

8300101052
VBS0206SSLES

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

Item	8300101052	
Motor	E06002-23	
Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Method of obtaining data		ml
Status		prelim.
Speed (rpm)	min ⁻¹	3300
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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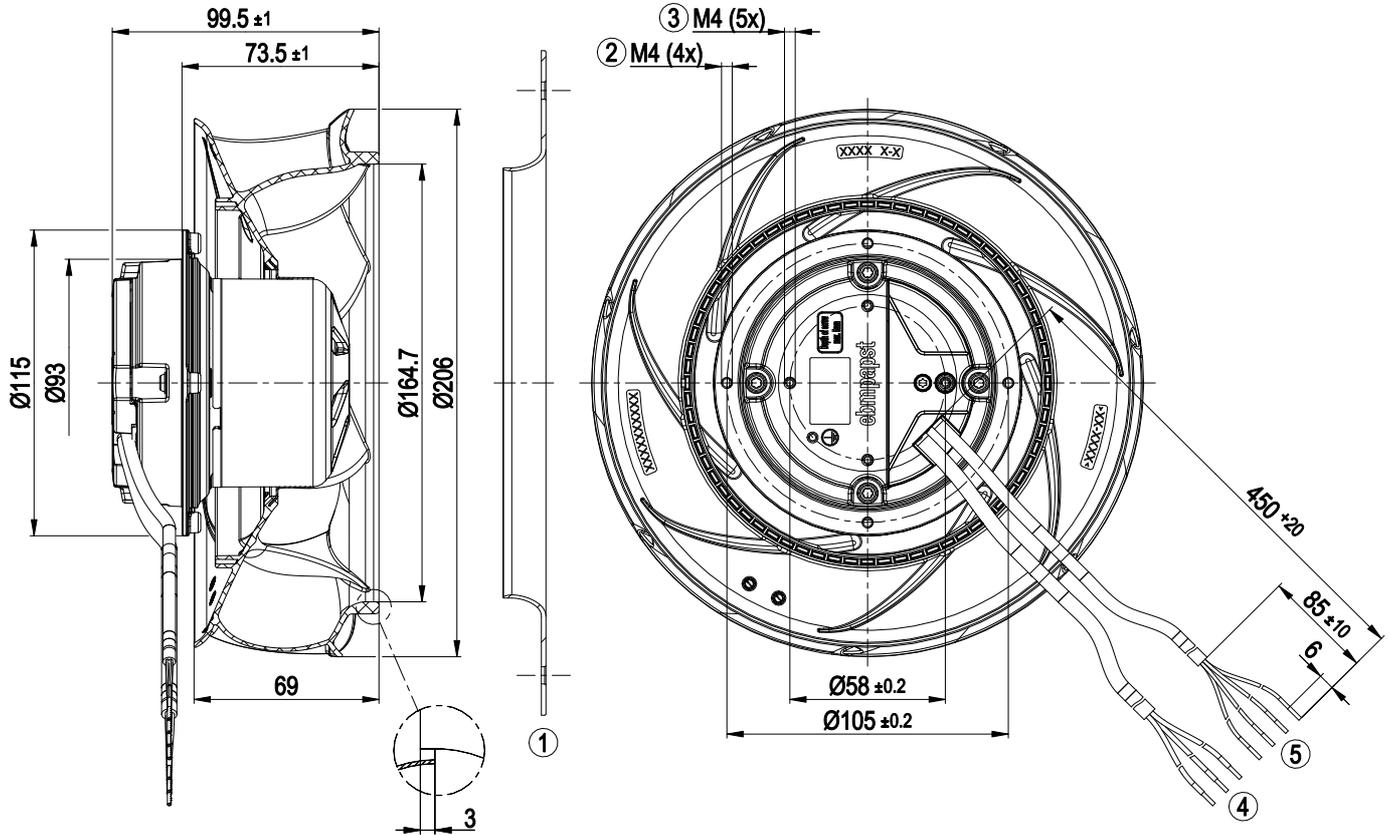
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Technical description

Weight	0.001 kg
Size	206 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; UKCA
Comment on CE	Ecodesign Directive 2009/125/EC + Fan Directive (EC) No. 327/2011 does not apply, as power consumption <125W.

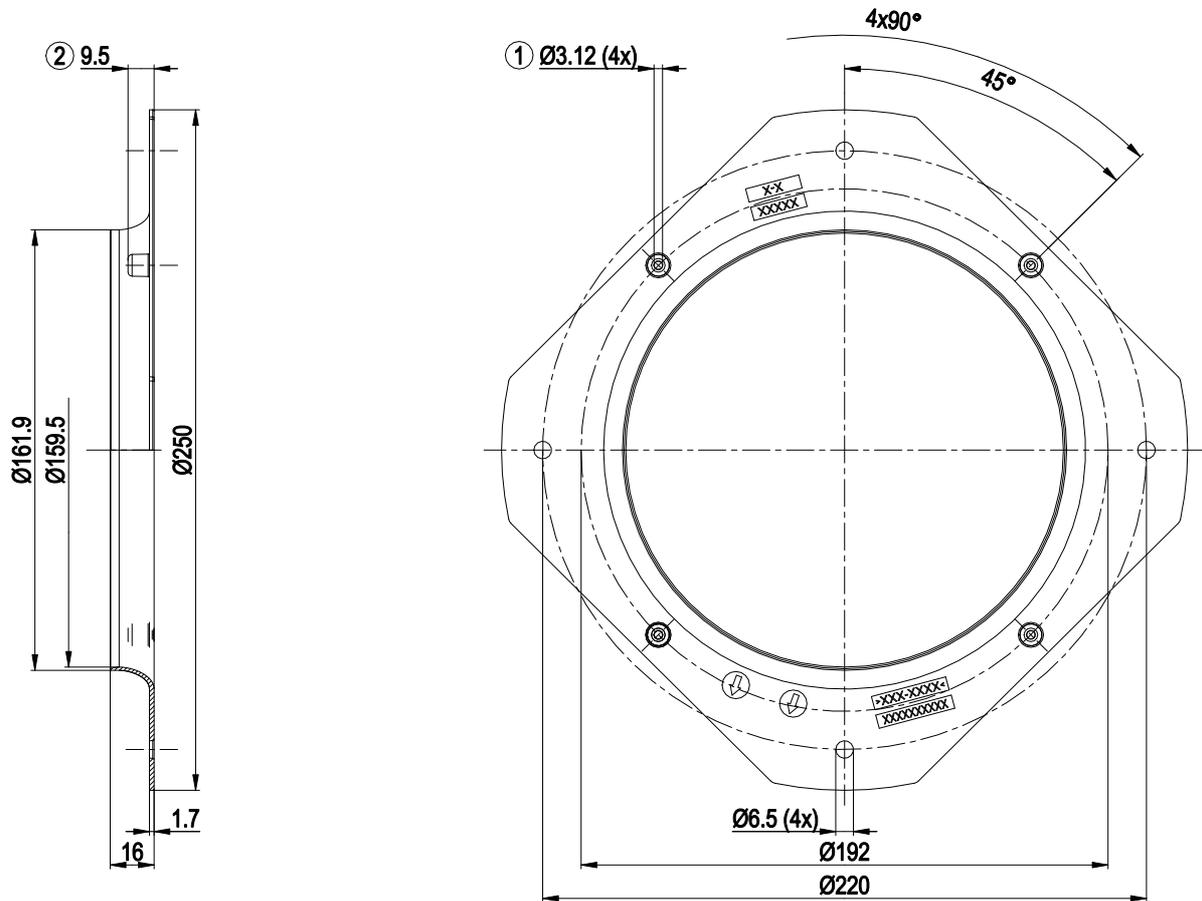


Product drawing



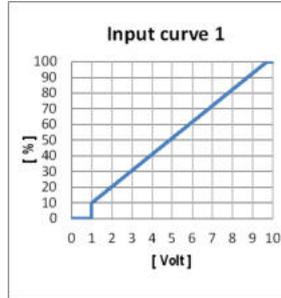
1	Inlet ring 8217118486 not included in scope of delivery
2	Max. clearance for screw 6 mm
3	Max. clearance for screw 5 mm
4	Supply line (PWR) PVC AWG20 3x splice
5	Control wire (CTRL) PVC AWG22 4x splice

Accessory part



-	Inlet ring 8217118486
1	Fastening holes for FlowGrid 8217118542 (not included in scope of delivery) are provided and must be subsequently opened as required
2	Screw-on domes are only permissible for Flowgrid!

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					

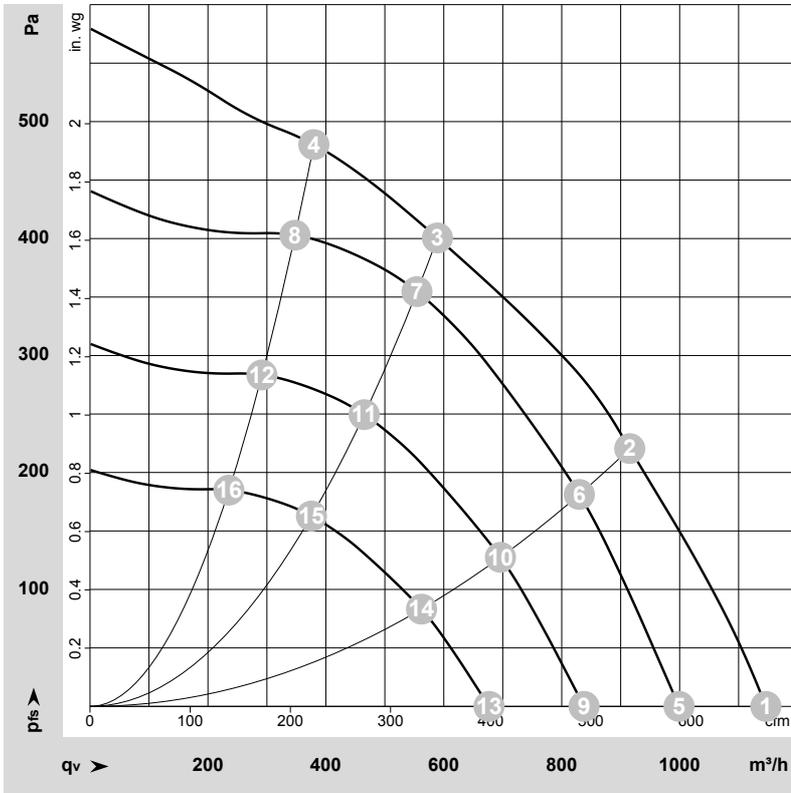
	INPUT	OUTPUT
source: set value	◦	
switch: parameter set: #1 / #2	◦	
switch: direction of rotation: cw / ccw	◦	
switch: enable/disable input	◦	
configurable function	◦	
signal: tach out		◦
signal: diagnostics out		◦
signal: alarm out		◦
signal: run monitoring		◦
signal: status		◦
signal: configurable 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-225328-1

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	3555	91	0.78	67	74	1145	0	675	0.00
2	1~	230	50	3415	115	0.97	63	70	915	220	540	0.88
3	1~	230	50	3300	120	1.00	61	69	590	400	345	1.61
4	1~	230	50	3385	118	0.99	65	74	380	480	225	1.93
5	1~	230	50	3100	60	0.52	64	71	1000	0	590	0.00
6	1~	230	50	3100	86	0.72	60	68	830	182	490	0.73
7	1~	230	50	3100	100	0.84	59	67	555	356	325	1.43
8	1~	230	50	3100	91	0.77	63	72	350	405	205	1.63
9	1~	230	50	2600	36	0.31	59	67	840	0	495	0.00
10	1~	230	50	2600	51	0.43	56	64	695	128	410	0.51
11	1~	230	50	2600	59	0.50	55	63	465	250	275	1.00
12	1~	230	50	2600	54	0.45	59	67	290	285	170	1.14
13	1~	230	50	2100	19	0.16	54	61	675	0	400	0.00
14	1~	230	50	2100	27	0.22	50	58	560	83	330	0.33
15	1~	230	50	2100	31	0.26	50	57	375	163	220	0.65
16	1~	230	50	2100	28	0.24	53	62	235	186	140	0.75

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

