

KARTA KATALOGOWA

R3G450-FS07-H1

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

Producent: ebm-papst



Zdjęcie poglądowe

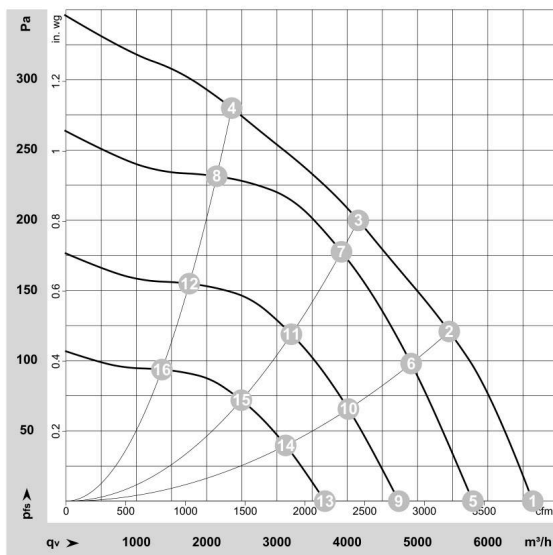
Dane znamionowe	
Napięcie znamionowe	1~ 230 V (200...277 V)
Częstotliwość	50/60 Hz
Prędkość obrotowa	1150 obr/min
Pobór mocy	385 W
Pobór prądu	1,7 A
Maks. wydajność	6640 m³/h
Maks. ciśnienie statyczne	350 Pa
Temperatura otoczenia	-25...+40 °C

Dane ErP (UE 327/2011)	
Sprawność całkowita	67,6 %
Przepływ w pkt. optymalnym	4000 m³/h
Przyrost ciśnienia	210 Pa
Regulacja obrotów	tak (0-10 V / PWM / MODBUS)

Budowa	
Średnica wirnika	450 mm
Materiał wirnika	tworzywo PP
Liczba łopatek	6
Stopień ochrony	IP55
Klasa izolacji	F
Masa	6,6 kg

Charakterystyka przepływowa

Curves: Air performance 50 Hz



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

Measurement: LU-215263-1

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.

Dane na podstawie karty producenta ebm-papst (oryginał na kolejnych stronach).

Wartości znamionowe dla punktu maksymalnego obciążenia; producent zastrzega możliwość zmian.

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R3G450-FS07-H1

EC centrifugal fan - RadiCal

backward-curved, single-intake

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General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen

Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	R3G450-FS07-H1	
Motor	M3G084-FA	

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	1150-1260
Power consumption	W	385
Current draw	A	1.7
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	40

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}	%	67.6	47.1	09 Power consumption P_{ed}	kW	0.38
02 Measurement category		A		09 Air flow q_v	m³/h	4000
03 Efficiency category		Static		09 Pressure increase p_{fs}	Pa	210
04 Efficiency grade N		82.5	62	10 Speed (rpm) n	min ⁻¹	1165
05 Variable speed drive		Yes		11 Specific ratio*		1.00

Data obtained at optimum efficiency level.

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

LU-215263

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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backward-curved, single-intake

Technical description

Weight	6.6 kg
Size	450 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 the mains - Thermal overload protection for electronics/motor - Line undervoltage / phase failure detection
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 assignment	I; If a protective earth is connected by the customer This component for installation may have several local protection classes. This information relates to this component's basic design. The final protection class is based on the component's intended installation and connection.
Conformity with standards	EN 61800-5-1; CE
Approval	CSA C22.2 No. 77 + CAN/CSA-E60730-1; EAC; UL 1004-7 + 60730-1

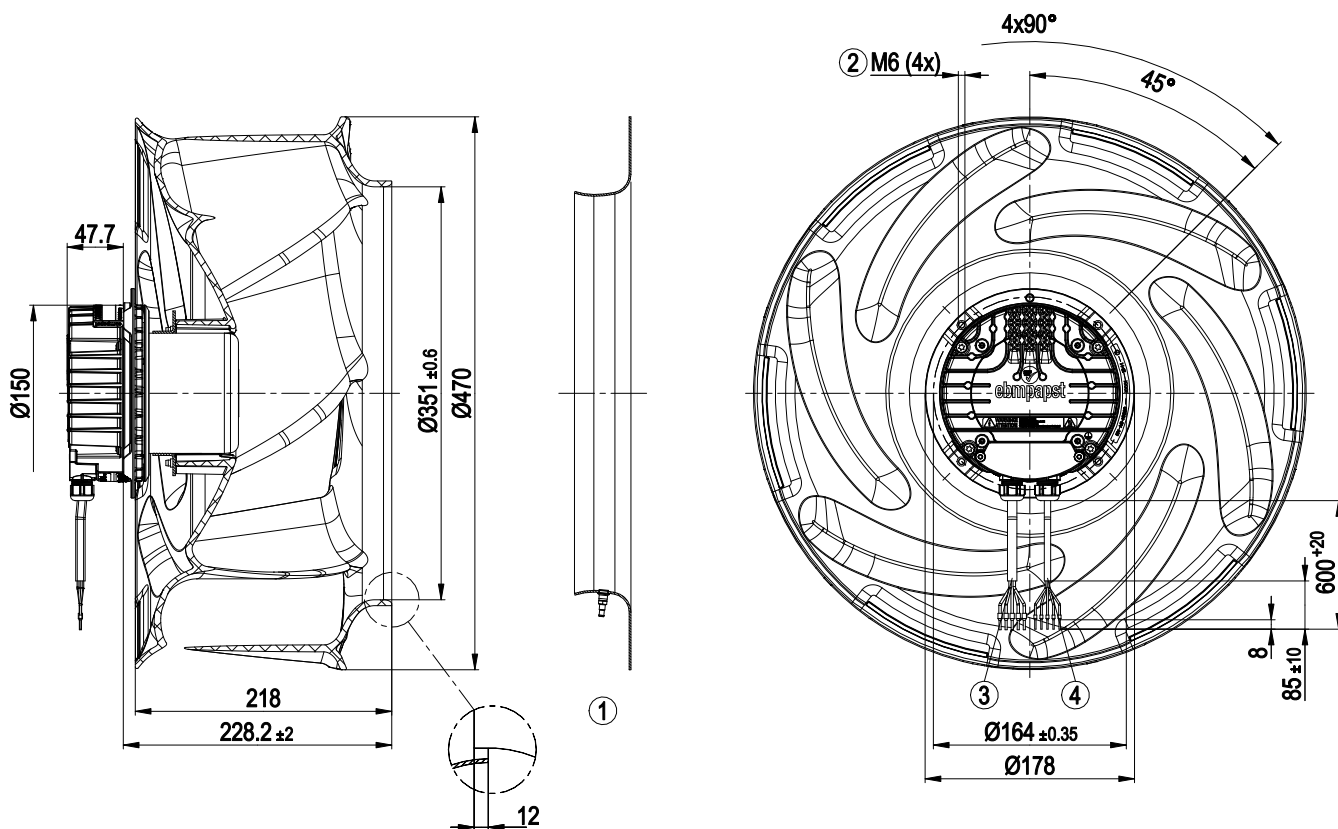


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Product drawing



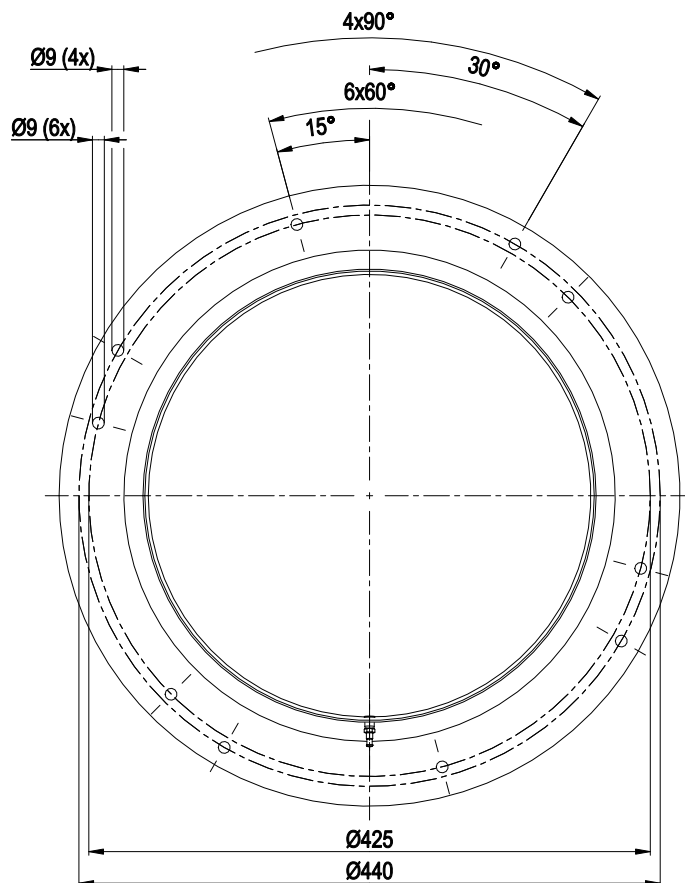
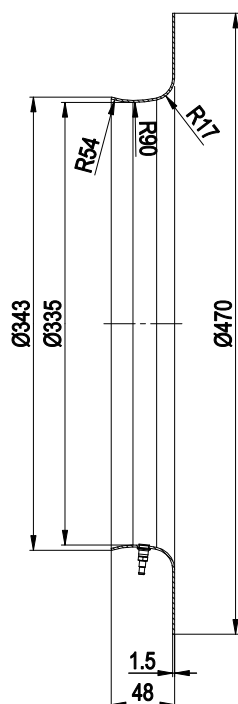
1	Accessory part: Inlet ring 45355-2-4013 with pressure tap (k-factor: 250) (not included in scope of delivery)
2	Max. clearance for screw 16 mm
3	Cable PVC AWG18
	5x wire-end ferrule
4	Cable PVC AWG22
5	5x wire-end ferrule

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Accessory part



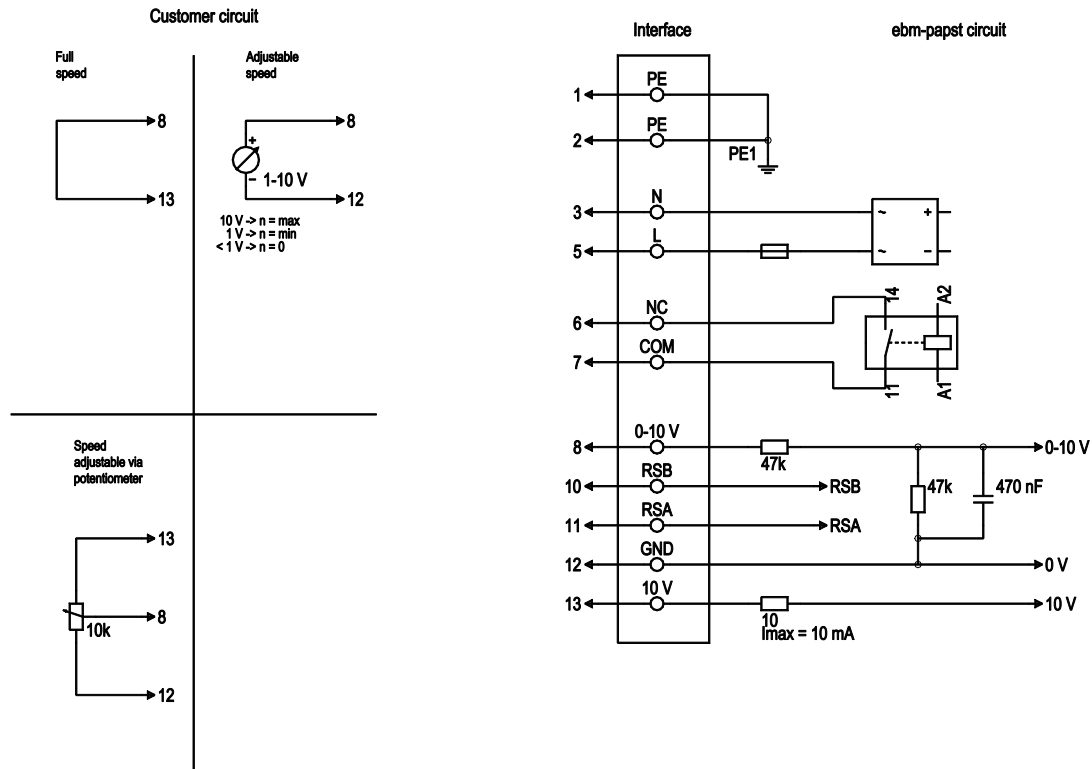
Inlet ring 45355-2-4013 with pressure tap (k-factor: 250)

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Connection diagram



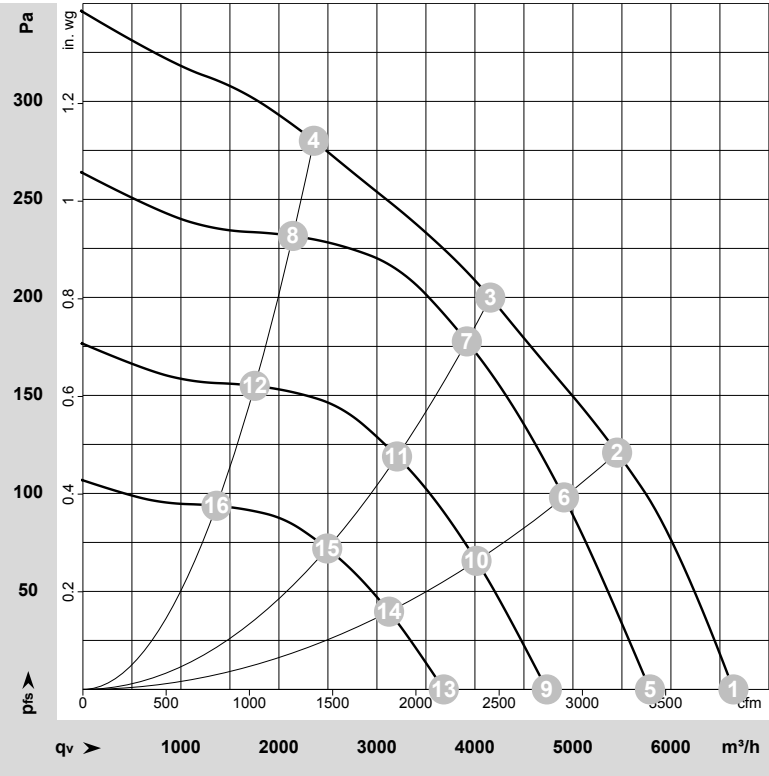
No.	Conn.	Designation	Color	Function/assignment
1	1, 2	PE	green/yellow	Protective earth
1	3	N	blue	Power supply, neutral conductor, 50/60 Hz
1	5	L	black	Power supply, phase, 50/60 Hz
1	6	NC	white 1	Status relay, floating status contact; break for failure, contact rating 250 VAC / 2A (AC1) / min. 10 mA, 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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Measured values

	Wired	U	f	n	P _{ed}	I	LpA _{in}	LwA _{in}	LwA _{out}	q _v	p _{fs}	q _v	p _{fs}
		V	Hz	min ⁻¹	W	A	dB(A)	dB(A)	dB(A)	m ³ /h	Pa	cfm	in. wg
1	1~	230	50	1260	283	1.26	67	75	80	6640	0	3905	0.00
2	1~	230	50	1220	385	1.70	63	72	78	5450	120	3210	0.48
3	1~	230	50	1150	385	1.70	59	67	72	4155	200	2445	0.80
4	1~	230	50	1210	385	1.70	62	70	73	2355	280	1385	1.12
5	1~	230	50	1100	187	0.83	63	72	77	5785	0	3405	0.00
6	1~	230	50	1100	279	1.23	60	69	75	4910	99	2890	0.40
7	1~	230	50	1100	322	1.41	57	66	71	3920	178	2305	0.71
8	1~	230	50	1100	290	1.27	59	68	71	2145	232	1260	0.93
9	1~	230	50	900	103	0.46	58	67	72	4735	0	2785	0.00
10	1~	230	50	900	153	0.67	55	64	70	4015	66	2365	0.26
11	1~	230	50	900	176	0.77	52	61	66	3205	119	1885	0.48
12	1~	230	50	900	159	0.70	54	63	66	1755	155	1030	0.62
13	1~	230	50	700	48	0.21	52	60	65	3680	0	2165	0.00
14	1~	230	50	700	72	0.32	49	58	64	3125	40	1840	0.16
15	1~	230	50	700	83	0.36	46	54	59	2495	72	1465	0.29
16	1~	230	50	700	75	0.33	48	56	60	1365	94	805	0.38

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
LwA_{out} = Sound power level outlet side · q_v = Air flow · p_{fs} = Pressure increase

