

KARTA KATALOGOWA

R3G310-AX52-01

Wentylator promieniowy EC, łopatki zakrzywione do tyłu, jednostronnie ssący

Producent: ebm-papst



Dane znamionowe

Napięcie znamionowe	3~ 400 V (380...480 V)
Częstotliwość	50/60 Hz
Prędkość obrotowa	2580 obr/min
Pobór mocy	1000 W
Pobór prądu	1,63 A
Maks. wydajność	4540 m³/h
Maks. ciśnienie statyczne	900 Pa
Temperatura otoczenia	-25...+60 °C

Budowa

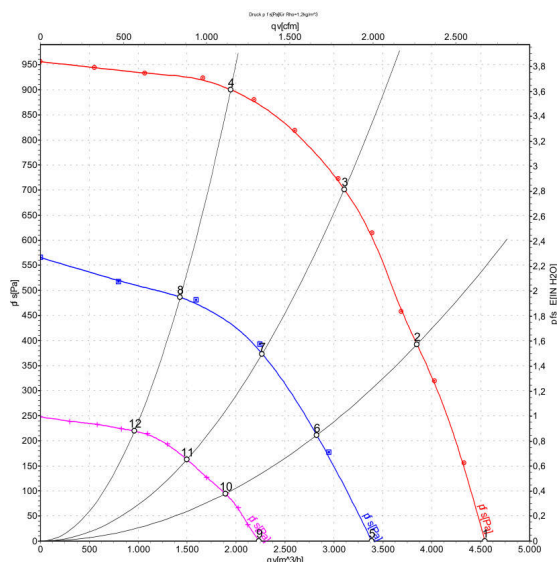
Średnica wirnika	310 mm
Materiał wirnika	blacha aluminiowa
Liczba łopatek	7
Stopień ochrony	IP54
Klasa izolacji	B
Zabezpieczenie silnika	termik (TOP)
Masa	8,8 kg

Dane ErP (UE 327/2011)

Sprawność całkowita	63,3 %
Przepływ w pkt. optymalnym	3050 m³/h
Przyrost ciśnienia	681 Pa
Regulacja obrotów	tak (0-10 V / PWM)

Charakterystyka przepływowa

Curves: Air performance 50 Hz


 Measurement: LU-106400-1
 Measurement: LU-108542-1
 Measurement: LU-106401-1

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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R3G310-AX52-01

EC centrifugal fan

backward-curved, single-intake



Nominal data

Type	R3G310-AX52-01	
Motor	M3G112-EA	
Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min ⁻¹	2580
Power consumption	W	1000
Current draw	A	1.63
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 ErP Directive

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	63.3	51.4
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		73.9	62
05 Variable speed drive		Yes	

Data obtained at optimum efficiency level.
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

09 Power consumption P_{ed}	kW	0.98
09 Air flow q_v	m³/h	3050
09 Pressure increase p_{fs}	Pa	681
10 Speed (rpm) n	min ⁻¹	2590
11 Specific ratio*		1.01

* Specific ratio = $1 + p_{fs} / 100\,000\text{ Pa}$ LU-106400



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Technical description

Weight	8.8 kg
Fan size	310 mm
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	Sheet aluminum
Number of blades	7
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	F4-1
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 - Output 20 VDC max. 50 mA - Output for slave 0-10 V - Input for sensor 0-10 V or 4-20 mA - Alarm relay - Integrated PID controller - Motor current limitation - PFC, passive - RS-485 ebmBUS - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from supply - Thermal overload protection for electronics/motor - Undervoltage / phase failure detection
EMC immunity to interference	According to EN 61000-6-2
EMC circuit feedback	According to EN 61000-3-2/3
EMC interference emission	According to EN 61000-6-3
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	Via terminal box
Motor protection	Thermal overload protector (TOP) internally connected
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1; CE
Approval	CCC; EAC; UL 1004-1

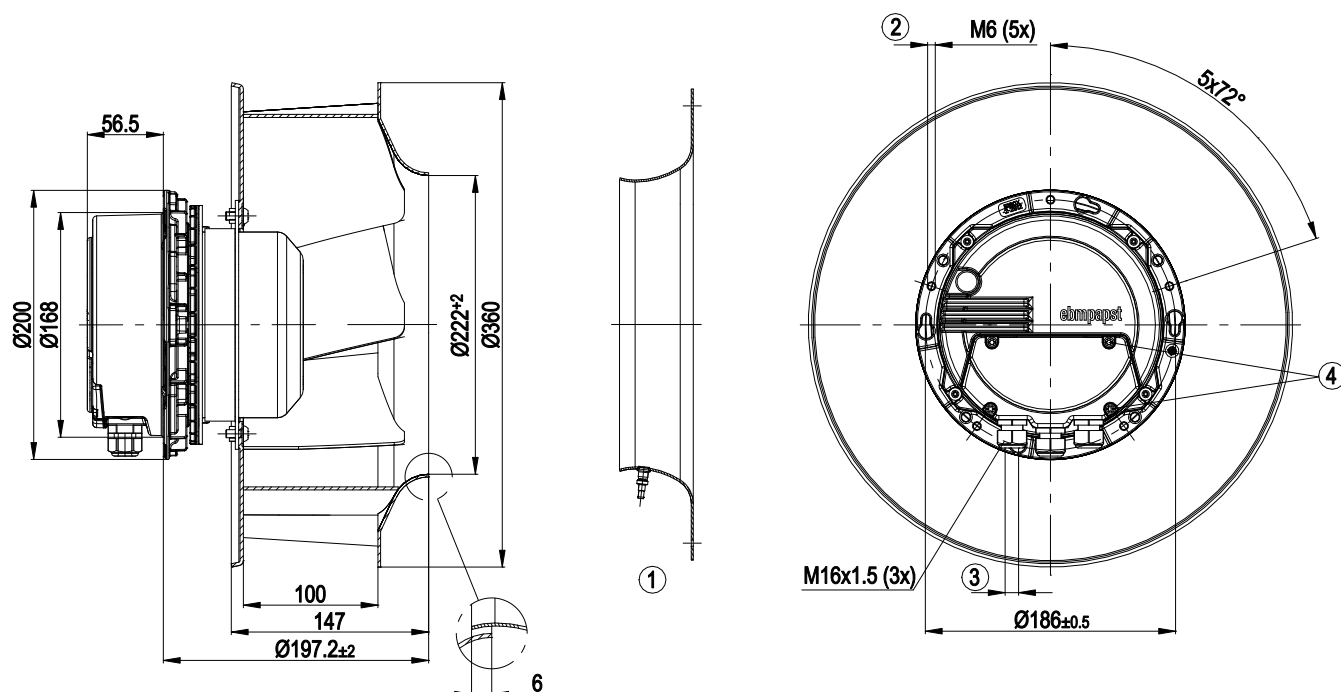


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Product drawing



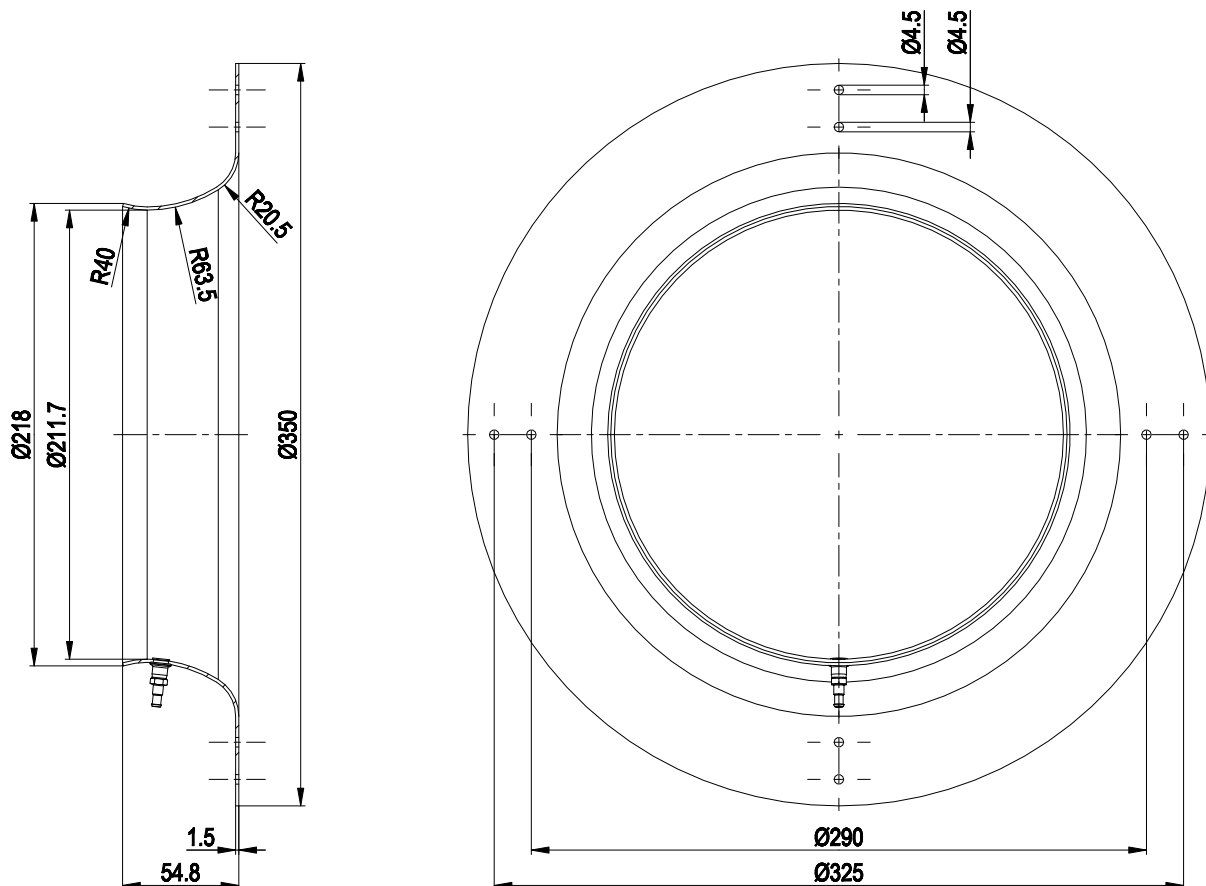
1	Accessory part: Inlet ring 31575-2-4013 not included in scope of delivery
2	Max. clearance for screw 16 mm
3	Cable diameter min. 4 mm, max. 10 mm; tightening torque 2.5 ± 0.4 Nm
4	Tightening torque 3.5 ± 0.5 Nm

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Accessory part



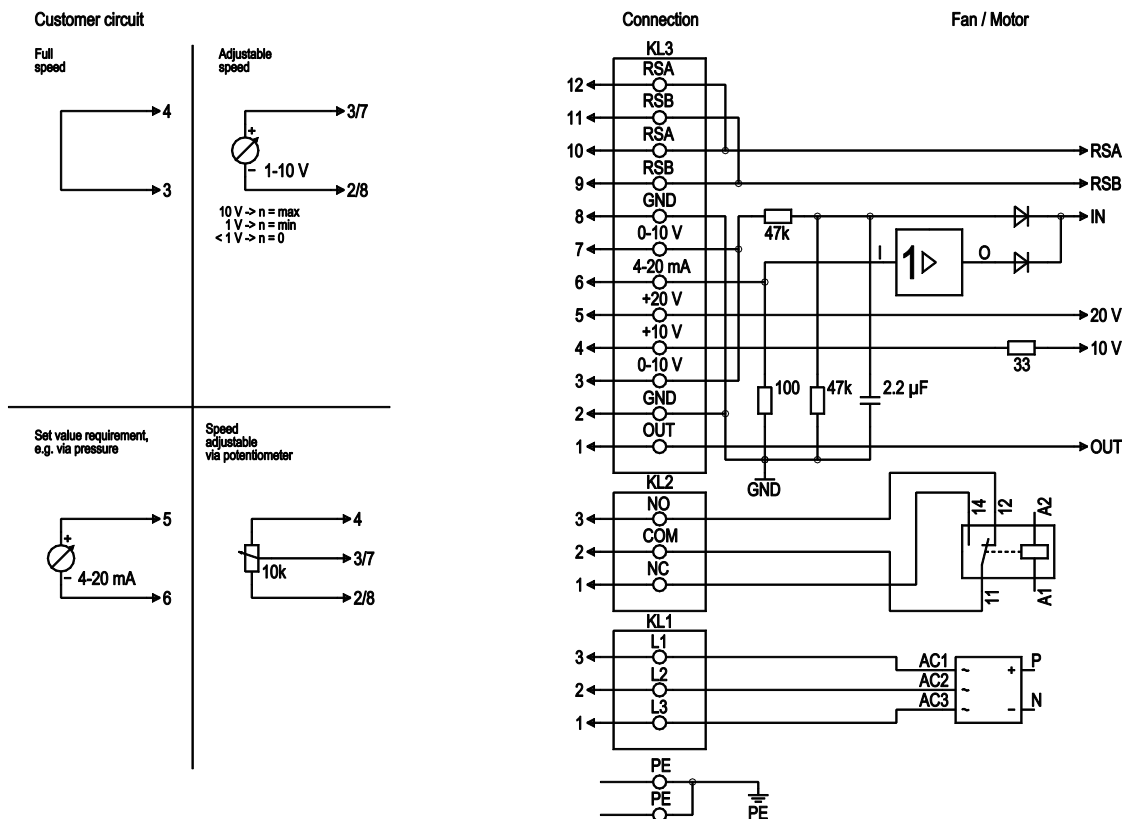
Inlet ring 31575-2-4013 with pressure tap not included in scope of delivery

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Connection diagram



No.	Conn.	Designation	Function/assignment
PE		PE	Protective earth terminal
KL1	1, 2, 3	L1, L2, L3	Power supply 50/60 Hz
KL2	1	NC	Floating status contact, break for failure
KL2	2	COM	floating status contact, changeover contact, common connection (2 A, max. 250 VAC, min. 10 mA, AC1)
KL2	3	NO	Floating status contact, make for failure
KL3	1	OUT	Analog output, 0-10 VDC, max. 3 mA, SELV, output of current motor modulation level: 1 V corresponds to 10% modulation level. 10 V corresponds to 100% modulation level.
KL3	2, 8	GND	Reference ground for control interface, SELV
KL3	3, 7	0-10 V	Use control / current sensor value input 0-10 VDC, impedance 100 kΩ only as alternative to 4-20 mA input, SELV
KL3	4	+10 V	Voltage output 10 VDC (±3%), max. 10 mA, power supply for external devices (e.g. potentiometer), SELV
KL3	5	+20 V	Voltage output 20 VDC (+25%/-10%), max. 50 mA, power supply for external devices (e.g. sensors), SELV
KL3	6	4-20 mA	Use control / current sensor value input 4-20 mA, impedance 100 Ω only as alternative to 0-10 V input, SELV
KL3	9, 11	RSB	RS485 interface for ebmBUS, RSB, SELV
KL3	10, 12	RSA	RS485 interface for ebmBUS, RSA, SELV

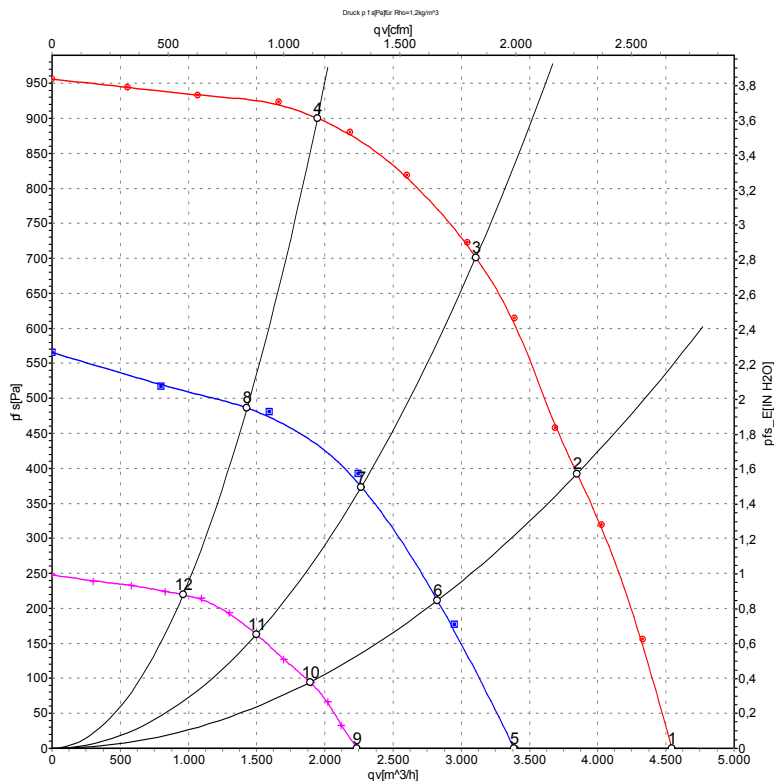


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Measured values

	U	f	n	P _{ed}	I	LpA _{in}	LwA _{in}	LwA _{out}	qv	P _{fs}	qv	P _{fs}
	V	Hz	min ⁻¹	W	A	dB(A)	dB(A)	dB(A)	m³/h	Pa	CFM	inH2O
1	400	50	2580	669	1.17	82	88	92	4540	0	2675	0.00
2	400	50	2580	862	1.46	75	81	87	3850	400	2265	1.61
3	400	50	2580	1000	1.63	70	77	83	3105	700	1830	2.81
4	400	50	2580	907	1.53	72	79	85	1945	900	1145	3.61
5	400	50	1930	288	0.57	73	80	84	3385	0	1995	0.00
6	400	50	1910	348	0.69	67	74	79	2825	216	1665	0.87
7	400	50	1900	396	0.77	63	70	76	2265	386	1335	1.55
8	400	50	1905	360	0.72	65	71	77	1430	489	840	1.96
9	400	50	1305	123	0.28	65	72	76	2235	0	1315	0.00
10	400	50	1305	144	0.33	60	67	72	1890	96	1115	0.39
11	400	50	1305	151	0.34	55	62	68	1495	164	880	0.66
12	400	50	1300	151	0.34	56	62	69	960	220	565	0.88

U = Power supply · 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 · qv = Air flow · p_{fs} = Pressure increase



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