

KARTA KATALOGOWA

R3G280-RR04-I1

Wentylator promieniowy EC RadiCal, łopatki zakrzywione do tyłu, jednostronnie ssący

Producent: ebm-papst



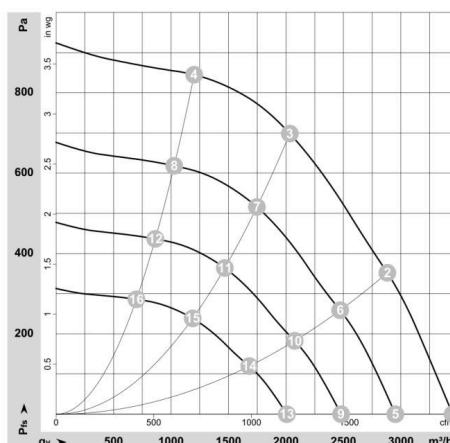
Dane znamionowe	
Napięcie znamionowe	1~ 230 V (200...277 V)
Częstotliwość	50/60 Hz
Prędkość obrotowa	2900 obr/min
Pobór mocy	660 W
Pobór prądu	2,9 A
Maks. wydajność	3450 m³/h
Maks. ciśnienie statyczne	920 Pa
Temperatura otoczenia	-25...+60 °C
Regulacja obrotów	0-10 V / PWM, MODBUS RTU

Budowa	
Wielkość	280 mm
Silnik	M3G084-DF
Materiał wirnika	tworzywo PP
Obudowa elektroniki	odlew aluminiowy
Liczba łopatek	6
Kierunek obrotów	w prawo, patrząc na wirnik
Stopień ochrony	IP55
Klasa izolacji	F
Zabezpieczenie silnika	wyłącznik termiczny, samoczynny powrót, podłączony wewnętrznie
Łożyskowanie	kulkowe
Masa	4,66 kg

Dane ErP (UE 327/2011)	
Sprawność całkowita	66,6 %
Przepływ w pkt. optymalnym	2100 m³/h
Przyrost ciśnienia	682 Pa
Regulacja prędkości (ErP)	tak

Charakterystyka przepływowa (50 Hz)

Curves: Air performance 50 Hz



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

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Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Inlet 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.

Dane na okładce wg karty katalogowej producenta ebm-papst (oryginał na kolejnych stronach).
Wartości przy maksymalnym obciążeniu; producent zastrzega możliwość zmian.

Dobór, wycena i dostawa – zapytaj LUFTBERG

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EC centrifugal fan - RadiCal

backward-curved, single-intake



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Nominal data

Type	R3G280-RR04-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	2900
Power consumption	W	660
Current draw	A	2.9
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}	%	66.6		49.6	
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			0.65	
09 Air flow q_v	m³/h			2100	
09 Pressure increase p_{fs}	Pa			682	
10 Speed (rpm) n	min ⁻¹			2905	
11 Specific ratio*				1.01	

Data obtained at optimum efficiency level.

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

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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).

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Technical description

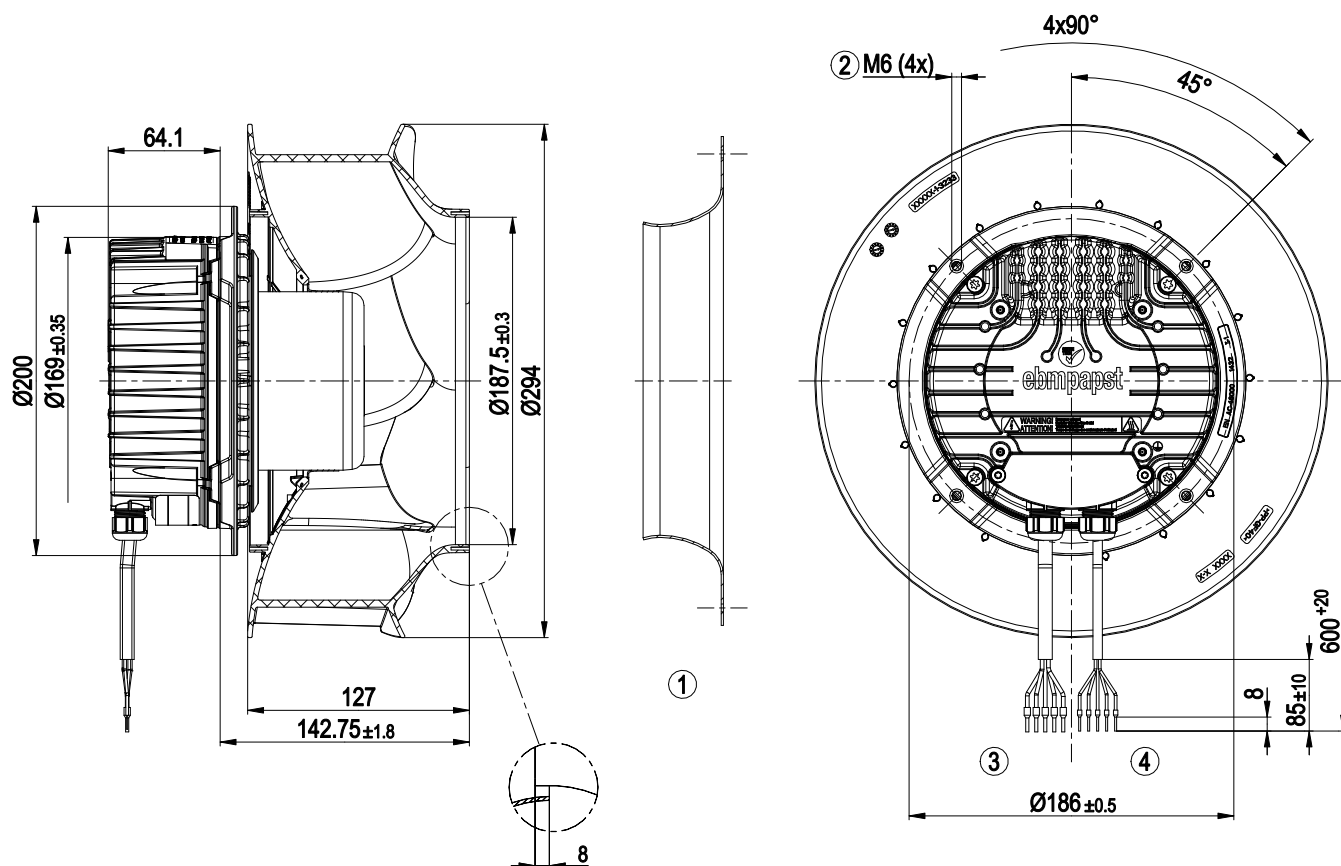
Weight	4.66 kg
Size	280 mm
Motor size	84
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	PP plastic
Number of blades	6
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP55
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H1
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 supply - 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 switch auto reset, 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 60335-1; EN 61800-5-1; CE
Approval	CSA C22.2 No. 77 + CAN/CSA-E60730-1; EAC; UL 1004-7 + 60730-1
Comment	Maximum permissible operating altitude 4000 m above sea level according to DIN 61800-5-1_2008_Sec. 4.3.6.4.1 overvoltage category II. Up to 2000 m above sea level, overvoltage category III applies.

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Product drawing



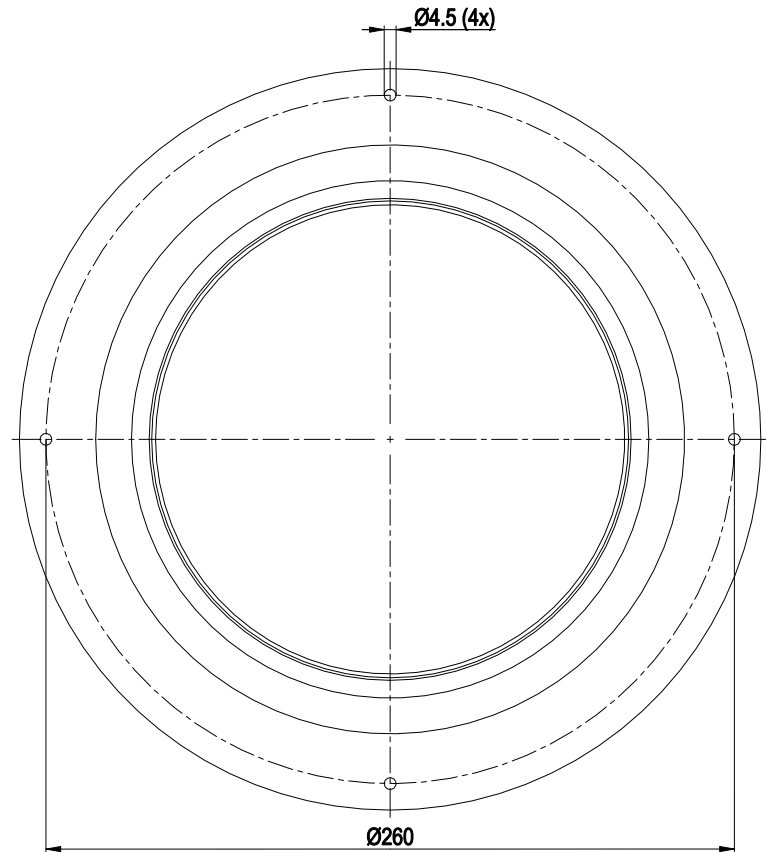
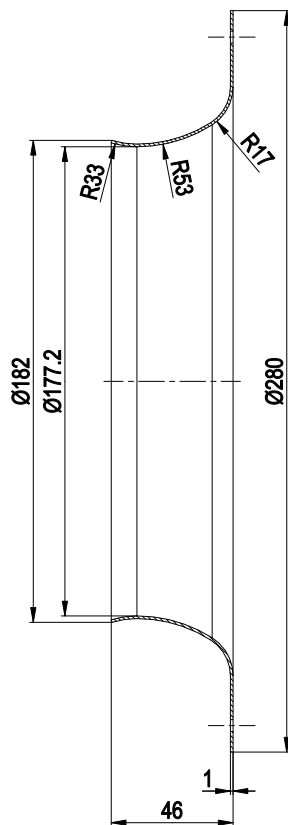
1	Accessory part: inlet ring 28000-2-4013 not included in scope of delivery
2	Max. clearance for screw 16 mm
3	Cable PVC AWG18 5x wire-end ferrule
4	Cable PVC AWG22 5x wire-end ferrule

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Accessory part



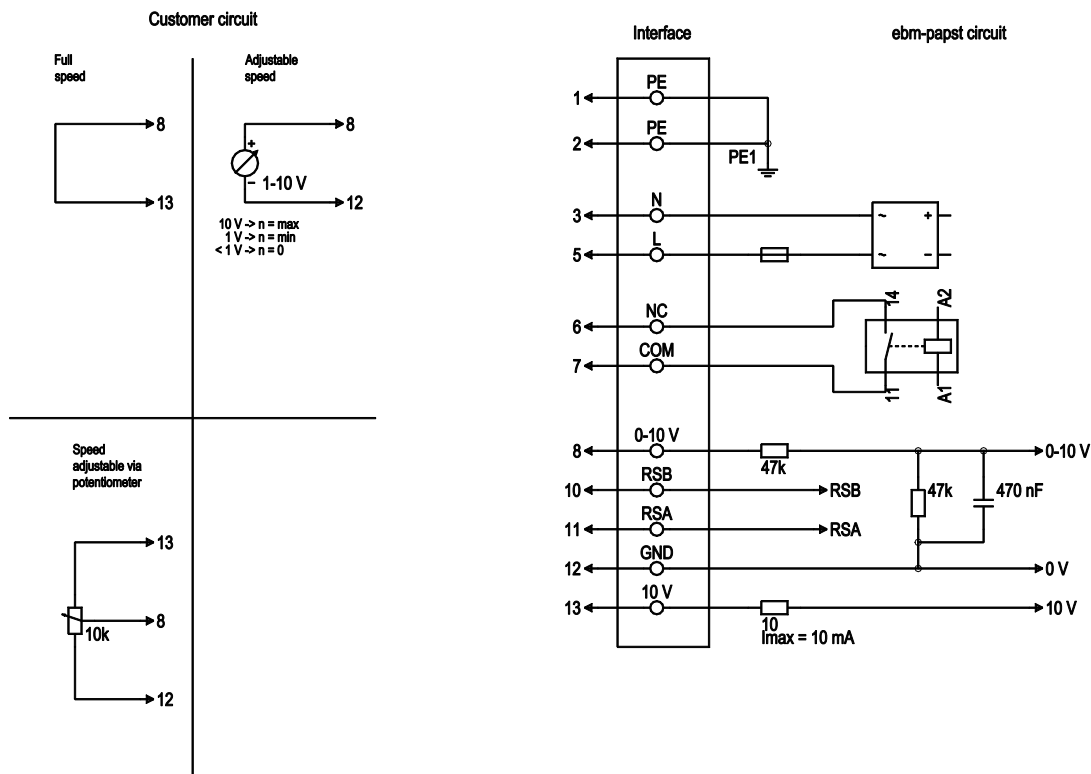
Inlet ring 28000-2-4013

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Connection diagram



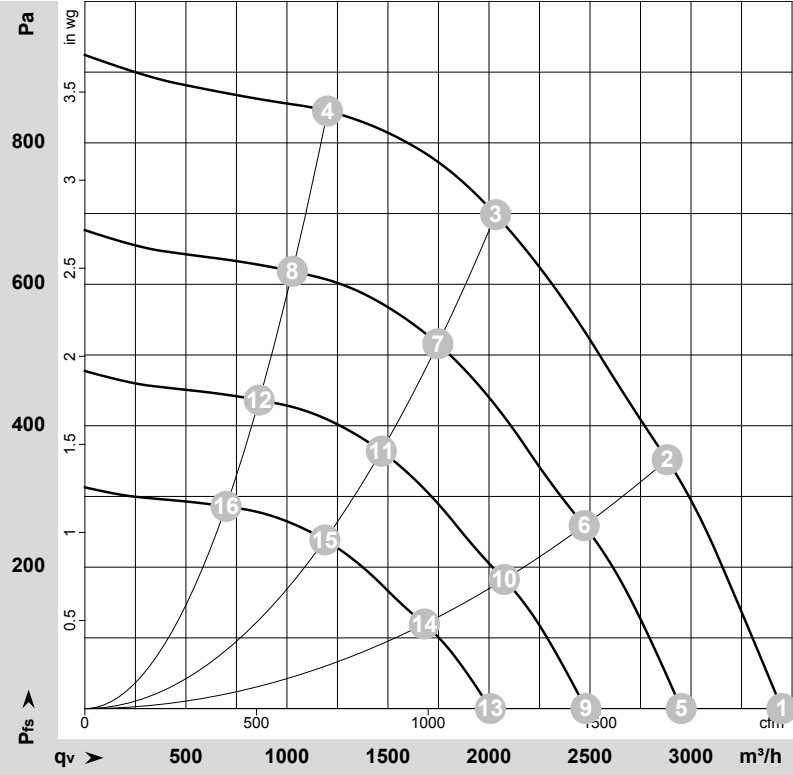
No.	Conn.	Designation	Color	Function/assignment
1	1, 2	PE	green/yellow	Protective earth
1	3	N	blue	Power supply, neutral conductor, 50/60 Hz
1	5	L	black	Power supply, phase, 50/60 Hz
1	6	NC	white 1	Status relay, floating status contact; break for failure, contact rating 250 VAC / 2A (AC1) / min. 10 mA, 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; R _i = 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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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)	m³/h	Pa	cfm	in. wg
1	230	50	2900	487	2.18	79	86	3450	0	2030	0.00
2	230	50	2900	604	2.67	73	81	2880	350	1695	1.41
3	230	50	2900	660	2.90	68	76	2035	700	1195	2.81
4	230	50	2900	571	2.53	74	81	1200	850	705	3.41
5	230	50	2500	305	1.37	75	82	2950	0	1735	0.00
6	230	50	2500	381	1.69	69	77	2470	259	1455	1.04
7	230	50	2500	417	1.84	64	72	1745	517	1030	2.08
8	230	50	2500	357	1.58	70	77	1025	619	605	2.49
9	230	50	2100	181	0.81	70	78	2480	0	1460	0.00
10	230	50	2100	226	1.00	65	73	2075	183	1220	0.73
11	230	50	2100	247	1.09	60	67	1470	365	865	1.47
12	230	50	2100	212	0.94	65	73	865	437	510	1.75
13	230	50	1700	96	0.43	65	72	2005	0	1180	0.00
14	230	50	1700	120	0.53	60	67	1680	120	990	0.48
15	230	50	1700	131	0.58	54	62	1190	239	700	0.96
16	230	50	1700	112	0.50	60	67	700	286	410	1.15

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