R3G310-RB01-03

EC centrifugal fan - RadiCal

backward-curved, single-intake

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**R3G310-RB01-03**
Motor	**M3G074-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}	1525
Power consumption	W	150
Current draw	A	1.2
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 ErP Directive

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	65.9	42.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		85.4	62
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.14
09 Air flow q_v	m^3/h	1355
09 Pressure increase p_{fs}	Pa	229
10 Speed (rpm) n	min^{-1}	1520
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 Pa

LU-137969

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Technical description

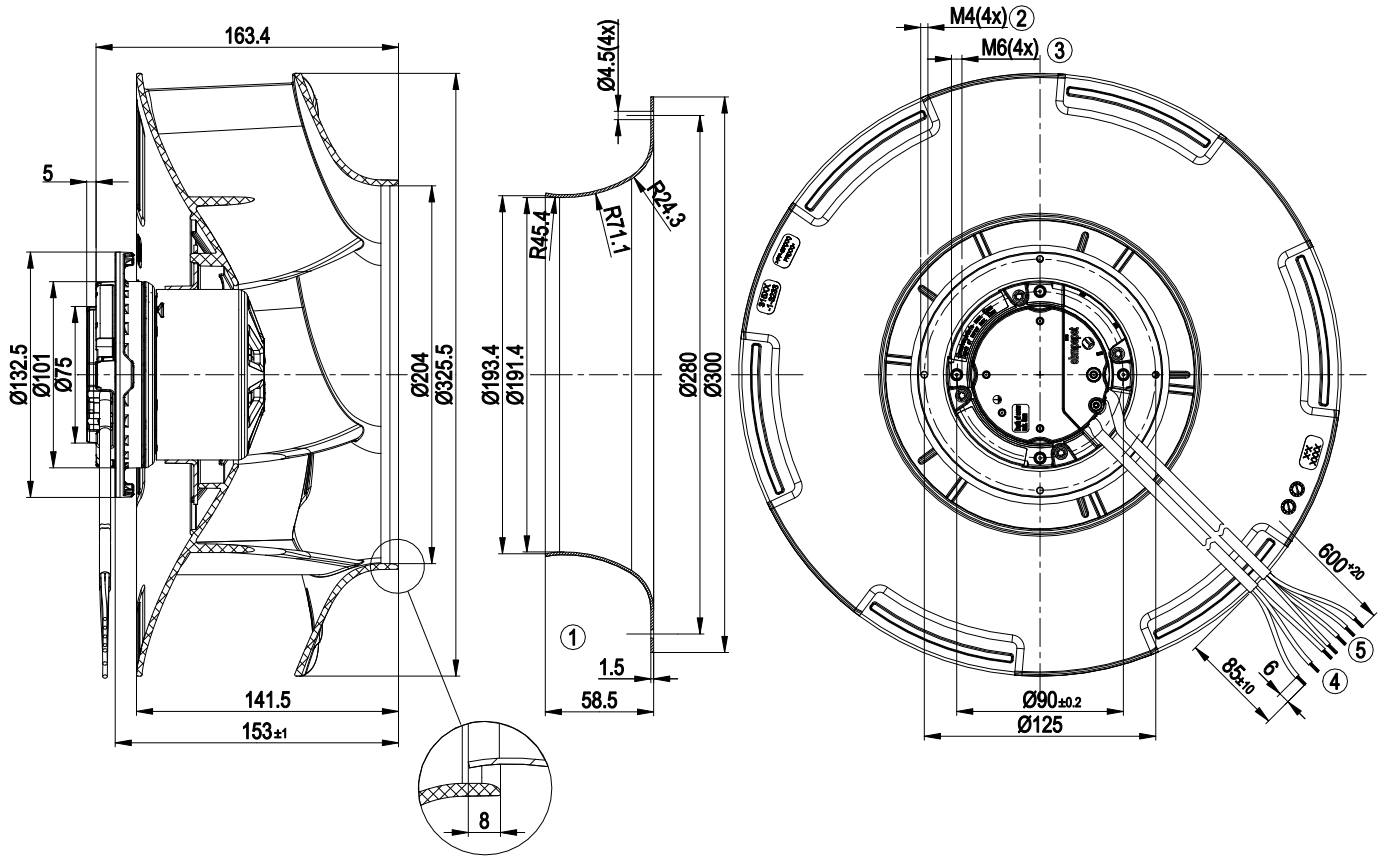
Fan size	310 mm
Impeller material	PP-GF40 plastic
Number of blades	6
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	F3-1
Max. permitted ambient temp. for motor (transport/storage)	+ 80 °C
Min. permitted ambient temp. for motor (transport/storage)	- 40 °C
Installation position	Any
Condensation drainage holes	On rotor side
Cooling hole/opening	On rotor side
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
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	PTC thermistor
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	CE
Approval	CCC; EAC; CSA C22.2 No. 77; UL 2111

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Product drawing



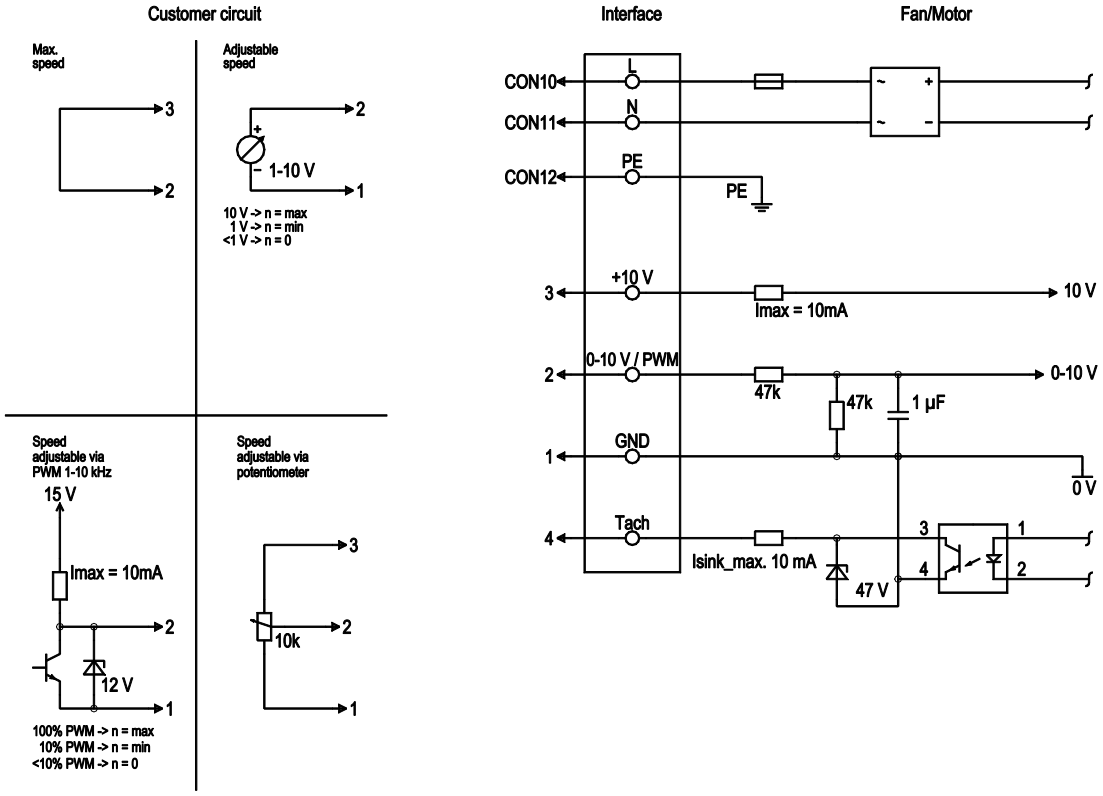
1	Accessory part: inlet ring 31000-2-4013 not included in scope of delivery, other inlet rings on request
2	Max. clearance for screw 10 mm
3	Max. clearance for screw 10 mm
4	Cable AWG20, 3x crimped ferrules
5	Cable AWG22, 4x crimped ferrules

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Connection diagram



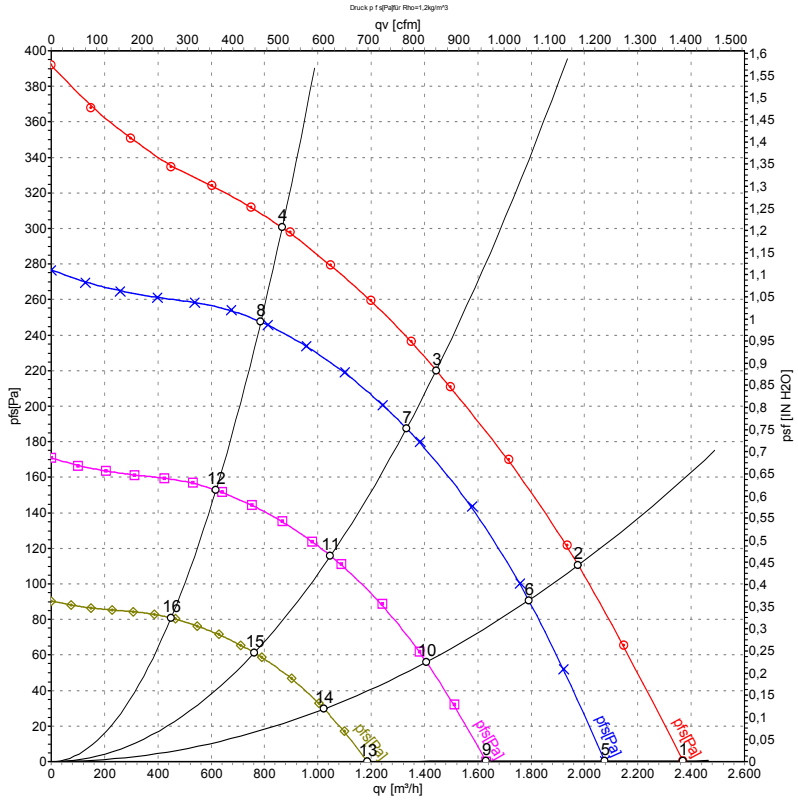
No.	Conn.	Designation	Color	Function/assignment
	CON10	L	black	Supply connection, power supply, phase, see nameplate for voltage range
	CON11	N	blue	Supply connection, power supply, neutral conductor, see nameplate for voltage range
	CON12	PE	green/yellow	Ground connection
	2	0- 10V PWM	yellow	0-10 V / PWM control input, Ri=100 kΩ, SELV
	4	Tach	white	Tach output, open collector, 1 pulse per revolution, Isink max = 10 mA, SELV
	3	+10 V	red	Fixed voltage output 10 VDC +/-3 %, Imax. 10 mA, short-circuit-proof, power supply for ext. devices (e.g. pot), SELV
	1	GND	blue	Reference ground for control interface, SELV

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Curves: Air performance 50 Hz



Measurement: LU-137969-1

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	f	n	P_{ed}	I	LpA_{in}	LwA_{in}	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	CFM	inH2O
1	230	50	1600	115	0.95	62	69	2370	0	1395	0.00
2	230	50	1545	137	1.12	57	65	1975	110	1165	0.44
3	230	50	1525	150	1.20	52	59	1445	220	850	0.88
4	230	50	1545	137	1.13	55	62	865	300	510	1.20
5	230	50	1400	77	0.64	59	66	2075	0	1220	0.00
6	230	50	1400	102	0.84	55	63	1790	91	1055	0.37
7	230	50	1400	118	0.97	50	57	1335	188	785	0.75
8	230	50	1400	102	0.84	53	60	785	248	465	1.00
9	230	50	1100	37	0.31	54	61	1630	0	960	0.00
10	230	50	1100	50	0.41	50	57	1405	56	830	0.22
11	230	50	1100	57	0.47	45	52	1045	116	615	0.47
12	230	50	1100	50	0.41	47	55	620	153	365	0.61
13	230	50	800	14	0.12	47	54	1185	0	700	0.00
14	230	50	800	19	0.16	43	50	1025	30	600	0.12
15	230	50	800	22	0.18	38	45	760	61	450	0.24
16	230	50	800	19	0.16	40	48	450	81	265	0.33

U = Power supply · 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
qv = Air flow · p_{fs} = Pressure increase

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