

R3G220-RN12-01 ebmpapst Datasheet

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Nominal data

Type	R3G220-RN12-01	
Motor	M3G074-CF	
Nominal voltage	VDC	24
Nominal voltage range	VDC	16 .. 28
Method of obtaining data		fa
Speed (rpm)	min ⁻¹	3460
Power consumption	W	157
Current draw	A	6.5
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

Data according to Commission Regulation (EU) 327/2011 (prEN 17166)

		Actual	Req. 2015			
01 Overall efficiency η_{es}	%	55.1	43.7	09 Power consumption P_e	kW	0.18
02 Measurement category		A		09 Air flow q_v	m ³ /h	720
03 Efficiency category		Static		09 Pressure increase p_{fs}	Pa	441
04 Efficiency grade N		73.4	62	10 Speed (rpm) n	min ⁻¹	3360
05 Variable speed drive		Yes		11 Specific ratio*		1.00

Data obtained at optimum efficiency level.

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

LU-150698

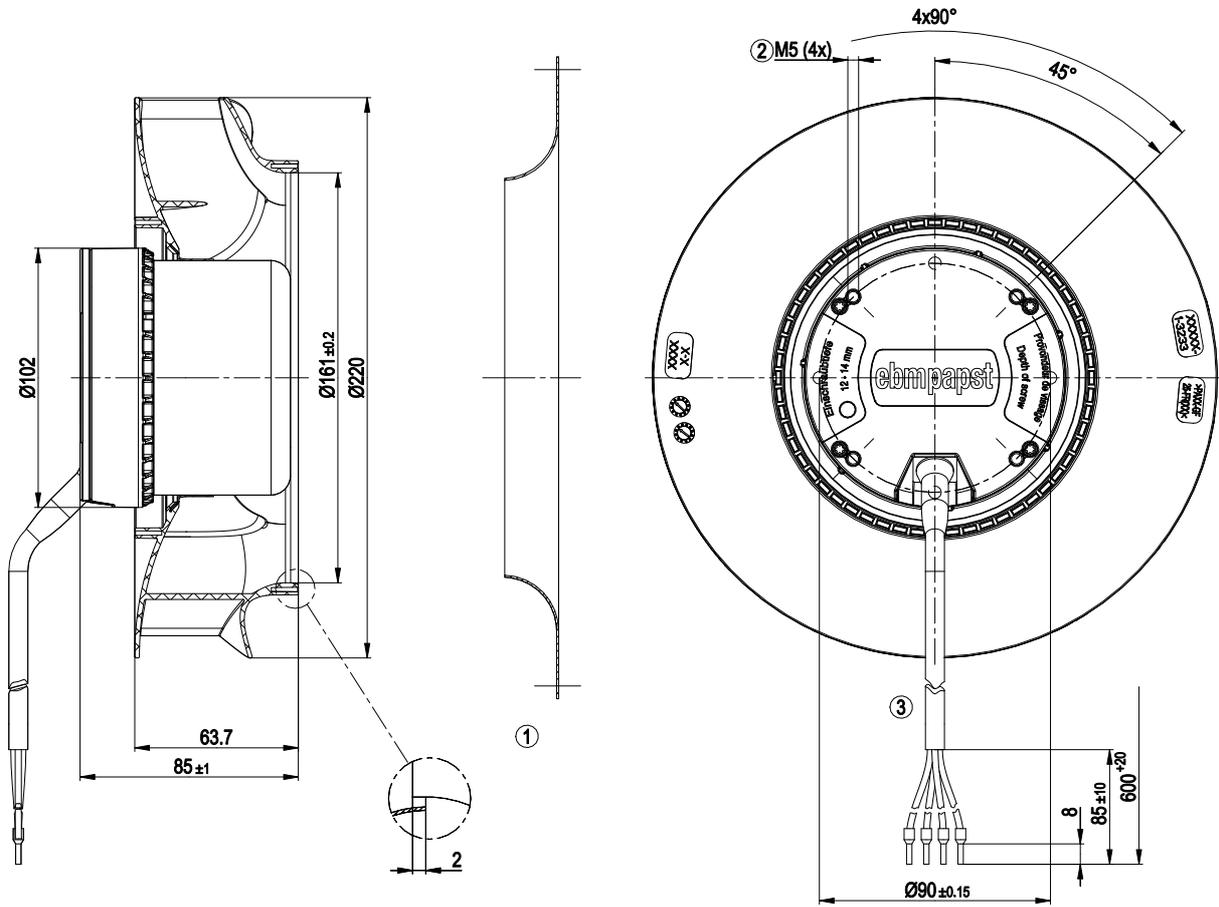
The efficiency values displayed for achieving conformity with the Ecodesign Regulation EU 327/2011 has been reached with defined air duct components (e.g. inlet rings).
The dimensions must be requested from ebm-papst. If other air conduction geometries are used on the installation side, the ebm-papst evaluation loses its validity/the conformity must be confirmed again.
The product does not fall within the scope of Regulation (EU) 2019/1781 due to the exception specified in Article 2 (2a) (motors completely integrated into a product).



Technical description

Weight	1.88 kg
Size	220 mm
Motor size	74
Rotor surface	Painted black
Impeller material	PA plastic
Number of blades	7
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP44; installation- and position-dependent
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	Shaft horizontal or rotor on top; rotor on bottom on request
Condensation drainage holes	None
Mode	S1
Motor bearing	Ball bearing
Technical features	<ul style="list-style-type: none"> - Tach output - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Overvoltage detection - Reverse polarity protection
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC interference emission	According to EN 55022 (Class B, household environment)
With cable	Variable
Protection class assignment	<p>III; Requires supply with safety extra-low voltage SELV.</p> <p>This component for installation may have several local protection classes. This information relates to this component's basic design.</p> <p>The final protection class is based on the component's intended installation and connection. If there is a PE connection point on the housing, it must not be visible after installation.</p>
Conformity with standards	EN 62368-1; CE
Approval	EAC

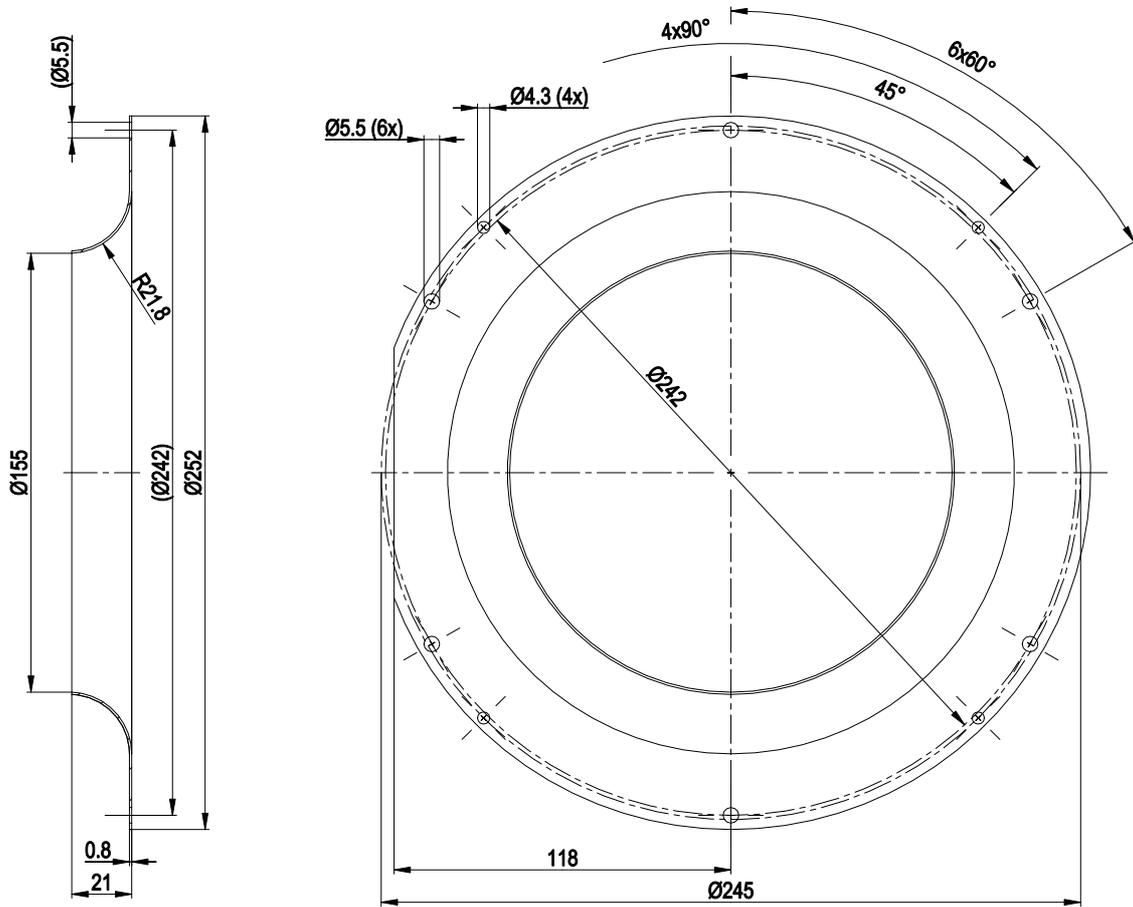
Product drawing



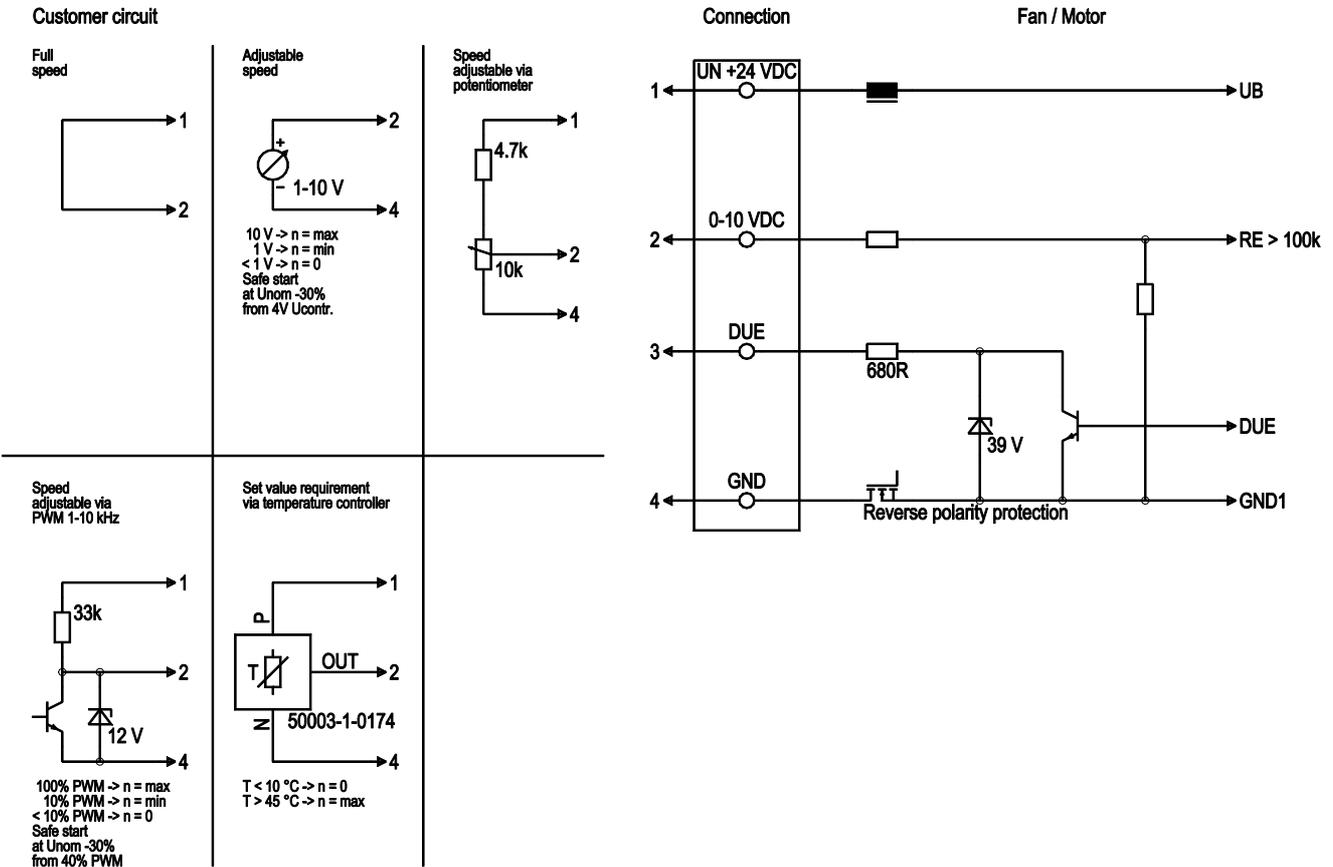
- 1 Accessory part: inlet ring 09609-2-4013 not included in scope of delivery
- 2 Max. clearance for screw 14 mm
- 3 Cable PVC AWG16, 4x crimped ferrules



Accessory part



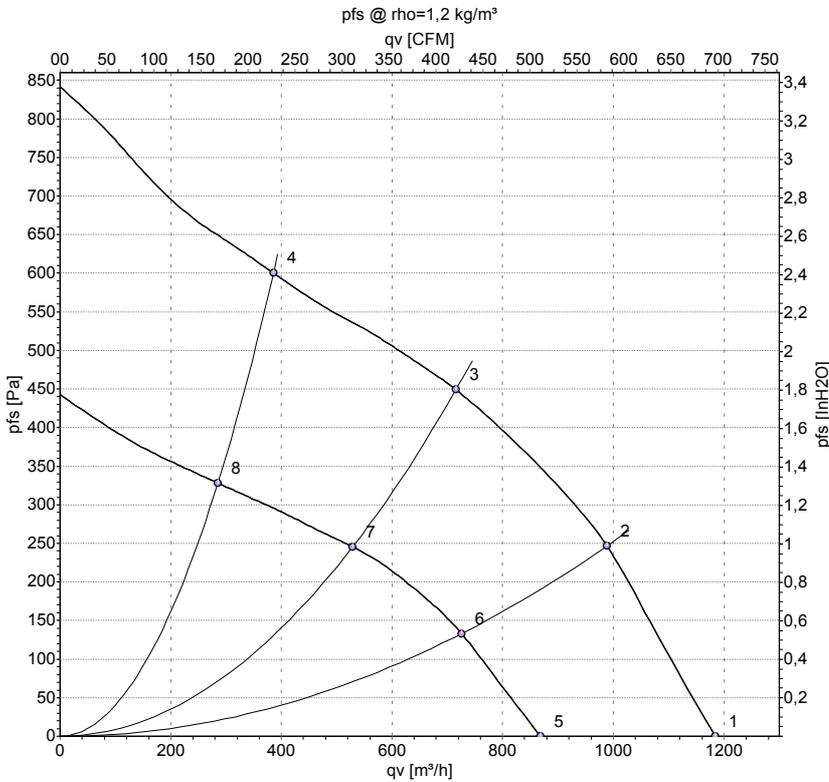
Connection diagram



No.	Conn.	Designation	Color	Function/assignment
	1	Un +24 VDC	red	Power supply 24 VDC, maximum ripple 3.5%
	2	0-10 VDC	yellow	Control input Re > 100k
	3	Tach	white	Tach output, 3 pulses per revolution, Isink max = 10 mA
	4	GND	blue	Reference ground



Curves: Air performance



Measurement: LU-150698-1
Measurement: LU-150704-1

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	n	P _{ed}	I	LpA _{in}	LwA _{in}	q _v	P _{fs}	q _v	P _{fs}
	V	min ⁻¹	W	A	dB(A)	dB(A)	m ³ /h	Pa	cfm	in. wg
1	24-28	3460	157	6.50*	73	81	1185	0	695	0.00
2	24-28	3420	171	7.11*	69	77	990	250	580	1.00
3	24-28	3360	182	7.59*	66	74	715	450	420	1.81
4	24-28	3455	168	6.97*	71	79	385	600	225	2.41
5	16	2575	67	4.15			870	0	510	0.00
6	16	2545	70	4.37			725	135	425	0.54
7	16	2505	75	4.68			530	246	310	0.99
8	16	2555	69	4.28			285	328	170	1.32

U = Voltage · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · * = Current measured at nominal voltage · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
q_v = Air flow · p_{fs} = Pressure increase

