EC centrifugal fan - RadiCal

backward curved

R3G355-RB03-06 ebmpapst Datasheet
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County court Stuttgart · HRA 590344

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Nominal data

Type	**R3G355-RB03-06**
Motor	**M3G074-DF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min^{-1}	1250
Power input	W	168
Current draw	A	1.4
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 in accordance with ecodesign regulation EU 327/2011

		Actual	Request 2015
01 Overall efficiency η_{es}	%	65.6	43.1
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		84.5	62
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	0.16
09 Air flow q_v	m^3/h	1805
09 Pressure increase p_{fs}	Pa	191
10 Speed (rpm) n	min^{-1}	1240
11 Specific ratio*		1.00

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

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

LU-139927

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Technical features

Mass	3.7 kg
Size	355 mm
Surface of rotor	Thick layer passivated
Material of impeller	PP plastic
Number of blades	6
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
Humidity (F)/environmental protection class (H)	H1
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Any
Condensation drainage holes	None, open rotor
Cooling bore / aperture	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Tach output - Output limit - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Overvoltage detection - Over-temperature protected electronics / motor - Line undervoltage detection
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Motor protection	Electronic motor protection
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1; CE

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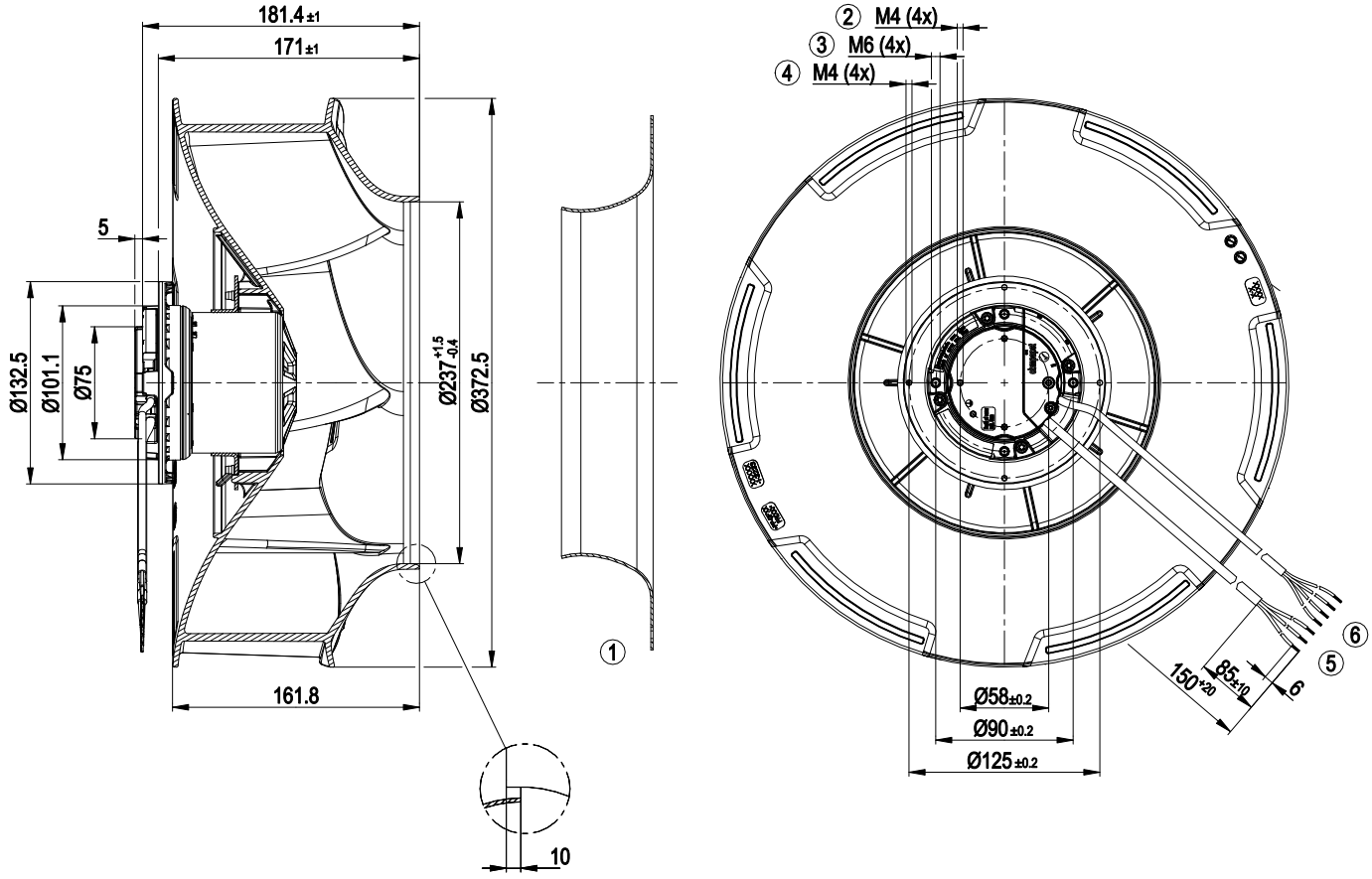
Product drawing



1	Accessory part: Inlet nozzle 35500-2-4013 not included in scope of delivery
2	Thread reach max. 5 mm
3	Thread reach max. 10 mm
4	Thread reach max. 10 mm
5	Connection line PVC AWG20, 3x lead tips stripped
6	Connection line PVC AWG22, 4x lead tips crimped

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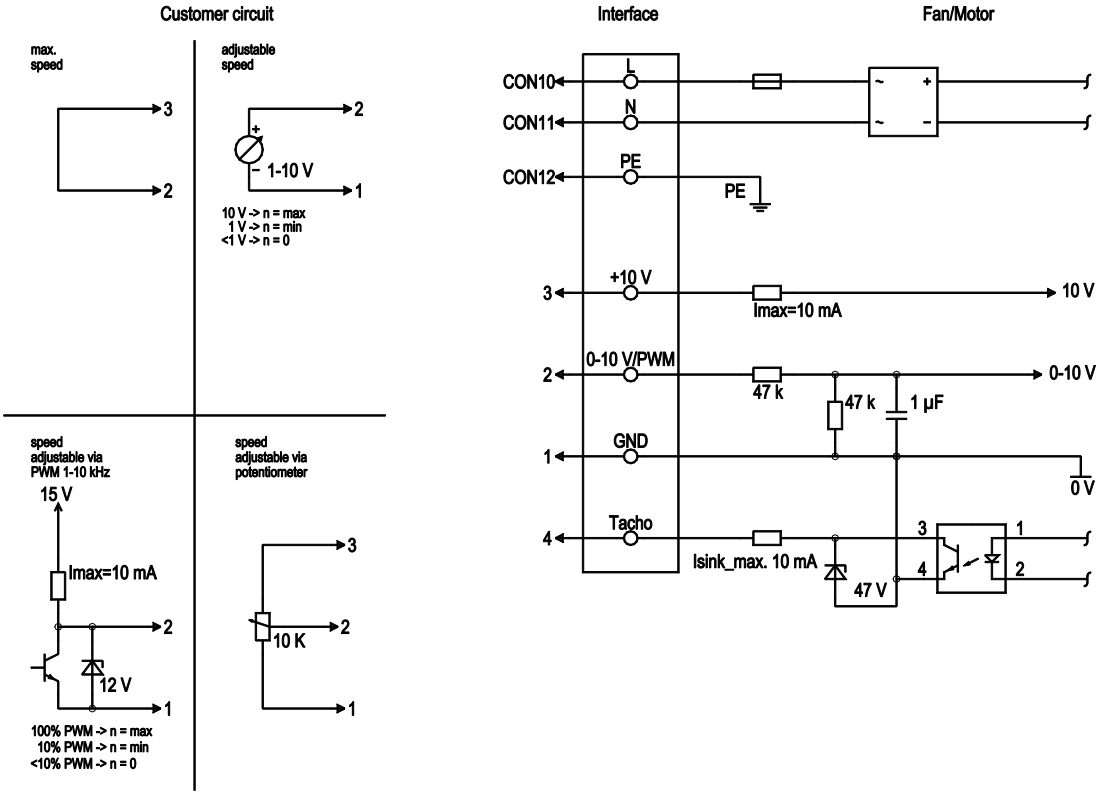
Connection screen



No.	Conn.	Designation	Colour	Function / assignment
	CON10	L	black	Mains connection, power supply, phase, see type plate for voltage range
	CON11	N	blue	Mains connection, power supply, neutral conductor, see type plate for voltage range
	CON12	PE	green/yellow	Earth connection
	2	0- 10V PWM	yellow	0-10 V/PWM control input, Ri=100 kΩ, SELV
	4	Tach	white	Speed monitoring 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. potentiometer), SELV
	1	GND	blue	Signal ground for control interface, SELV

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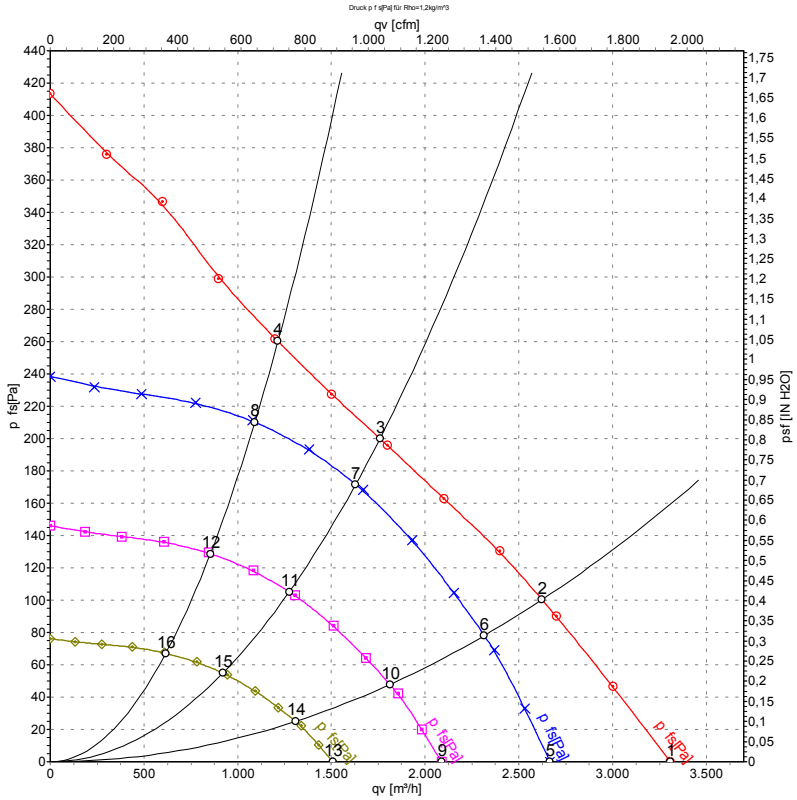
Charts: Air flow 50 Hz



Measurement: LU-139927-1

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}	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	230	50	1425	165	1.35	65	71	3310	0	1950	0.00
2	230	50	1305	165	1.36	57	65	2625	100	1545	0.40
3	230	50	1250	168	1.40	50	58	1760	200	1035	0.80
4	230	50	1280	165	1.36	52	60	1215	260	715	1.04
5	230	50	1150	86	0.71	59	66	2665	0	1570	0.00
6	230	50	1150	114	0.94	54	62	2315	78	1365	0.31
7	230	50	1150	133	1.08	48	56	1630	172	960	0.69
8	230	50	1150	122	1.00	49	57	1090	211	640	0.85
9	230	50	900	41	0.34	53	60	2085	0	1230	0.00
10	230	50	900	55	0.45	48	55	1810	48	1065	0.19
11	230	50	900	64	0.52	42	50	1275	105	750	0.42
12	230	50	900	58	0.48	43	51	855	129	505	0.52
13	230	50	650	16	0.13	45	52	1505	0	885	0.00
14	230	50	650	21	0.17	40	47	1310	25	770	0.10
15	230	50	650	24	0.20	34	41	920	55	540	0.22
16	230	50	650	22	0.18	35	42	615	67	365	0.27

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