

8300101457
VBH0250SSLFS

EC centrifugal module - RadiCal

backward-curved, single-intake
with housing

ebm-papst Mulfingen GmbH & Co. KG

Bachmühle 2 · D-74673 Mulfingen

Phone +49 7938 81-0

Fax +49 7938 81-110

info1@de.fansco.com

www.fansco.com

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	8300101457	
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

8300101457
VBH0250SSLFS

EC centrifugal module - RadiCal

backward-curved, single-intake
with housing

Technical description

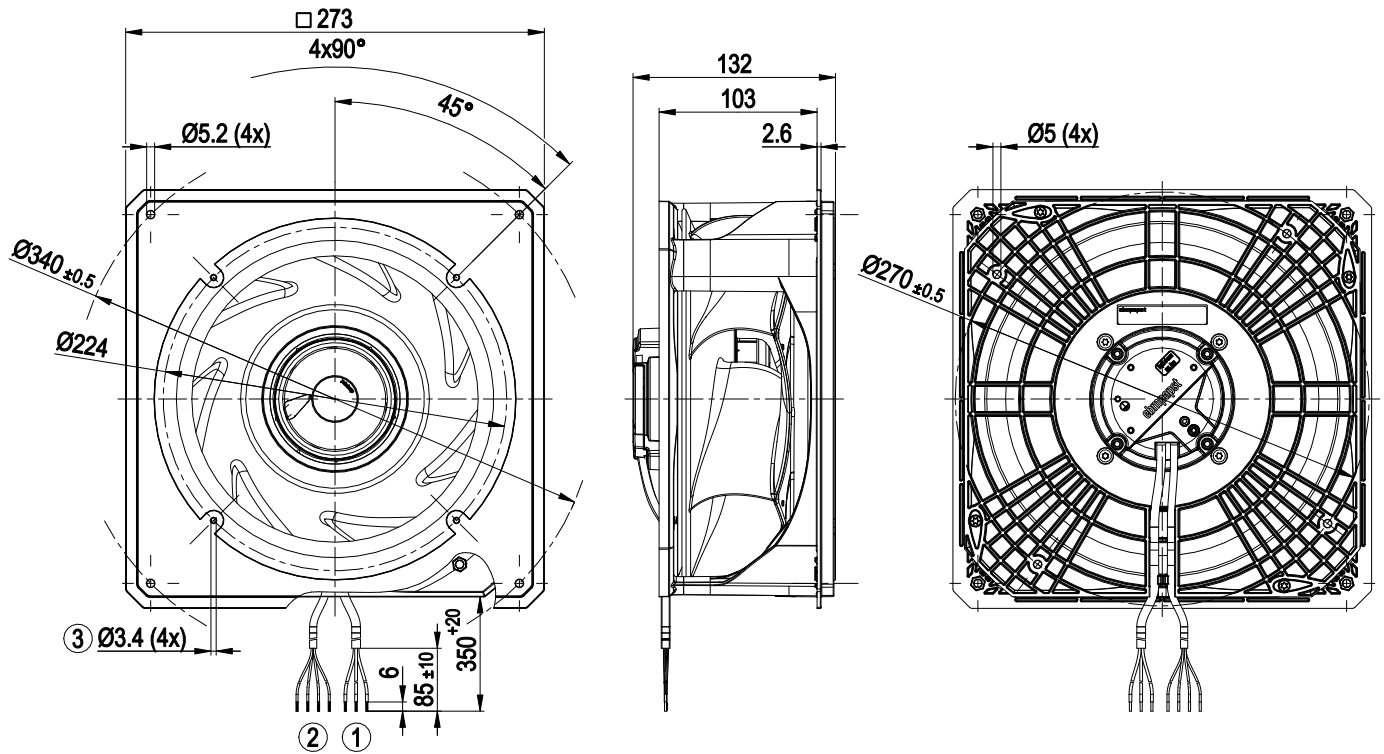
Weight	0.001 kg
Size	250 mm
Motor size	60
Rotor surface	Thick-film passivated
Electronics housing material	Die-cast aluminum
Impeller material	PP plastic
Housing material	PP plastic
Number of blades	7
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
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.

8300101457
VBH0250SSLFS

EC centrifugal module - RadiCal

backward-curved, single-intake
with housing

Product drawing

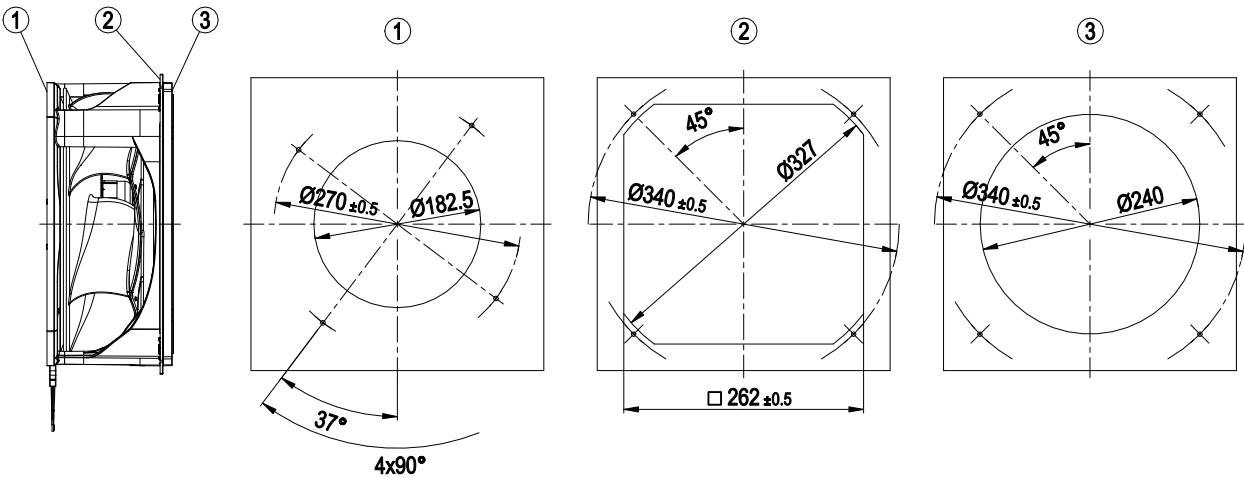


1	Supply line (PWR) PVC AWG20 3x splice
2	Control wire (CTRL) PVC AWG22 4x splice
3	Fastening holes for FlowGrid 8217118468 (not included in scope of delivery) are provided and must only be used for FlowGrid

EC centrifugal module - RadiCal

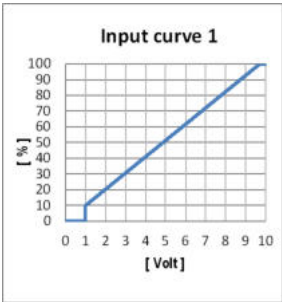
backward-curved, single-intake
with housing

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

8300101457
VBH0250SSLFS

EC centrifugal module - RadiCal

backward-curved, single-intake
with housing

Terminal/plug assignment

		configurable IO mode		electrical specification		INPUT		OUTPUT			
IO1	Din1 (high active): digital input	Ain1 0-10 V/PWM: analog 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			switch: parameter set: #1 / #2	switch: enable/disable input	configurable function	signal: tach out	signal: diagnostics out	signal: alarm out
						source: set value					
IO2	Tach out (open collector)	Diagnosics 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						signal: run monitoring	signal: status	signal: configurable function
Vout	Voltage output		Voltage 10 VDC, SELV								

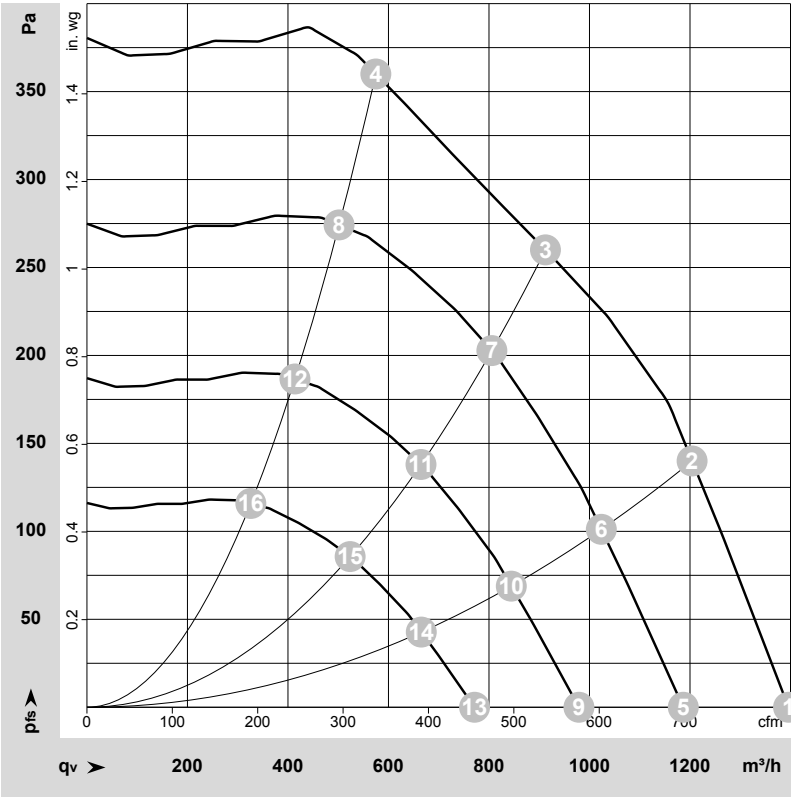
Basic (B4)
Factory configuration option upon request

Factory configuration option

EC centrifugal module - RadiCal

backward-curved, single-intake
with housing

Curves: Air performance 50 Hz



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

Measurement: LU-224210-1
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	84	0.75	64	71	1395	0	820	0.00
2	1~	230	50	2355	111	0.97	60	68	1205	140	710	0.56
3	1~	230	50	2265	120	1.03	57	65	910	260	535	1.04
4	1~	230	50	2290	120	1.03	61	69	575	360	340	1.45
5	1~	230	50	2000	52	0.46	59	67	1185	0	700	0.00
6	1~	230	50	2000	68	0.59	56	64	1025	101	605	0.41
7	1~	230	50	2000	82	0.71	54	61	805	203	475	0.81
8	1~	230	50	2000	80	0.69	58	66	500	274	295	1.10
9	1~	230	50	1650	29	0.26	55	62	980	0	575	0.00
10	1~	230	50	1650	38	0.33	51	59	845	69	495	0.28
11	1~	230	50	1650	46	0.40	49	57	665	138	390	0.55
12	1~	230	50	1650	45	0.39	53	61	415	187	245	0.75
13	1~	230	50	1300	14	0.13	49	56	770	0	455	0.00
14	1~	230	50	1300	19	0.16	45	53	665	43	390	0.17
15	1~	230	50	1300	23	0.19	43	51	525	86	310	0.35
16	1~	230	50	1300	22	0.19	47	55	325	116	190	0.47

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