

8300100658

VBH0190SSLDS

EC centrifugal module - RadiCal

backward-curved, single-intake

with housing

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General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen

Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Item	8300100658	
Motor	E06002-17	

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	3850
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	1.54 kg
Size	190 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
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 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.

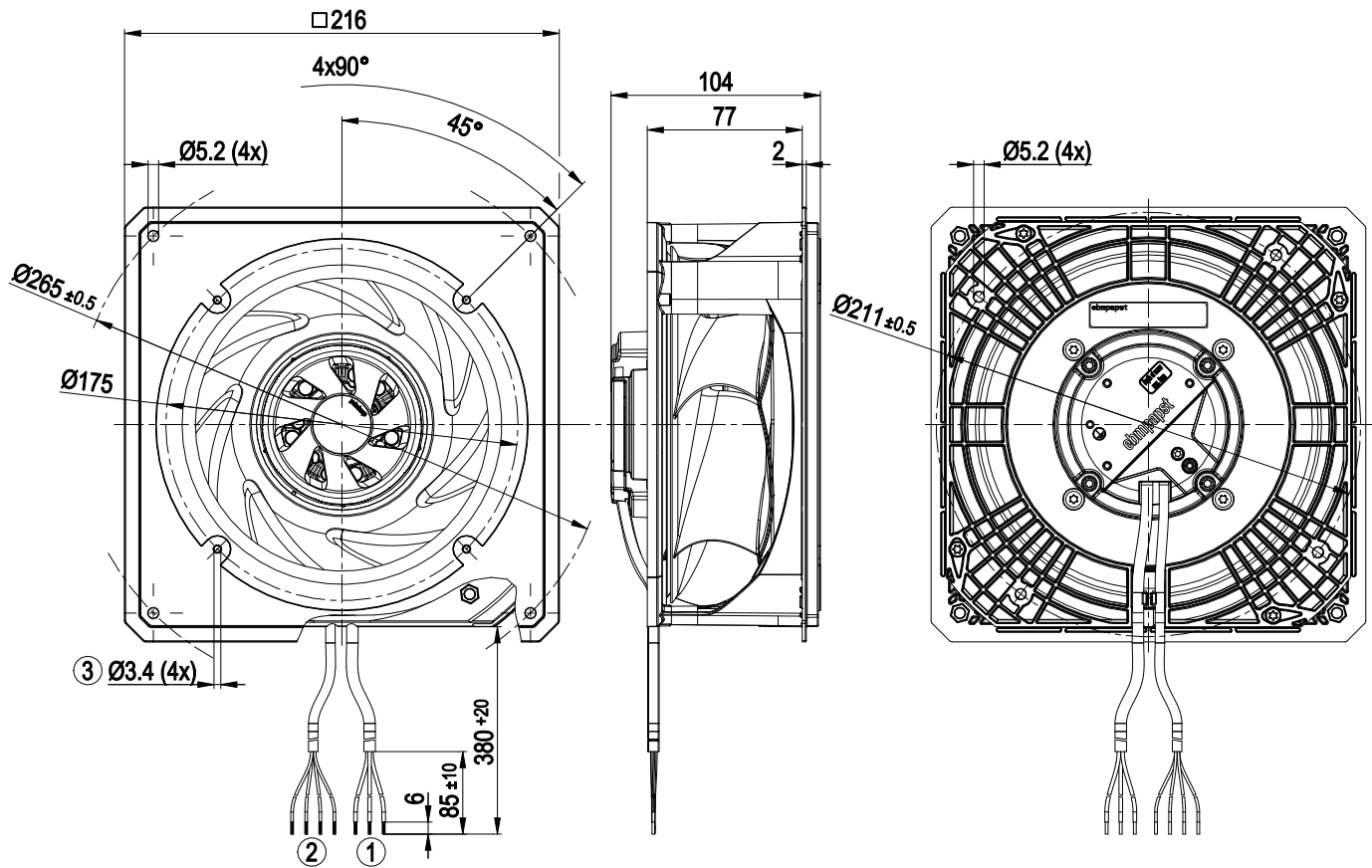
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Product drawing

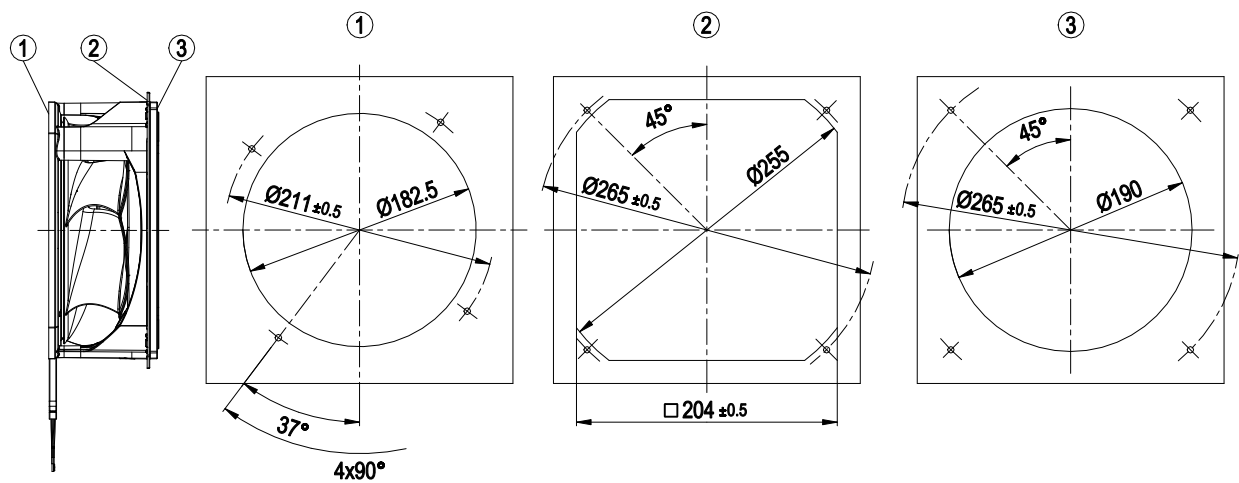


1	Supply line (PWR) PVC AWG20 3x splice
2	Control wire (CTRL) PVC AWG22 4x splice
3	Fastening holes for FlowGrid 8217117433 (not included in scope of delivery) are provided and must only be used for FlowGrid

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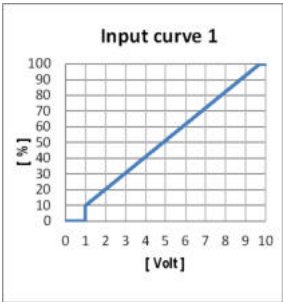
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Mounting dimensions



- | | |
|---|---|
| 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	○
										signal: status	○
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	○		○
Vout	Voltage output	Voltage 10 VDC, SELV									

Basic (B4)

Factory configuration option upon request

○ Factory configuration option

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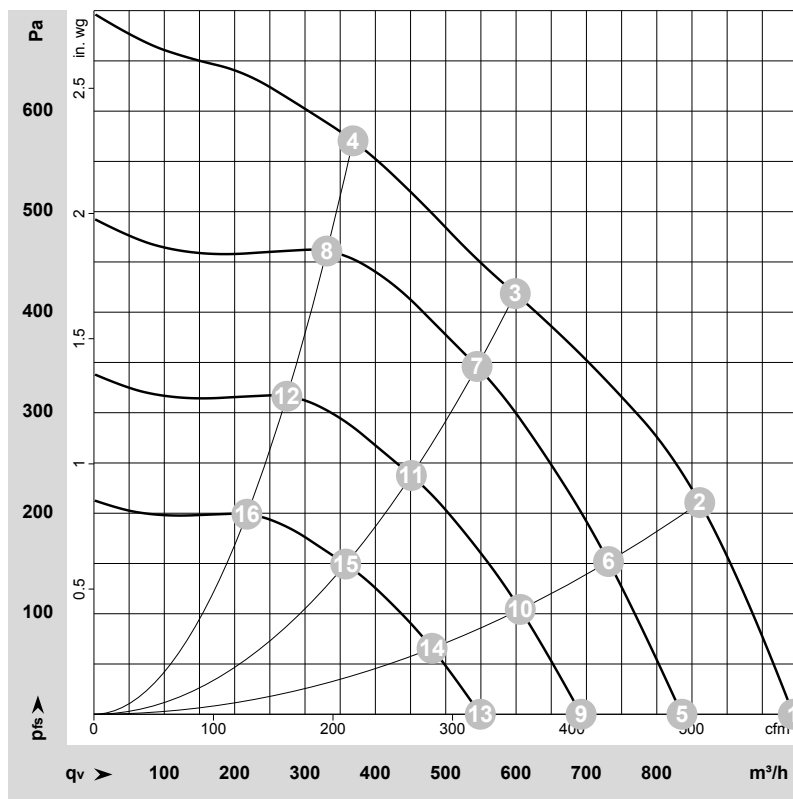
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Curves: Air performance 50 Hz



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

Measurement: LU-221758-1

Date: 2022-07-01

Nozzle: 8217116915

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	4165	84	0.73	67	75	995	0	585	0.00
2	1~	230	50	4125	113	0.95	63	72	860	210	505	0.84
3	1~	230	50	3850	120	1.00	61	69	600	420	355	1.69
4	1~	230	50	3890	120	1.00	66	75	370	570	215	2.29
5	1~	230	50	3500	50	0.43	62	71	835	0	490	0.00
6	1~	230	50	3500	69	0.58	59	67	730	152	430	0.61
7	1~	230	50	3500	90	0.76	59	67	545	346	320	1.39
8	1~	230	50	3500	88	0.74	64	72	330	463	195	1.86
9	1~	230	50	2900	29	0.25	58	66	690	0	405	0.00
10	1~	230	50	2900	39	0.33	55	63	605	105	355	0.42
11	1~	230	50	2900	51	0.43	54	62	450	238	265	0.96
12	1~	230	50	2900	50	0.42	59	68	275	318	160	1.28
13	1~	230	50	2300	14	0.12	52	60	550	0	325	0.00
14	1~	230	50	2300	20	0.17	49	57	480	66	285	0.26
15	1~	230	50	2300	26	0.21	48	56	360	149	210	0.60
16	1~	230	50	2300	25	0.21	53	62	220	200	130	0.80

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