8300101067

VBH0250SSLFS

EC centrifugal module - RadiCal

backward-curved, single-intake

with housing

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Limited partnership · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Item	**8300101067**
Motor	**E06002-30**

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}	2250
Power consumption	W	120
Current draw	A	1.0
Min. ambient temperature	°C	-40
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	250 mm
Motor size	60
Rotor surface	Thick-film passivated
Electronics housing material	Die-cast aluminum
Impeller material	PP plastic
Housing 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
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 60335-1; EN 60034-1; EN 60204-1; CE; UKCA
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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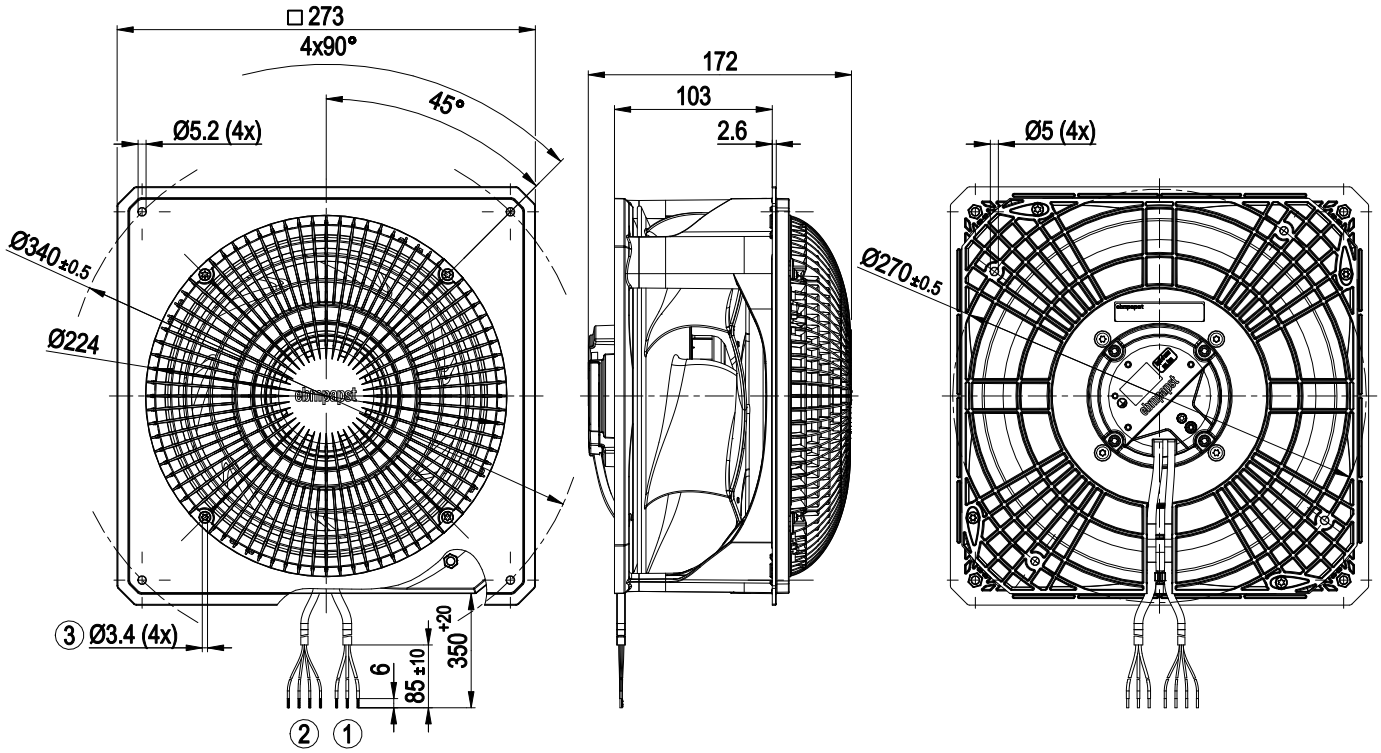
Product drawing



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

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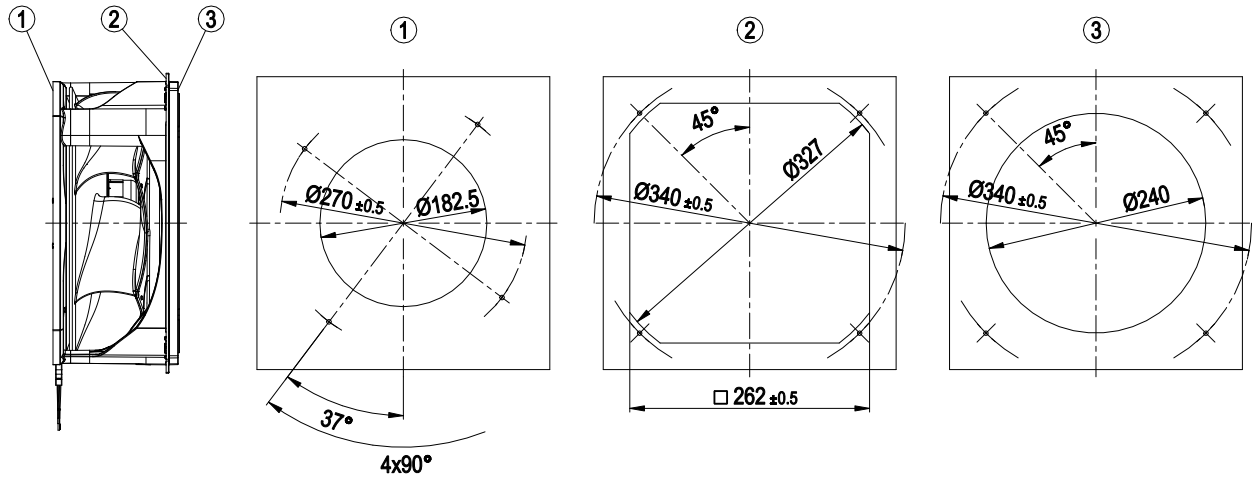
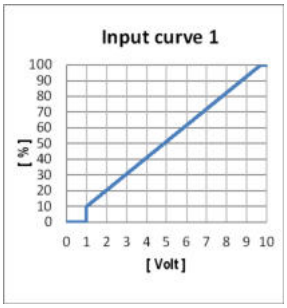
Mounting dimensions



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

Basic (B4)
Factory configuration option upon request

○ *Factory configuration option*

	configurable IO mode	electrical specification	INPUT: source: set value	INPUT: switch: parameter set: #1 / #2	INPUT: switch: direction of rotation: cw / ccw	INPUT: switch: enable/disable input	INPUT: configurable function	OUTPUT: signal: tach out	OUTPUT: signal: diagnostics out	OUTPUT: signal: alarm out	OUTPUT: signal: run monitoring	OUTPUT: signal: status	OUTPUT: signal: configurable function
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_{PWM} = 1k..10 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	Voltage10 VDC, SELV											

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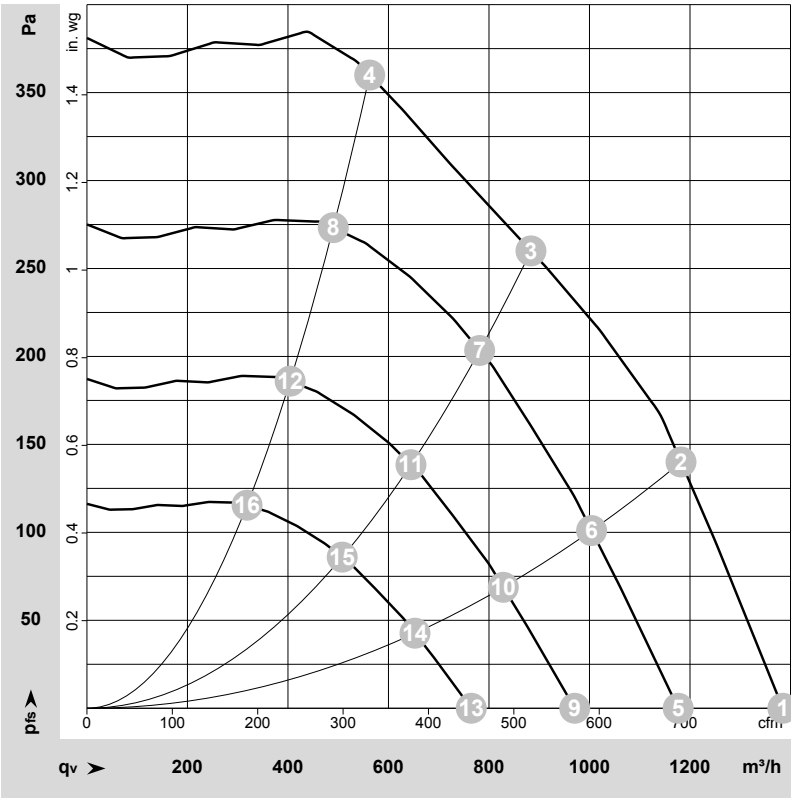
Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-229077-1
Date: 2023-10-05
Nozzle: 8217118132

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	2355	89	0.78	64	72	1385	0	815	0.00
2	1~	230	50	2355	114	0.98	61	69	1180	140	695	0.56
3	1~	230	50	2260	119	1.02	57	65	885	260	520	1.04
4	1~	230	50	2295	119	1.03	61	70	565	360	330	1.45
5	1~	230	50	2000	55	0.48	60	67	1175	0	695	0.00
6	1~	230	50	2000	70	0.60	56	64	1005	101	590	0.41
7	1~	230	50	2000	83	0.71	54	62	780	203	460	0.81
8	1~	230	50	2000	79	0.68	58	66	490	273	290	1.10
9	1~	230	50	1650	31	0.27	55	63	970	0	570	0.00
10	1~	230	50	1650	39	0.34	52	60	830	69	485	0.28
11	1~	230	50	1650	46	0.40	49	57	645	138	380	0.55
12	1~	230	50	1650	44	0.38	53	61	405	186	240	0.75
13	1~	230	50	1300	15	0.13	49	57	765	0	450	0.00
14	1~	230	50	1300	19	0.16	46	54	655	43	385	0.17
15	1~	230	50	1300	23	0.19	43	51	510	86	300	0.35
16	1~	230	50	1300	22	0.19	47	55	320	115	190	0.46

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

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