

8300101420
VBH0206SSLES

EC centrifugal module - RadiCal

backward-curved, single-intake
with housing

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Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Item	8300101420	
Motor	E06002-23	
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	3250
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

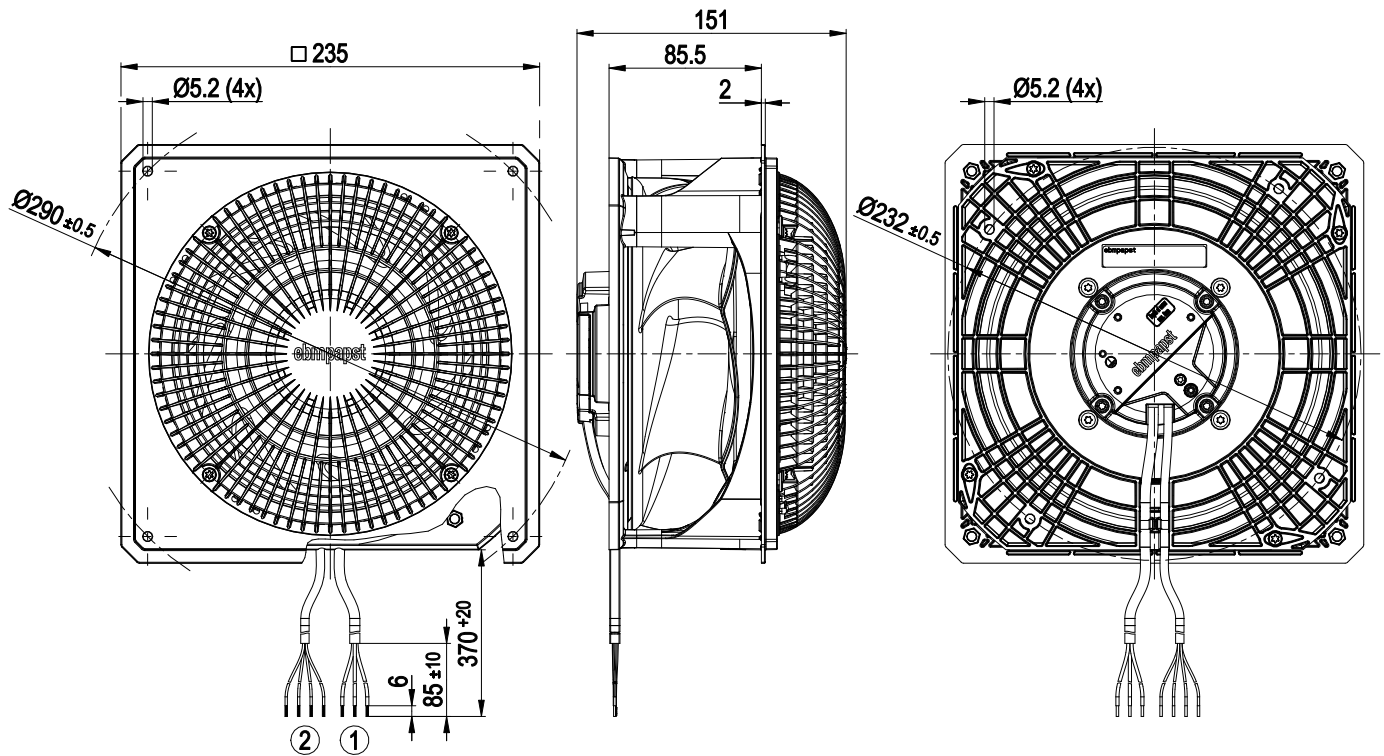
Size	206 mm
Motor size	60
Rotor surface	Thick-film passivated
Electronics housing material	Die-cast aluminum
Impeller material	PP plastic
Housing material	PP plastic
Flowgrid material	PP plastic
Number of blades	7
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation 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	- 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. The built-in component has several local protection class assignments. The final protection class is determined by the intended installation.
Conformity with standards	EN 60335-1; EN 60034-1; EN 60204-1; UKCA; 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

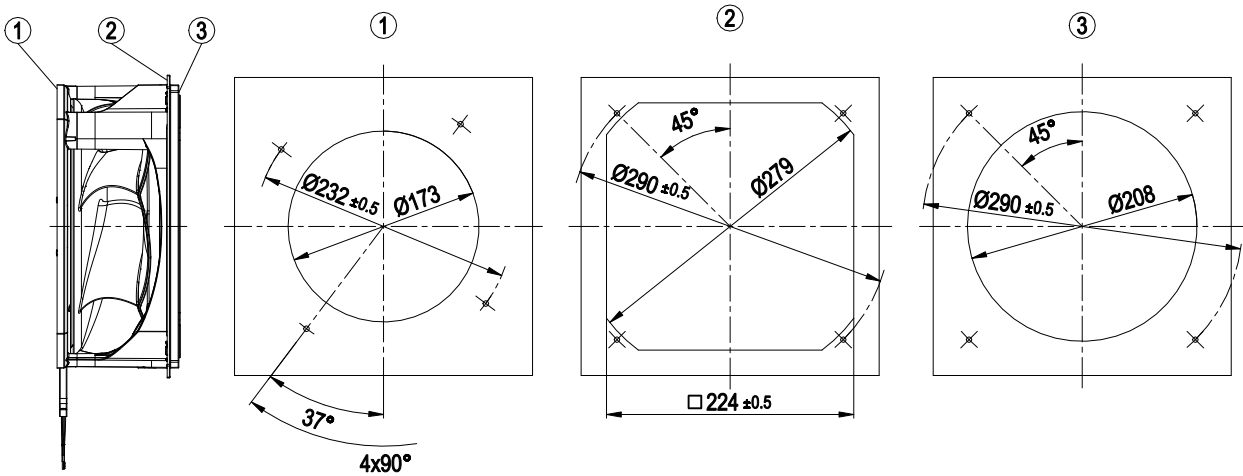


1	Supply line (PWR) PVC AWG20 3x splice
2	Control wire (CTRL) PVC AWG22 4x splice

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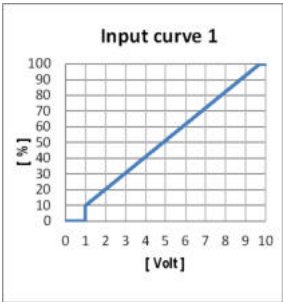
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Mounting dimensions



- | | |
|---|---|
| 1 | Installation of motor plate |
| 2 | Installation of nozzle plate on outlet side |
| 3 | Installation of nozzle plate on intake side |

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

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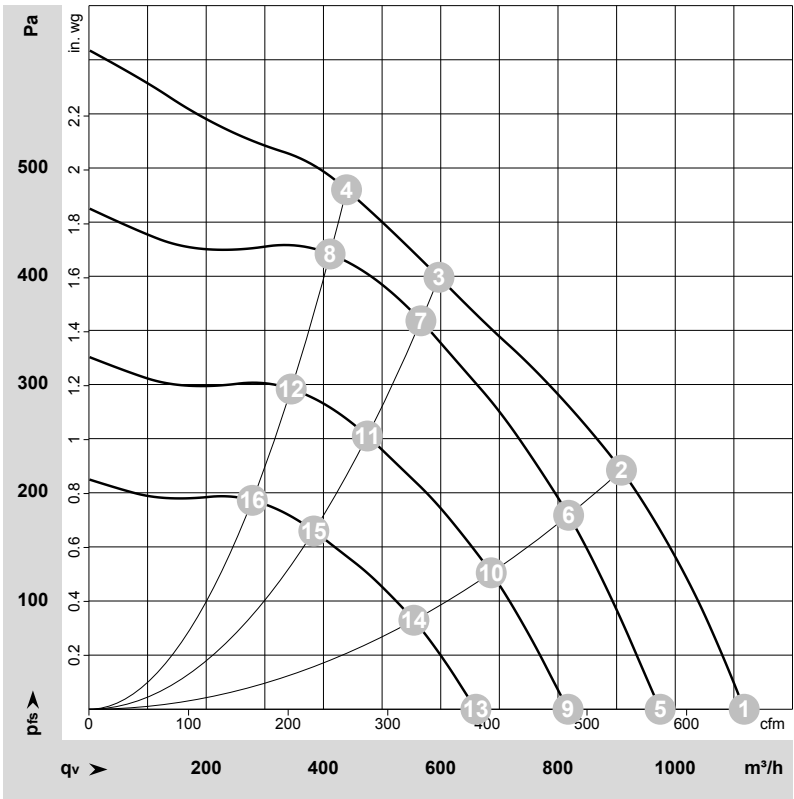
Terminal/plug assignment

		electrical specification		configurable IO mode		INPUT		OUTPUT			
IO1	Din1 (high active): digital input	active: parameterizable voltage x-30 VDC not active: pin open or parameterizable voltage <x VDC, SELV Ri = 100 kΩ, characteristic curve parameterizable, f _{PWM} = 1k..10 kHz, SELV		Ain1 0-10 V/PWM: analog input		switch: parameter set: #1 / #2	○	configurable function	○	signal: tach out	○
						switch: direction of rotation: cw / ccw	○	switch: enable/disable input	○	signal: diagnostics out	○
										signal: alarm out	○
										signal: run monitoring	○
IO2	Tach out (open collector) Diagnostics out (open collector) Alarm out (open collector) Open collector	U _{max} =50 VDC, I _{max} =10 mA, SELV U _{max} =50 VDC, I _{max} =10 mA, SELV U _{max} =50 VDC, I _{max} =10 mA, SELV U _{max} =50 VDC, I _{max} =10 mA, SELV				source: set value	○	signal: configurable function	○	signal: status	○
Vout	Voltage output	Voltage 10 VDC, SELV									

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-228007-1
Date: 2023-07-27
Nozzle: 8217118633

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.

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	0.79	66	74	1120	0	660	0.00
2	1~	230	50	3440	115	0.97	63	71	910	220	535	0.88
3	1~	230	50	3250	120	1.00	61	69	595	400	350	1.61
4	1~	230	50	3310	120	1.00	65	74	440	480	260	1.93
5	1~	230	50	3100	61	0.52	63	71	975	0	575	0.00
6	1~	230	50	3100	84	0.71	60	68	820	180	480	0.72
7	1~	230	50	3100	102	0.86	60	68	565	359	335	1.44
8	1~	230	50	3100	98	0.83	63	72	410	421	240	1.69
9	1~	230	50	2600	36	0.31	58	67	815	0	480	0.00
10	1~	230	50	2600	50	0.42	56	64	685	126	405	0.51
11	1~	230	50	2600	60	0.51	55	64	475	253	280	1.02
12	1~	230	50	2600	58	0.49	59	68	345	296	205	1.19
13	1~	230	50	2100	19	0.16	53	61	660	0	390	0.00
14	1~	230	50	2100	26	0.22	51	58	555	83	325	0.33
15	1~	230	50	2100	32	0.27	50	58	385	165	225	0.66
16	1~	230	50	2100	31	0.26	53	62	280	193	165	0.77

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