

EC centrifugal fan - RadiCal

backward-curved, single-intake

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Nominal data

Type	R3G355-RB03-03	
Motor	M3G074-DF	
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	1250
Power consumption	W	168
Current draw	A	1.4
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}	%	65.5	43.3	09 Power consumption P_{ed}	kW	0.16
02 Measurement category		A		09 Air flow q_v	m³/h	1805
03 Efficiency category		Static		09 Pressure increase p_{fs}	Pa	191
04 Efficiency grade N		84.2	62	10 Speed (rpm) n	min ⁻¹	1240
05 Variable speed drive		Yes		11 Specific ratio*		1.00

Data obtained at optimum efficiency level.

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

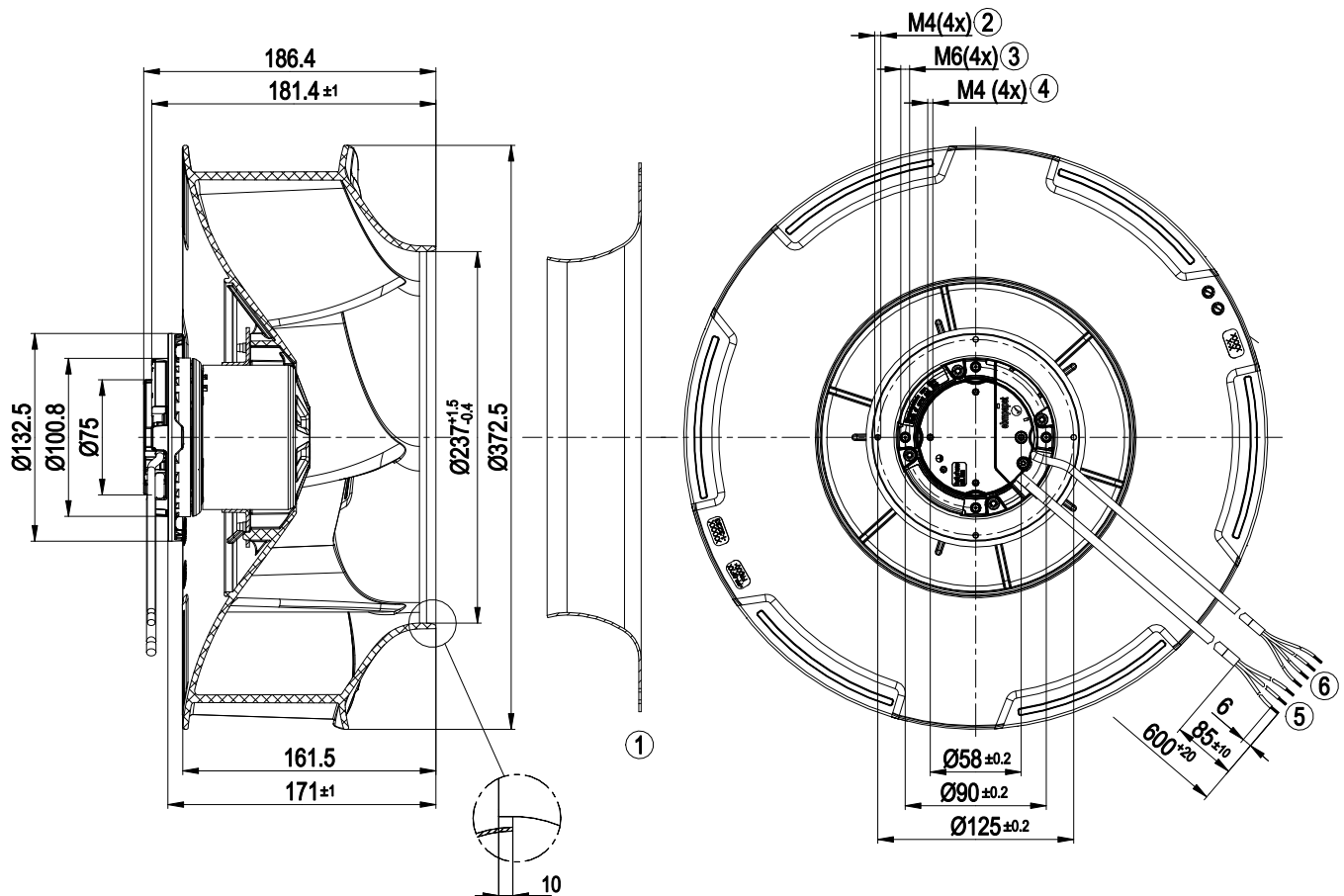
LU-139927

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

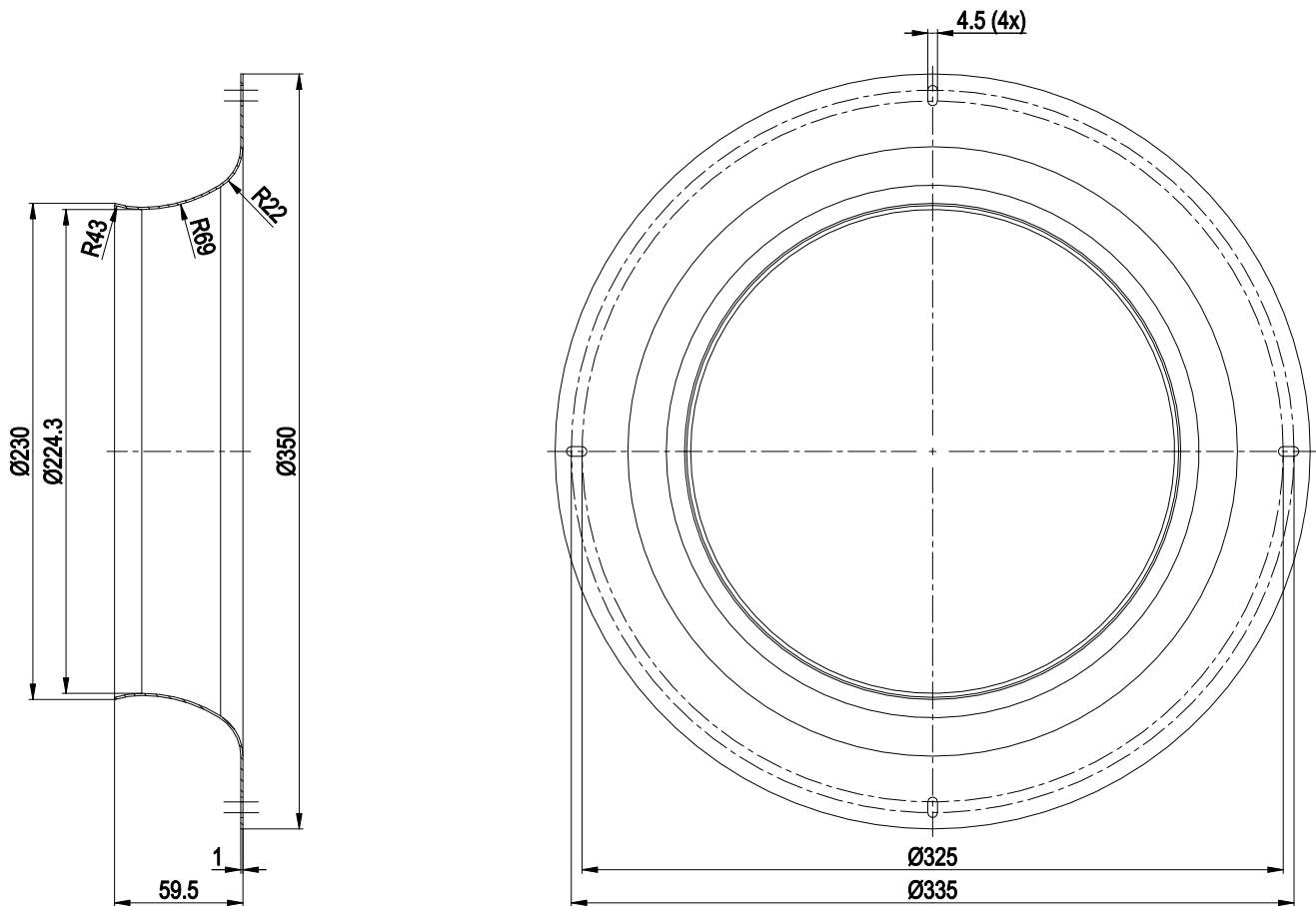
Weight	3.68 kg
Size	355 mm
Motor size	74
Rotor surface	Thick-film passivated
Impeller material	PP plastic
Number of blades	6
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H1
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Any
Condensation drainage holes	None, open rotor
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
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC interference emission	According to EN 61000-6-4 (industrial environment)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	Electronic motor protection
With cable	Variable
Protection class assignment	I; If a protective earth is connected. The built-in component has several local protection class assignments. The final protection class is determined by the intended installation.
Conformity with standards	CE; UKCA
Approval	UL 1004-7 + 60730-1; CCC; EAC; CSA C22.2 No. 77 + CAN/CSA-E60730-1

Product drawing



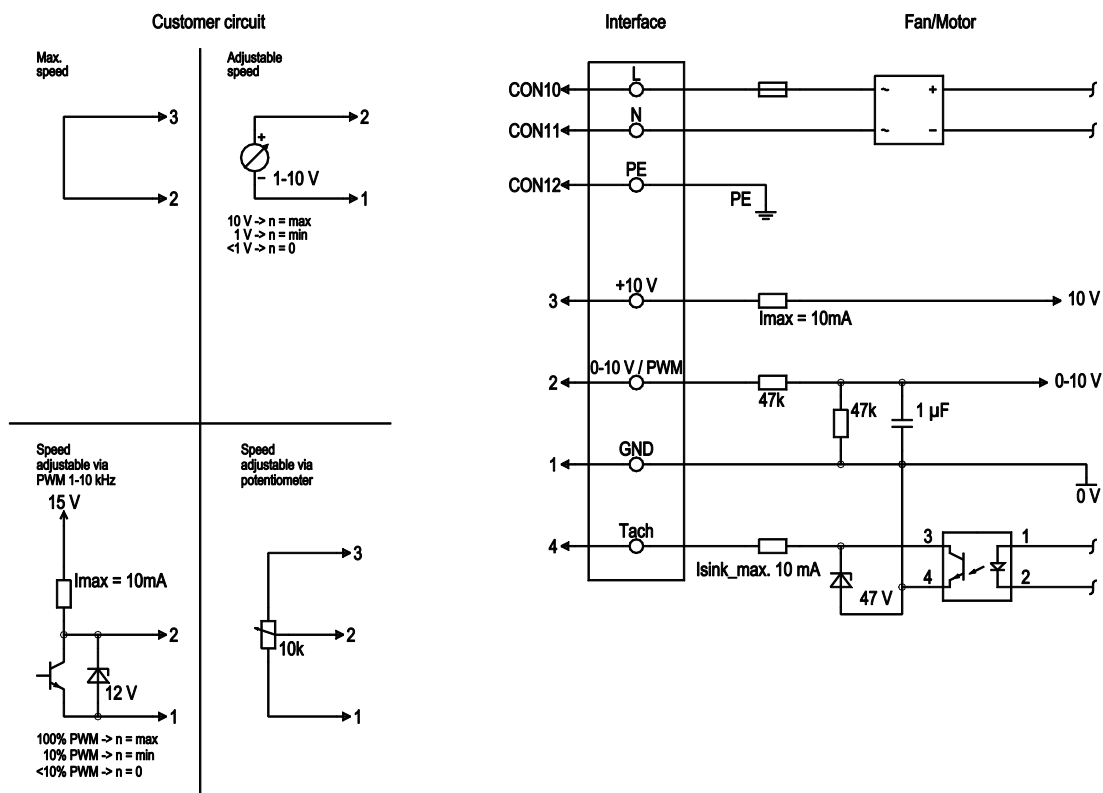
1	Accessory part: inlet ring 35500-2-4013 not included in scope of delivery, other inlet rings on request
2	Max. clearance for screw 10 mm
3	Max. clearance for screw 10 mm
4	Max. clearance for screw 5 mm
5	Cable PVC AWG20
	3x splice
6	Cable PVC AWG22
	4x splice

Accessory part



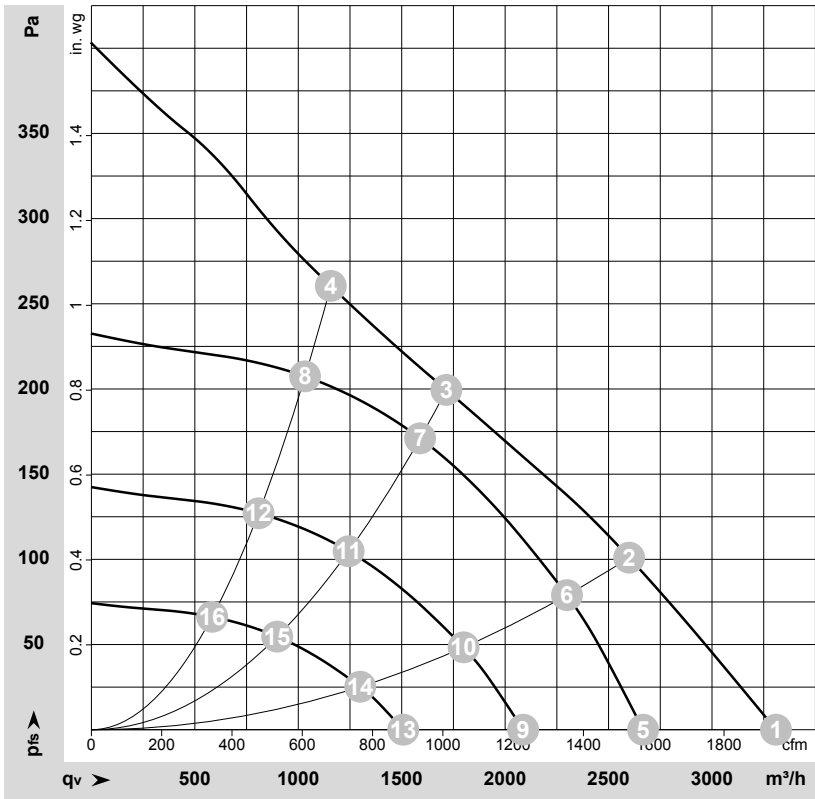
Inlet ring 35500-2-4013

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, R _i =100 kΩ, SELV
	4	Tach	white	Tach output, open collector, 1 pulse per revolution, I _{sink max} = 10 mA, SELV
	3	+10 V	red	Fixed voltage output 10 VDC +/-3 %, I _{max} . 10 mA, short-circuit-proof, power supply for ext. devices (e.g. pot), SELV
	1	GND	blue	Reference ground for control interface, SELV

Curves: Air performance 50 Hz



$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-139927-1
Date: 2012-01-25
Nozzle: 35500-2-4013

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	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	1~	230	50	1425	165	1.35	65	71	3310	0	1950	0.00
2	1~	230	50	1300	166	1.36	57	64	2600	100	1530	0.40
3	1~	230	50	1250	168	1.40	50	58	1715	200	1010	0.80
4	1~	230	50	1285	167	1.37	53	60	1155	260	680	1.04
5	1~	230	50	1150	86	0.71	59	66	2665	0	1570	0.00
6	1~	230	50	1150	115	0.94	54	61	2300	79	1355	0.32
7	1~	230	50	1150	132	1.08	48	56	1590	171	935	0.69
8	1~	230	50	1150	119	0.98	50	57	1035	208	610	0.84
9	1~	230	50	900	41	0.34	53	60	2085	0	1230	0.00
10	1~	230	50	900	55	0.45	48	55	1800	48	1060	0.19
11	1~	230	50	900	63	0.52	42	49	1245	105	730	0.42
12	1~	230	50	900	57	0.47	44	51	810	127	475	0.51
13	1~	230	50	650	16	0.13	45	52	1505	0	885	0.00
14	1~	230	50	650	21	0.17	39	47	1300	25	765	0.10
15	1~	230	50	650	24	0.19	34	41	900	55	530	0.22
16	1~	230	50	650	21	0.18	35	43	585	66	345	0.26

Wired = Wiring · U = Voltage · 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
q_v = Air flow · p_{fs} = Pressure increase