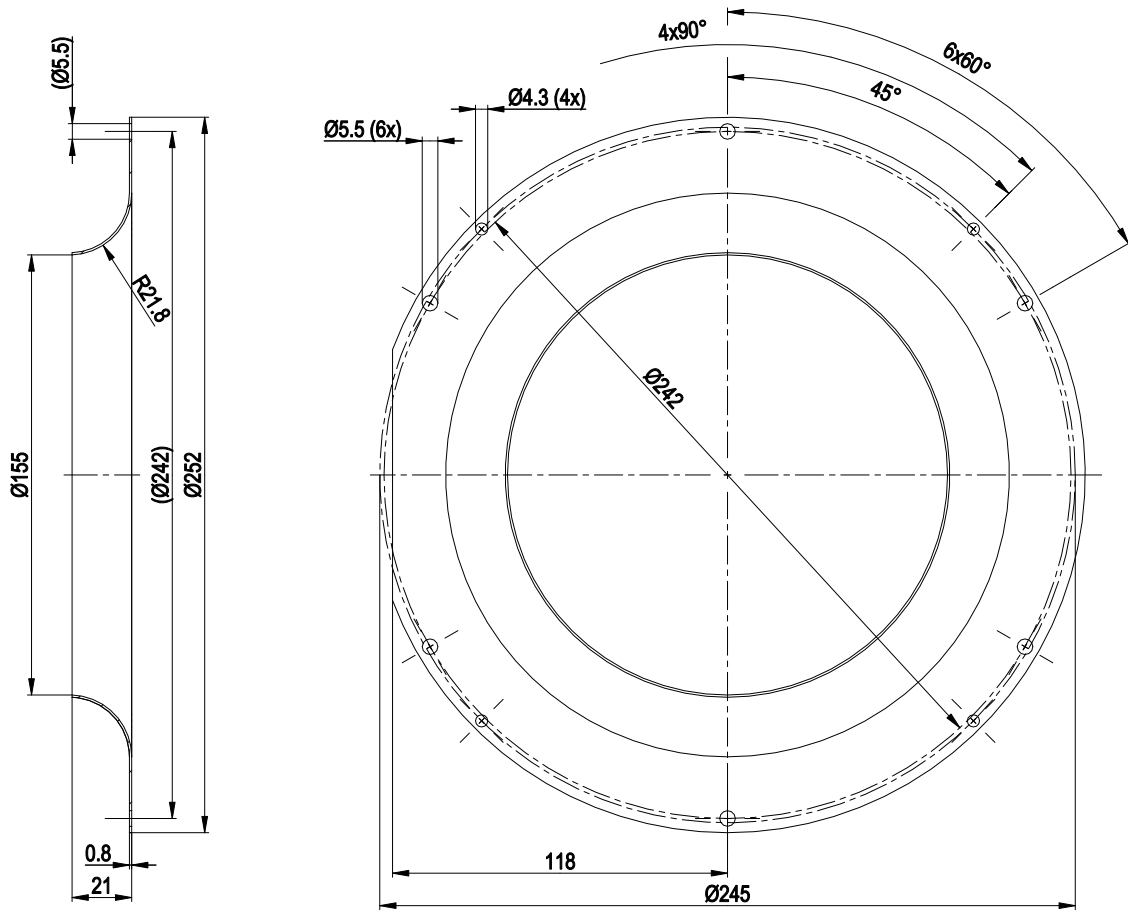
<b>Weight</b>	1.4 kg
<b>Fan size</b>	220 mm
<b>Rotor surface</b>	Thick-film passivated
<b>Electronics housing material</b>	Die-cast aluminum
<b>Impeller material</b>	PA plastic
<b>Number of blades</b>	7
<b>Direction of rotation</b>	Clockwise, viewed toward rotor
<b>Degree of protection</b>	IP54
<b>Insulation class</b>	"B"
<b>Max. permitted ambient temp. for motor (transport/storage)</b>	+ 80 °C
<b>Min. permitted ambient temp. for motor (transport/storage)</b>	- 40 °C
<b>Installation position</b>	Any
<b>Condensation drainage holes</b>	None, open rotor
<b>Mode</b>	S1
<b>Motor storage</b>	Ball bearing
<b>Technical features</b>	<ul style="list-style-type: none"> <li>- Output 10 VDC, max. 1.1 mA</li> <li>- Tach output</li> <li>- Motor current limitation</li> <li>- Soft start</li> <li>- Control input 0-10 VDC / PWM</li> <li>- Thermal overload protection for electronics/motor</li> <li>- Line undervoltage detection</li> </ul>
<b>EMC immunity to interference</b>	According to EN 61000-6-2 (industrial environment)
<b>EMC interference emission</b>	According to EN 61000-6-4 (industrial environment)
<b>Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)</b>	<= 3.5 mA
<b>Motor protection</b>	Locked-rotor protection
<b>With cable</b>	Variable
<b>Protection class</b>	I (with customer connection of protective earth)
<b>Conformity with standards</b>	EN 60335-1; CE
<b>Approval</b>	CCC; CSA C22.2 No. 77; EAC; UL 2111

Product drawing

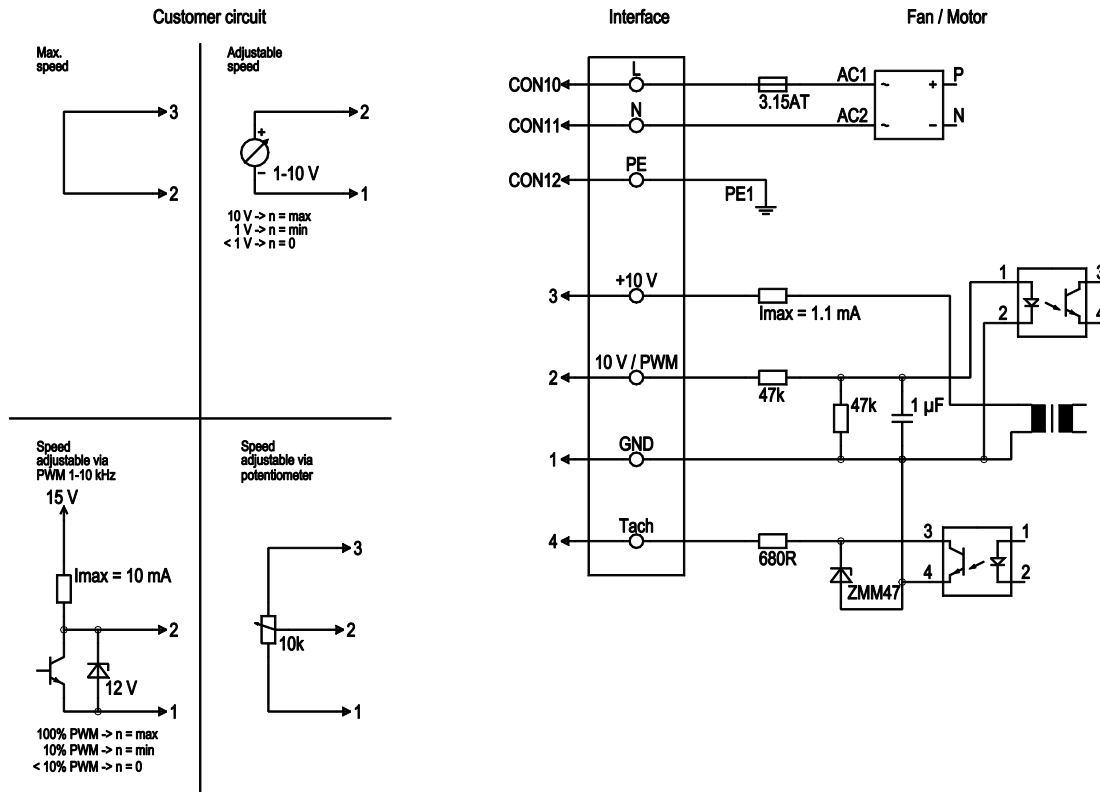


1	Accessory part: inlet ring 09609-2-4013 not included in scope of delivery
2	Max. clearance for screw 10 mm
3	Max. clearance for screw 5 mm
4	Cable PVC 3G AWG20, 3x crimped splices
5	Cable PVC 4x AWG22, 4x crimped splices

## Accessory part

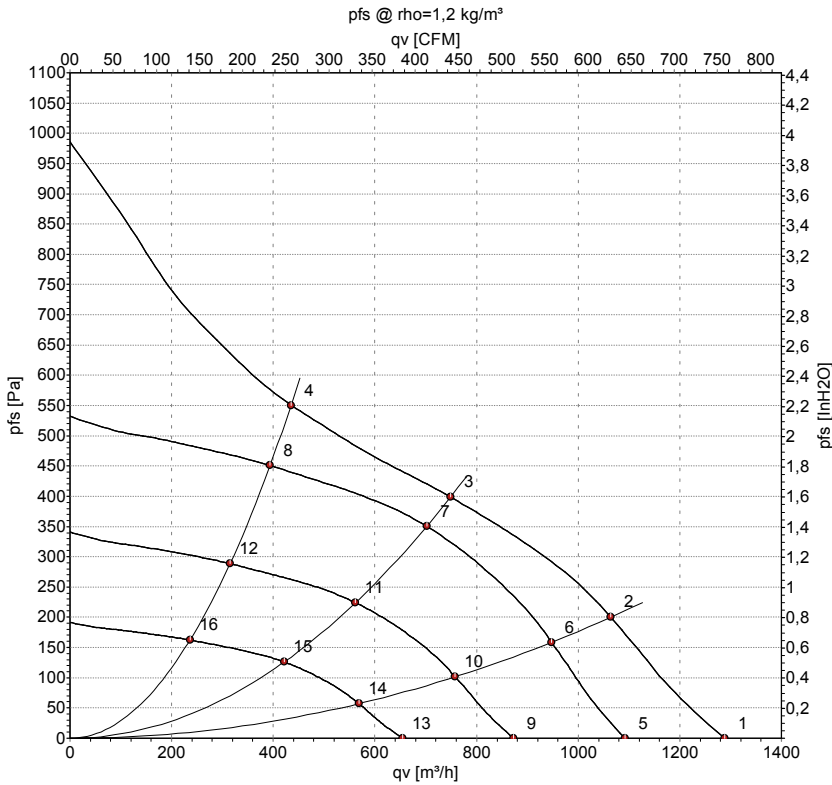


## Connection diagram



No.	Conn.	Designation	Color	Function/assignment
	CON10	L	black	Power supply 230 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 V / 1.1 mA, electrically isolated, not short-circuit-proof.
	4	Tach	white	Tach output: open collector, 1 pulse per revolution, electrically isolated

## Curves: Air performance 50 Hz



Measurement: LU-153697

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	f	n	P <sub>ed</sub>	I	LpA <sub>in</sub>	LwA <sub>in</sub>	qv	p <sub>fs</sub>
	V	Hz	min <sup>-1</sup>	W	A	dB(A)	dB(A)	m³/h	Pa
1	230	50	3540	168	1.40	70	78	1290	0
2	230	50	3370	168	1.40	65	73	1065	200
3	230	50	3230	168	1.40	62	70	750	400
4	230	50	3310	168	1.40	66	74	435	550
5	230	50	3000	99	0.82	66	73	1090	0
6	230	50	3000	115	0.96	62	70	950	159
7	230	50	3000	135	1.12	61	68	700	350
8	230	50	3000	121	1.01	63	70	395	451
9	230	50	2400	51	0.42	60	68	875	0
10	230	50	2400	59	0.49	57	64	760	102
11	230	50	2400	69	0.57	55	63	560	224
12	230	50	2400	62	0.51	57	65	315	289
13	230	50	1800	21	0.18	53	61	655	0
14	230	50	1800	25	0.21	50	57	570	57
15	230	50	1800	29	0.24	48	55	420	126
16	230	50	1800	26	0.22	50	58	235	162

U = Power supply · f = Frequency · n = Speed · P<sub>ed</sub> = Power consumption · I = Current draw · LpA<sub>in</sub> = Sound pressure level intake side · LwA<sub>in</sub> = Sound power level intake side  
 qv = Air flow · p<sub>fs</sub> = Pressure increase

