

8300100072
VBS0220RSLES

EC centrifugal fan - RadiCal

backward-curved, single-intake

8300100072 ebmpapst Datasheet
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Amtsgericht (court of registration) Stuttgart · HRA 590344
General partner Elektrobau Muldingen GmbH · Headquarters Muldingen
Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Item	8300100072	
Motor	E06002-23 (M3G060-CD)	
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	2900
Power consumption	W	120
Current draw	A	1.0
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

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Technical description

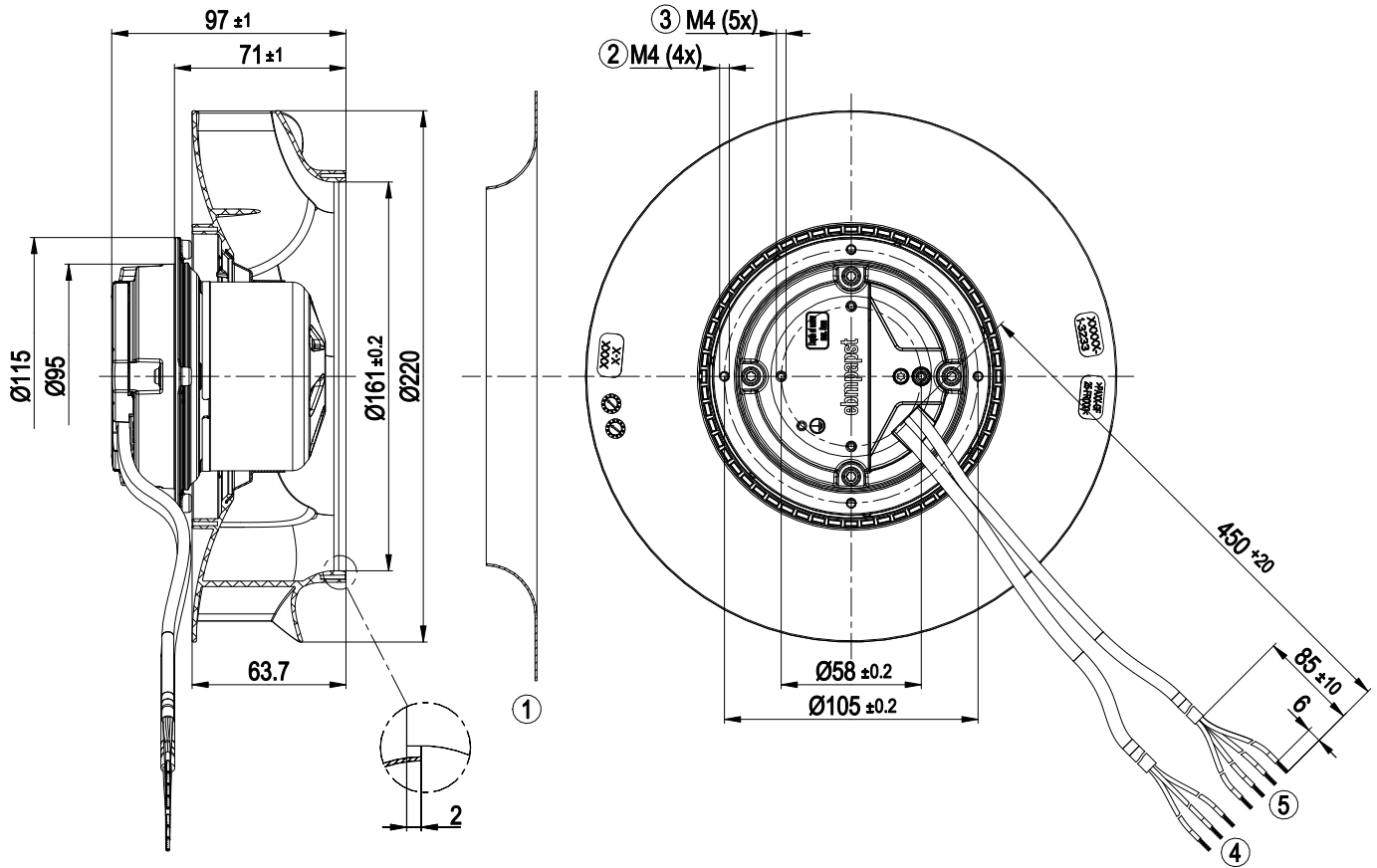
Weight	1.37 kg
Size	220 mm
Motor size	60
Rotor surface	Thick-film passivated
Electronics housing material	Die-cast aluminum
Impeller material	PP plastic
Number of blades	7
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (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
Mode	S1
Motor bearing	Ball bearing
Technical features	<ul style="list-style-type: none">- Output 10 VDC, max. 10 mA- Locked-rotor detection- Tach output- Speed control- 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 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	Electronic motor protection
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 60034-1; EN 60204-1; EN 60335-1; CE
Comment on CE	Ecodesign Directive 2009/125/EC + Fan Directive (EC) No. 327/2011 does not apply, as power consumption <125W.

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Product drawing



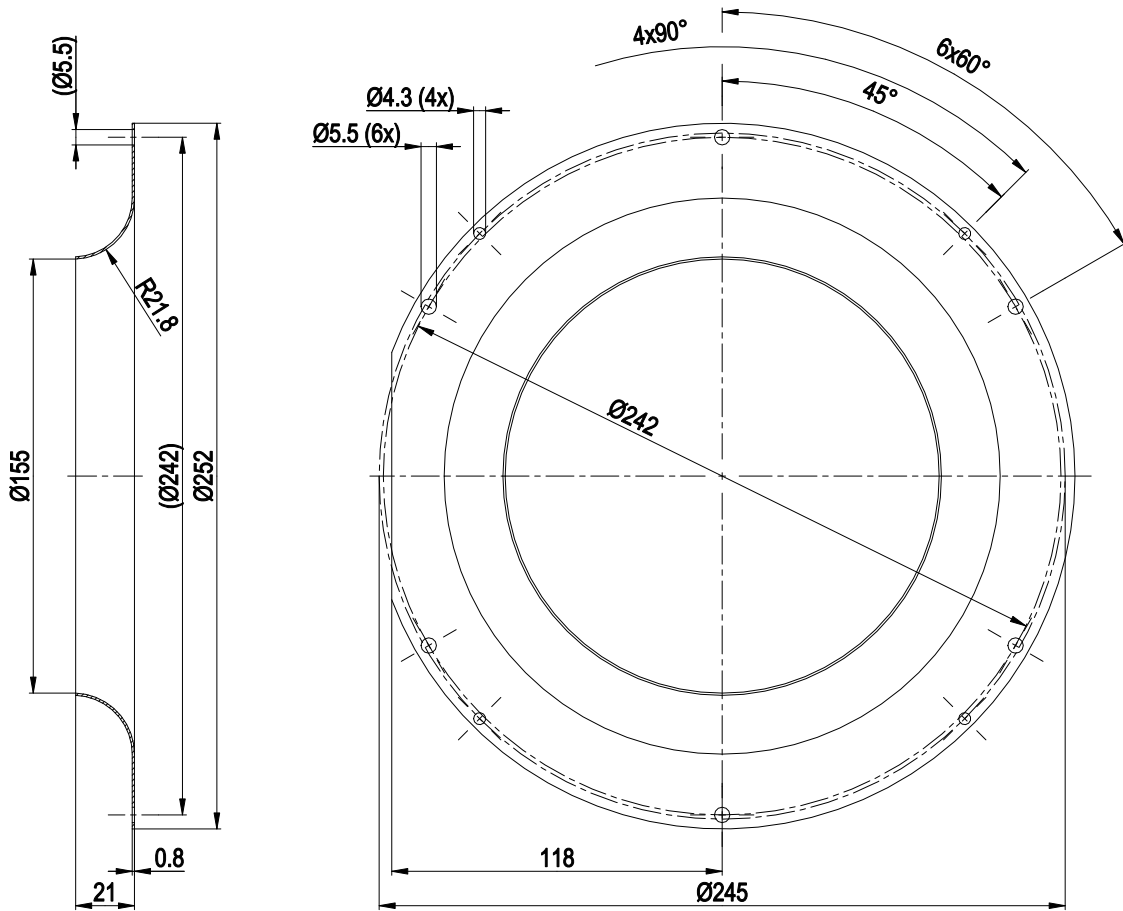
1	Accessory part: Inlet ring 09609-2-4013 (not included in scope of delivery)
2	Max. clearance for screw 6 mm
3	Max. clearance for screw 5 mm
4	Supply line (PWR) PVC AWG20 3x splice
5	Control wire (CTRL) PVC AWG22 4x splice

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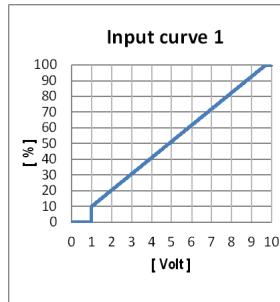
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Accessory part



Inlet ring 09609-2-4013

Connection diagram



No.	Conn.	Designation	Color	Function/assignment
	PWR	L	black	Power supply, phase, see nameplate for voltage range
	PWR	N	blue	Power supply, neutral conductor, see nameplate for voltage range
	PWR	PE	green/yellow	Protective earth
	CTRL	GND	blue	Reference ground for control interface, SELV
	CTRL	IO1	yellow	Factory setting: Analog input 0-10 V/PWM, Ri=100 KΩ, fPWM=1 kHz..10 kHz, Function: Speed set value Characteristic curve parameterizable (see "Input curve 1"), SELV Function parameterizable at the factory (see Optional interface functions table)
	CTRL	IO2	white	Factory setting: Open collector output, Umax=50 VDC, Imax= 10 mA, function: Tach output 1 pulse/revolution, SELV Function parameterizable at factory (see table Optional interface functions)
	CTRL	Vout	red	Voltage output 10 VDC +/-3%, Imax=10 mA Short-circuit-proof, power supply for external devices, SELV

Terminal/plug assignment

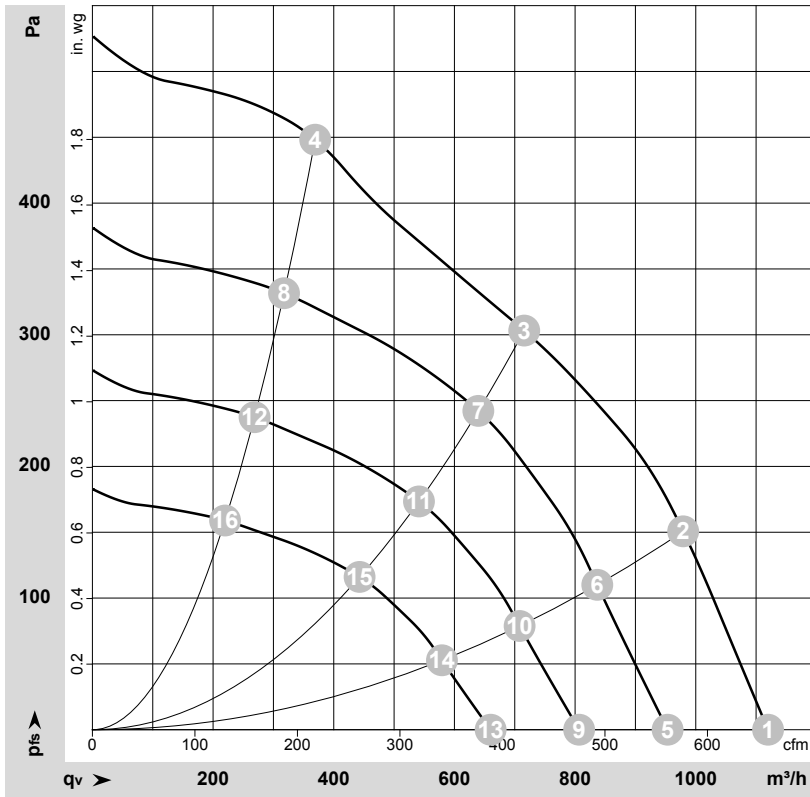
	configurable IO mode	electrical specification					
IO1	◦ Din1 (high active): digital input	active: parameterizable voltage x-30 VDC not active: pin open or parameterizable voltage <x VDC, SELV					
	◦ Ain1 0-10 V/PWM: analog input	RI = 100 kΩ, characteristic curve parameterizable, $f_{\text{PWM}} = 1\text{k}..10\text{kHz}$, SELV					
IO2	◦ Tach out (open collector)	Umax=50 VDC, Imax=10 mA, SELV					
	◦ Diagnostics out (open collector)	Umax=50 VDC, Imax=10 mA, SELV					
	◦ Alarm out (open collector)	Umax=50 VDC, Imax=10 mA, SELV					
	◦ Open collector	Umax=50 VDC, Imax=10 mA, SELV					
Vout	Voltage output	Voltage 10 VDC, SELV					

	INPUT	OUTPUT
source: set value	◦	
switch: parameter set: #1 / #2	◦	
switch: direction of rotation: cw / ccw	◦	
switch: enable/disable input	◦	
configurable function	◦	
signal: tach out		◦
signal: diagnostics out		◦
signal: alarm out		◦
signal: run monitoring		◦
signal: status		◦
signal: configurable function		◦

Basic (B4)
Factory configuration option upon request

◦ Factory configuration option

Curves: Air performance 50 Hz



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

Measurement: LU-213261-1
Date: 2026-06-02
Nozzle: 22010-2-2911

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebmpapst. 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 _e	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	3055	97	0.81	66	74	1120	0	660	0.00
2	1~	230	50	3045	117	0.96	62	70	980	150	575	0.60
3	1~	230	50	2900	120	1.00	60	68	715	300	420	1.20
4	1~	230	50	3030	120	1.00	65	73	370	450	215	1.81
5	1~	230	50	2600	60	0.50	62	70	955	0	560	0.00
6	1~	230	50	2600	73	0.60	58	66	835	110	495	0.44
7	1~	230	50	2600	85	0.70	57	65	640	242	375	0.97
8	1~	230	50	2600	76	0.62	61	70	320	333	185	1.34
9	1~	230	50	2200	36	0.30	58	65	805	0	475	0.00
10	1~	230	50	2200	44	0.36	54	62	710	79	415	0.32
11	1~	230	50	2200	52	0.43	53	61	540	174	320	0.70
12	1~	230	50	2200	46	0.38	57	66	270	238	160	0.96
13	1~	230	50	1800	20	0.17	52	60	660	0	390	0.00
14	1~	230	50	1800	24	0.20	49	57	580	53	340	0.21
15	1~	230	50	1800	28	0.23	48	56	445	116	260	0.47
16	1~	230	50	1800	25	0.21	52	61	220	159	130	0.64

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_e = 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