R3G250-PR17-I1

EC centrifugal fan - RadiPac

backward-curved, single-intake

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Nominal data

Type	**R3G250-PR17-I1**
Motor	**M3G084-DF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min^{-1}	3450
Power consumption	W	750
Current draw	A	3.3
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	45

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 (EN 17166)

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	67	50
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		79	62
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.71
09 Air flow q_v	m^3/h	2110
09 Pressure increase p_{fs}	Pa	749
10 Speed (rpm) n	min^{-1}	3395
11 Specific ratio*		1.01

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-174661

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Technical description

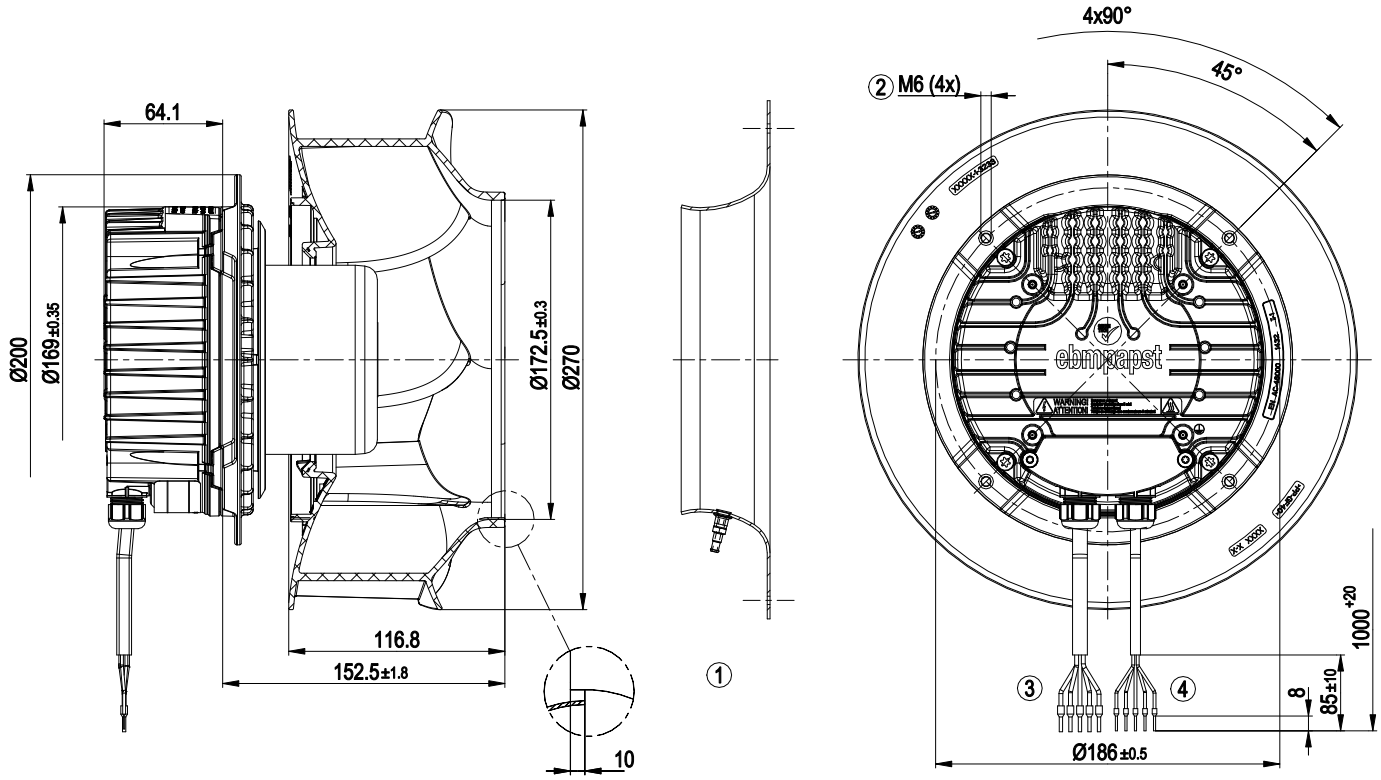
Weight	4.683 kg
Size	250 mm
Motor size	84
Rotor surface	Painted black
Impeller material	PP plastic
Housing material	Die-cast aluminum
Number of blades	6
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP55
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H1
Ambient temperature note	Occasional start-up at temperatures between -40°C and -25°C is permitted. For continuous operation at ambient temperatures below -25°C (such as refrigeration applications), use must be made of a fan design with special low-temperature bearings.
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensation drainage holes	On rotor side
Mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Operation and alarm display - Alarm relay - Integrated PID controller - Power limiter - Motor current limitation - PFC, active - RS-485 MODBUS-RTU - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Thermal overload protection for electronics/motor - Line undervoltage / phase failure detection
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC circuit feedback	According to EN 61000-3-2/3
EMC interference emission	According to EN 61000-6-3 (household environment)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Protection class	I (if protective earth is connected by customer to the housing's connection point)
Conformity with standards	EN 61800-5-1; EN 60335-1; CE
Approval	EAC; UL 1004-7 + 60730-1; CCC; CSA C22.2 No. 77 + CAN/CSA-E60730-1

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Product drawing



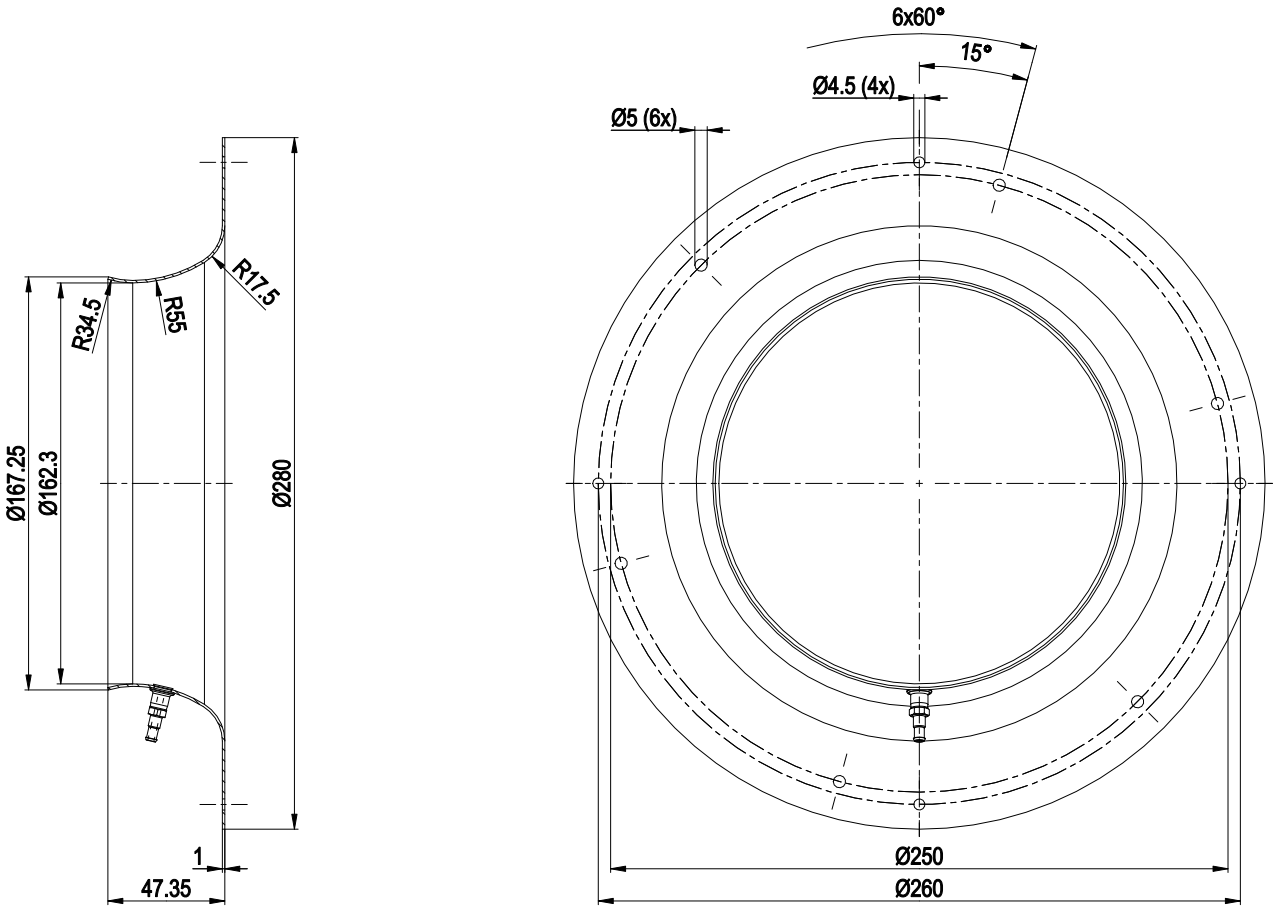
1	Accessory part: inlet ring 96355-2-4013 with pressure tap (k-factor: 76) not included in scope of delivery
2	Max. clearance for screw 16 mm
3	Cable PVC AWG18, 5x crimped ferrules
4	Cable PVC AWG22, 5x crimped ferrules

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Accessory part



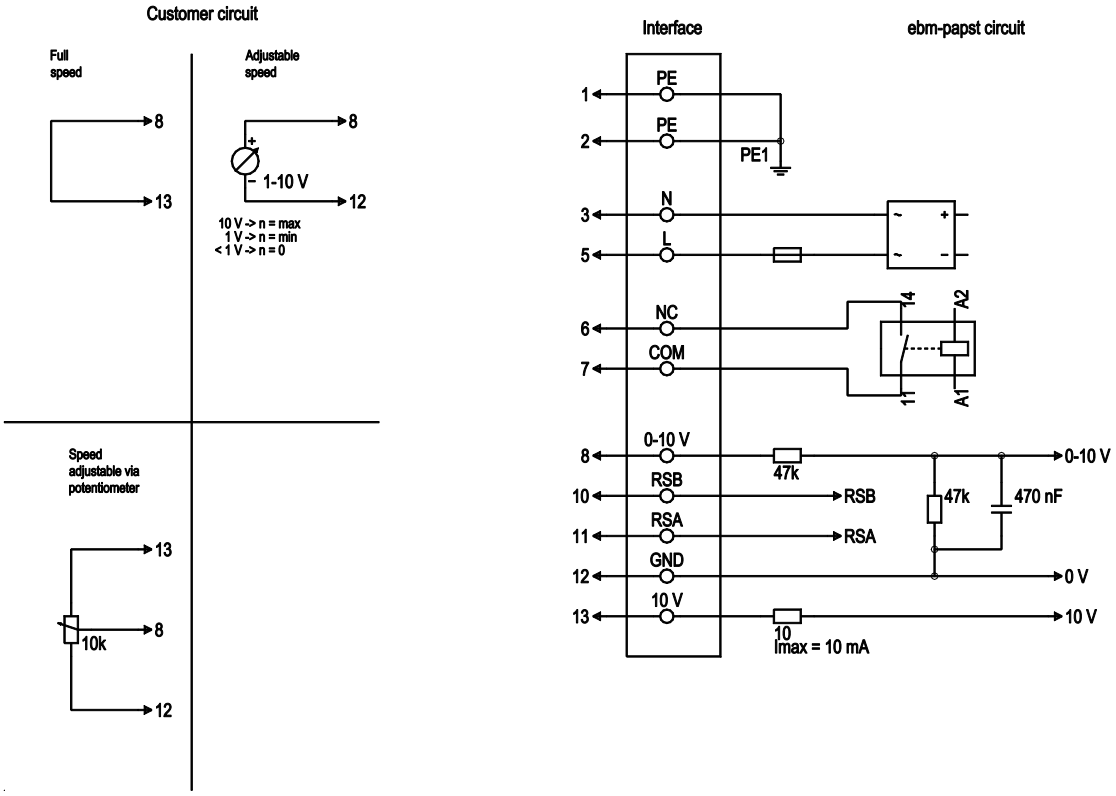
Inlet ring 96355-2-4013 with pressure tap (k-factor: 76)

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Connection diagram



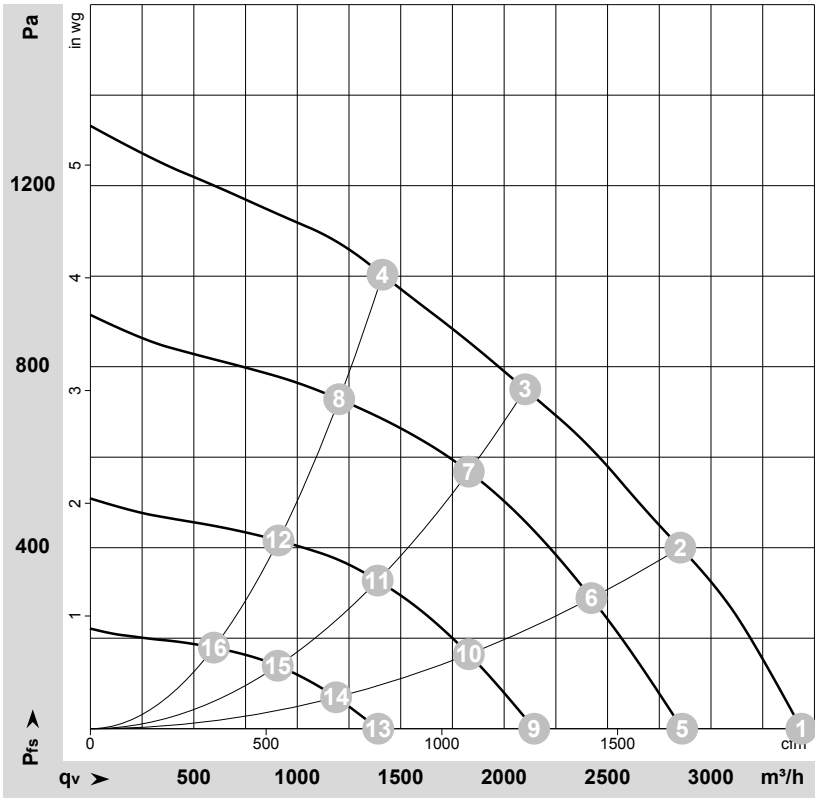
No.	Conn.	Designation	Color	Function/assignment
1	1, 2	PE	green/yellow	Protective earth
1	3	N	blue	Power supply, neutral conductor, 50/60 Hz
1	5	L	black	Power supply, phase, 50/60 Hz
1	6	NC	white 1	Status relay, floating status contact; break for failure, contact rating 250 VAC / 2A (AC1) / min. 10 mA, basic insulation on supply side and reinforced insulation on control interface side
1	7	COM	white 2	Status relay, floating status contact; common connection, contact rating 250 VAC / 2A (AC1) / min. 10 mA, basic insulation on supply side and reinforced insulation on control interface side
2	8	0-10V	yellow	Analog input (set value); 0-10 V; Ri = 100 kΩ; adjustable curve
2	10	RSB	brown	RS485 interface for MODBUS, RSB
2	11	RSA	white	RS485 interface for MODBUS, RSA
2	12	GND	blue	Reference ground for control interface, SELV
2	13	+10V	red	Fixed voltage output 10 VDC, +10 V ±3%; max. 10 mA; short-circuit-proof; power supply for external devices (e.g. pot)

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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-174661-1

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}	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	3645	627	2.74	80	87	3435	0	2025	0.00
2	230	50	3490	731	3.19	76	82	2850	400	1680	1.61
3	230	50	3450	750	3.30	73	78	2100	750	1235	3.01
4	230	50	3500	720	3.15	76	82	1410	1000	830	4.01
5	230	50	3035	369	1.64	76	83	2860	0	1685	0.00
6	230	50	2975	454	2.01	73	78	2420	289	1425	1.16
7	230	50	2960	477	2.10	71	76	1830	568	1075	2.28
8	230	50	2980	449	1.99	72	77	1205	728	710	2.92
9	230	50	2290	172	0.79	69	76	2145	0	1260	0.00
10	230	50	2260	210	0.95	66	72	1830	166	1075	0.67
11	230	50	2250	225	1.01	64	69	1390	329	820	1.32
12	230	50	2265	211	0.96	65	71	910	416	535	1.67
13	230	50	1510	64	0.37	58	65	1390	0	820	0.00
14	230	50	1490	75	0.41	55	63	1190	70	700	0.28
15	230	50	1485	79	0.42	52	59	905	140	535	0.56
16	230	50	1490	75	0.41	53	59	595	179	350	0.72

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

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