EC circulation blower for hot air

R3G210-AF73-09 ebmpapst Datasheet
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Nominal data

Type	**R3G210-AF73-09**
Motor	**M3G074-CF**

Phase		1~
Nominal voltage	V	230
Nominal voltage range	V	200 .. 240
Frequency	Hz	50/60
Method of obtaining data		ml
Status		prelim.
Speed (rpm)	min^{-1}	3000
Power consumption	W	170
Current draw	A	1.3
Min. back pressure	Pa	0
Min. back pressure	in. wg	0
Max. ambient temperature	°C	50
Max. temp. of flow medium	°C	250

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	5.0 kg
Size	210 mm
Motor size	74
Rotor surface	Thick-film passivated
Impeller material	Sheet steel, rust-resistant
Number of blades	6
Direction of rotation	Counterclockwise, 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	Any
Condensation drainage holes	None
Mode	S1
Motor bearing	Hybrid 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
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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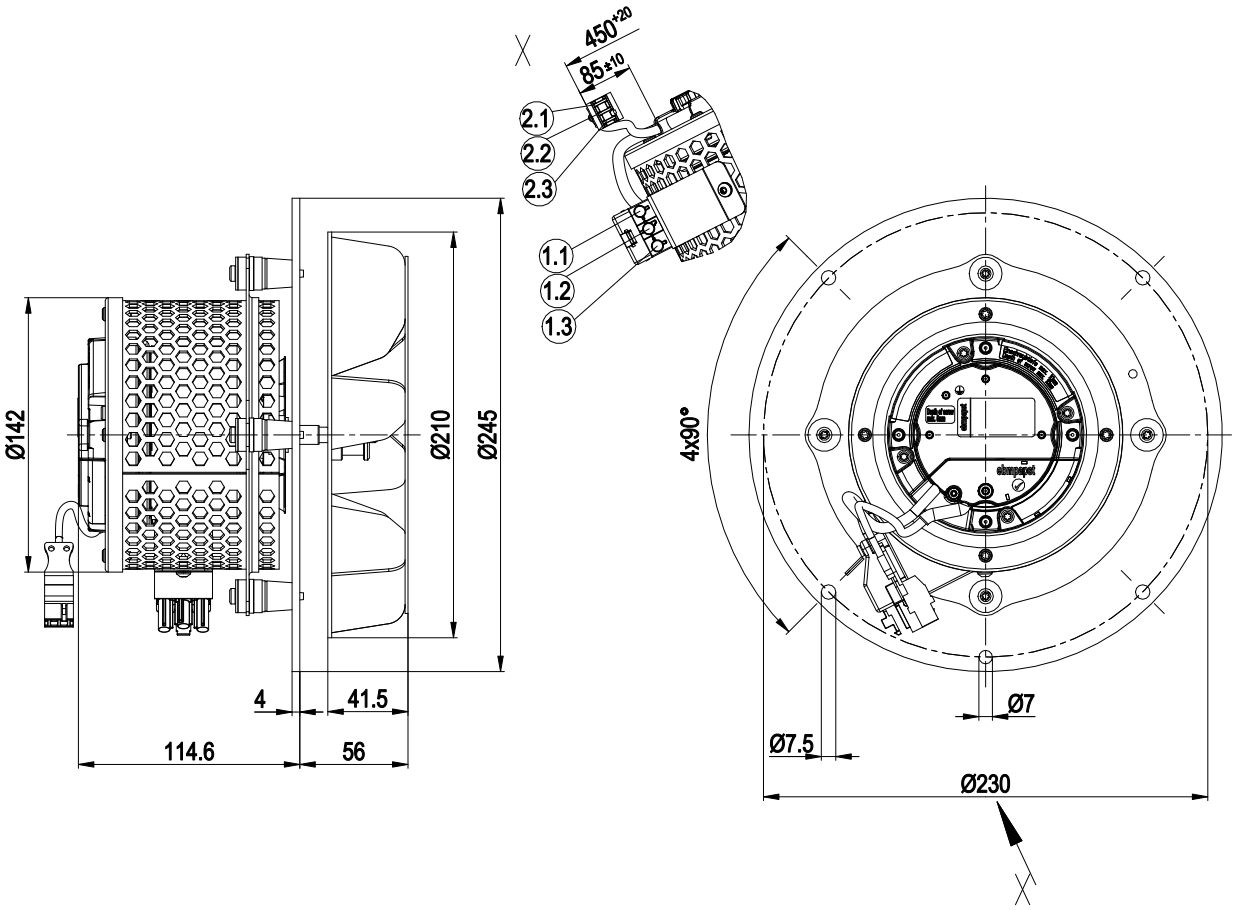
Product drawing



1	3-pole connector housing Wieland 93.832.4357.0
1.4	N (blue)
1.5	PE (green/yellow)
1.6	L (black)
2	3-pole connector housing Lumberg 3615-1 03 K02
2.1	0-10 V PWM (yellow)
2.2	GND (blue)
2.3	Tach (white)

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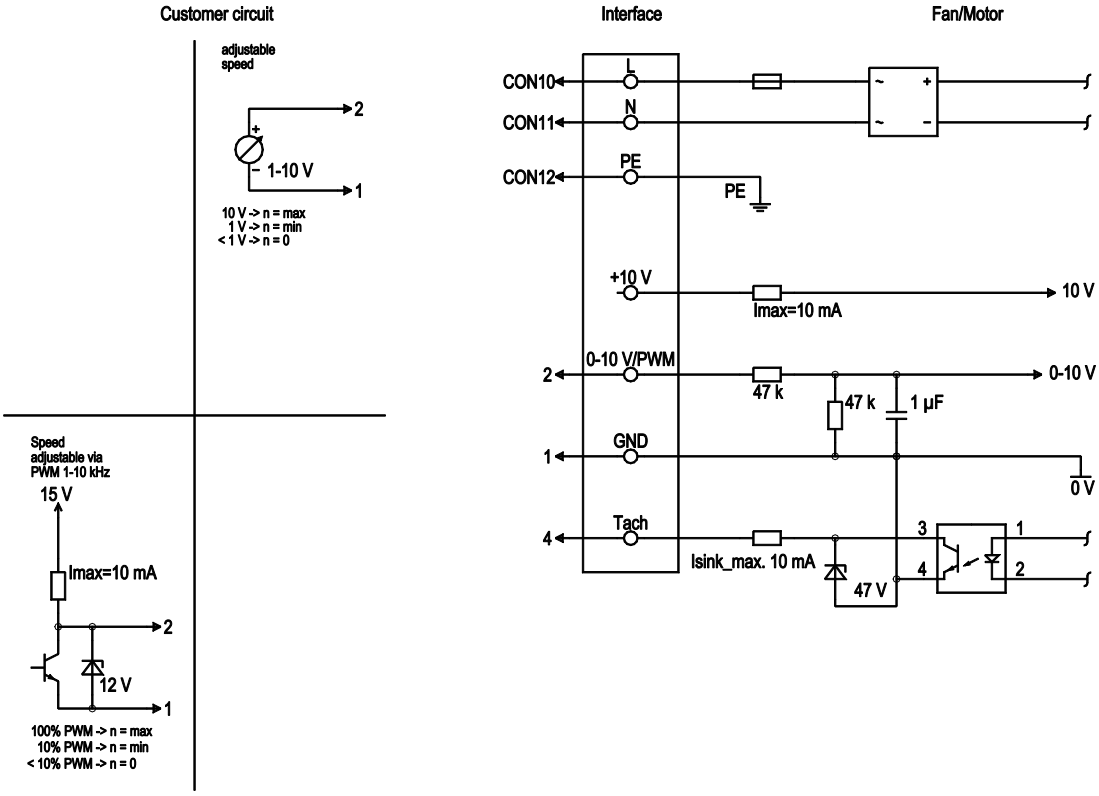
Connection diagram



No.	Conn.	Designation	Color	Function/assignment
	CON10	L	black	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
	1	GND	blue	Reference ground for control interface, SELV

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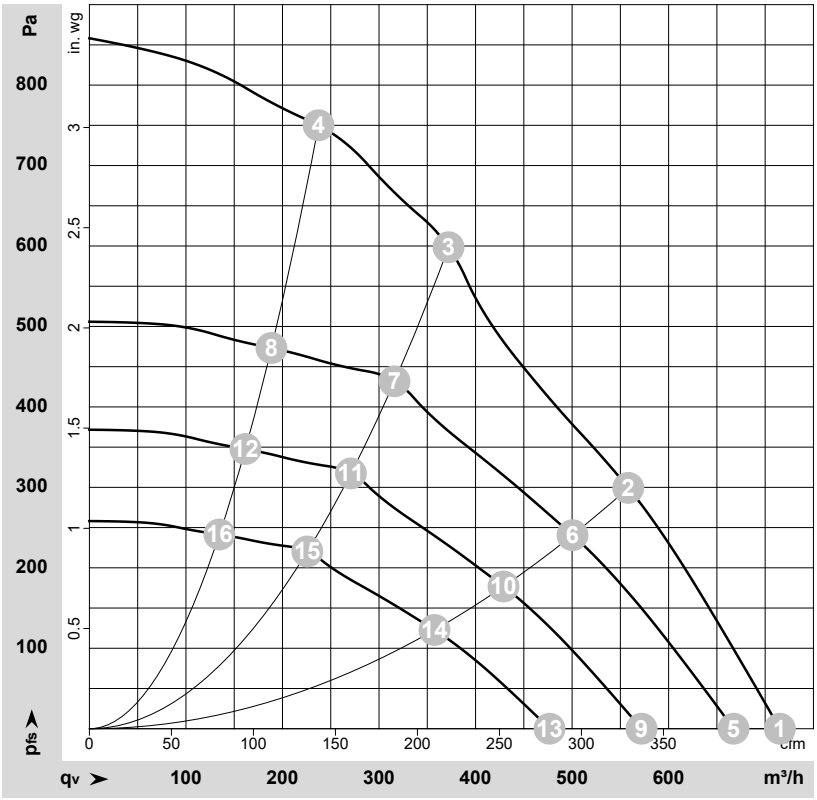
Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-197862-1

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	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	in. wg
1	1~	230	50	3000	170	1.30	715	0	420	0.00
2	1~	230	50	3125	170	1.30	560	300	330	1.20
3	1~	230	50	3295	170	1.30	370	600	220	2.41
4	1~	230	50	3525	162	1.32	235	750	140	3.01
5	1~	230	50	2800	134	1.08	665	0	395	0.00
6	1~	230	50	2800	122	0.98	500	241	295	0.97
7	1~	230	50	2800	101	0.82	315	438	185	1.76
8	1~	230	50	2800	81	0.66	190	473	110	1.90
9	1~	230	50	2400	85	0.68	570	0	335	0.00
10	1~	230	50	2400	77	0.62	430	177	250	0.71
11	1~	230	50	2400	64	0.52	270	322	160	1.29
12	1~	230	50	2400	51	0.42	160	348	95	1.40
13	1~	230	50	2000	49	0.39	475	0	280	0.00
14	1~	230	50	2000	44	0.36	355	123	210	0.49
15	1~	230	50	2000	37	0.30	225	224	135	0.90
16	1~	230	50	2000	30	0.24	135	241	80	0.97

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase