R3G310-RB01-03

EC centrifugal fan - RadiCal®

backward curved, single inlet

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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
Type of data definition		ml
Speed	min^{-1}	1525
Power input	W	150
Current draw	A	1.2
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

Data according to ErP directive

Installation category	A
Efficiency category	Static
Variable speed drive	Yes
Specific ratio*	1.00

* Specific ratio = 1 + p_{fs} / 100 000 Pa

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}	%	65.9	38.5	42.5
Efficiency grade N		85.4	58	62
Power input P_{ed}	kW	0.14		
Air flow q_v	m^3/h	1355		
Pressure increase p_{fs}	Pa	229		
Speed n	min^{-1}	1520		

Data definition with optimum efficiency. LU-137969
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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Technical features

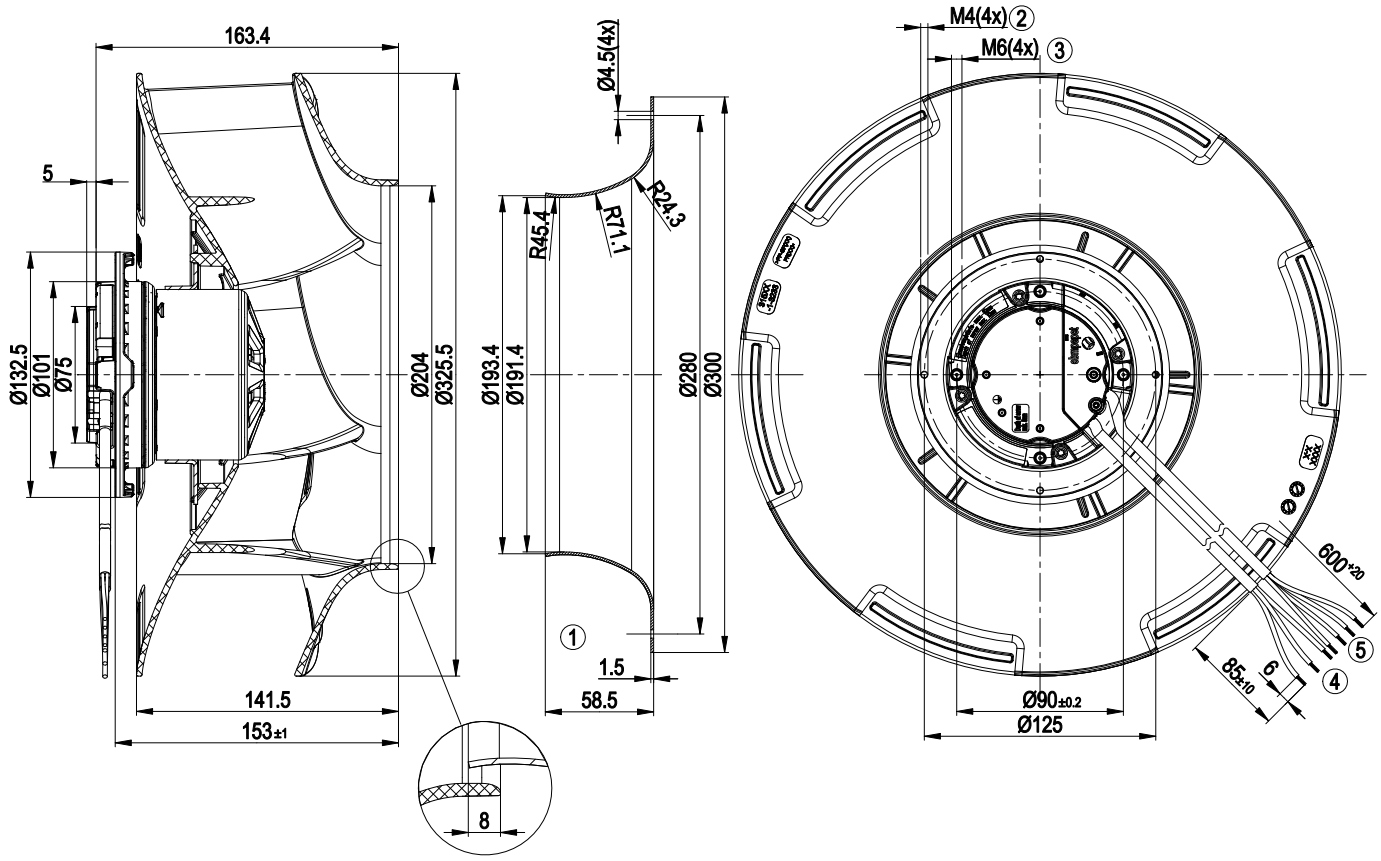
Size	310 mm
Material of impeller	PP-GF40 plastic
Number of blades	6
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
Humidity class	F3-1
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Any
Condensate discharge holes	Rotor-side
Cooling bore / aperture	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 1.1 mA - Tach output - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Over-temperature protected electronics / motor
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Motor protection	PTC resistor
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Approval	CCC; EAC

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Product drawing



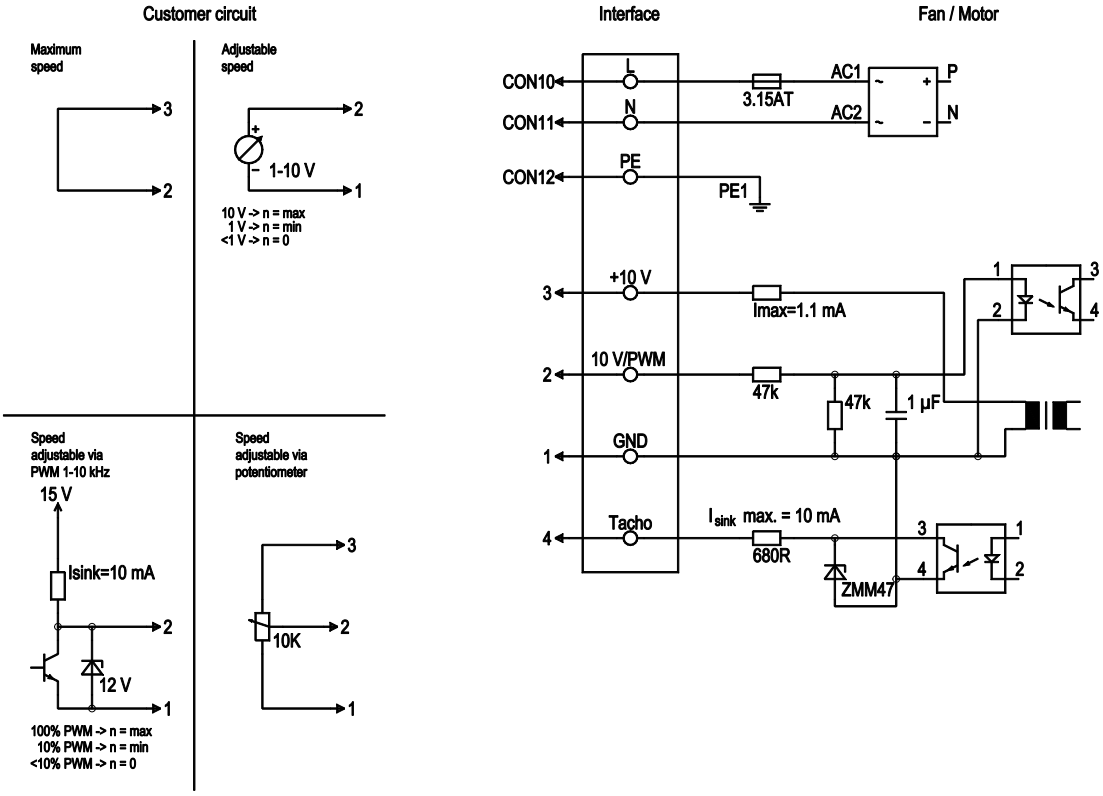
1	Accessory part: inlet nozzle 31000-2-4013 not included in the standard scope of delivery; other inlet nozzles on request
2	Depth of screw max. 10 mm
3	Depth of screw max. 10 mm
4	Connection line AWG20, 3 x crimped core-end sleeves
5	Connection line AWG22, 4 x crimped core-end sleeves

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Connection screen



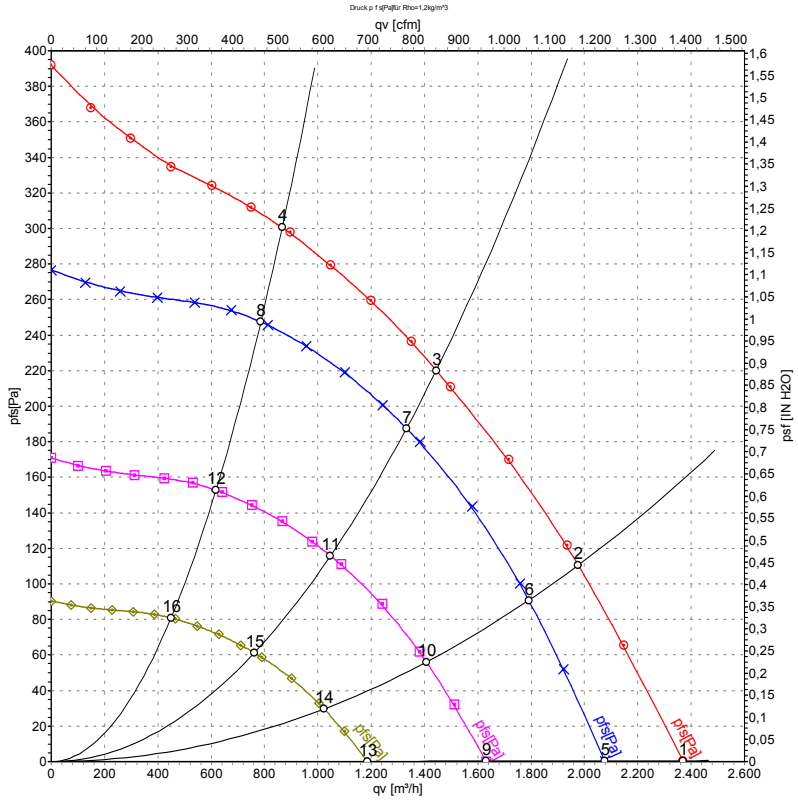
No.	Conn.	Designation	Colour	Function / assignment
	CON10	L	black	Power supply 230 VAC, 50-60 Hz, for voltage range refer to rating plate
	CON11	N	blue	Neutral conductor
	CON12	PE	green/yellow	Protective earth
	1	GND	blue	GND - Connection for control interface
	2	0- 10V PWM	yellow	Control input 0 - 10 V or PWM, electrically isolated
	3	10V/ max 1.1mA	red	Voltage output 10 V / 1.1 mA, electrically isolated, not short-circuit-proof, Isink = 10 mA
	4	Tach	white	Tach output: open collector, 1 pulse per revolution, electrically isolated, Isink max = 10 mA

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Charts: Air flow 50 Hz



Measurement: LU-137969

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

Measured values

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

U = Supply voltage · f = Frequency · n = Speed · P_{ed} = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side · qv = Air flow
p_{fs} = Pressure increase

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