

8300101053
VBS0206SSLDS

EC centrifugal fan - RadiCal

backward-curved, single-intake

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	8300101053	
Motor	E06001-17	
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	2950
Power consumption	W	85
Current draw	A	0.7
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

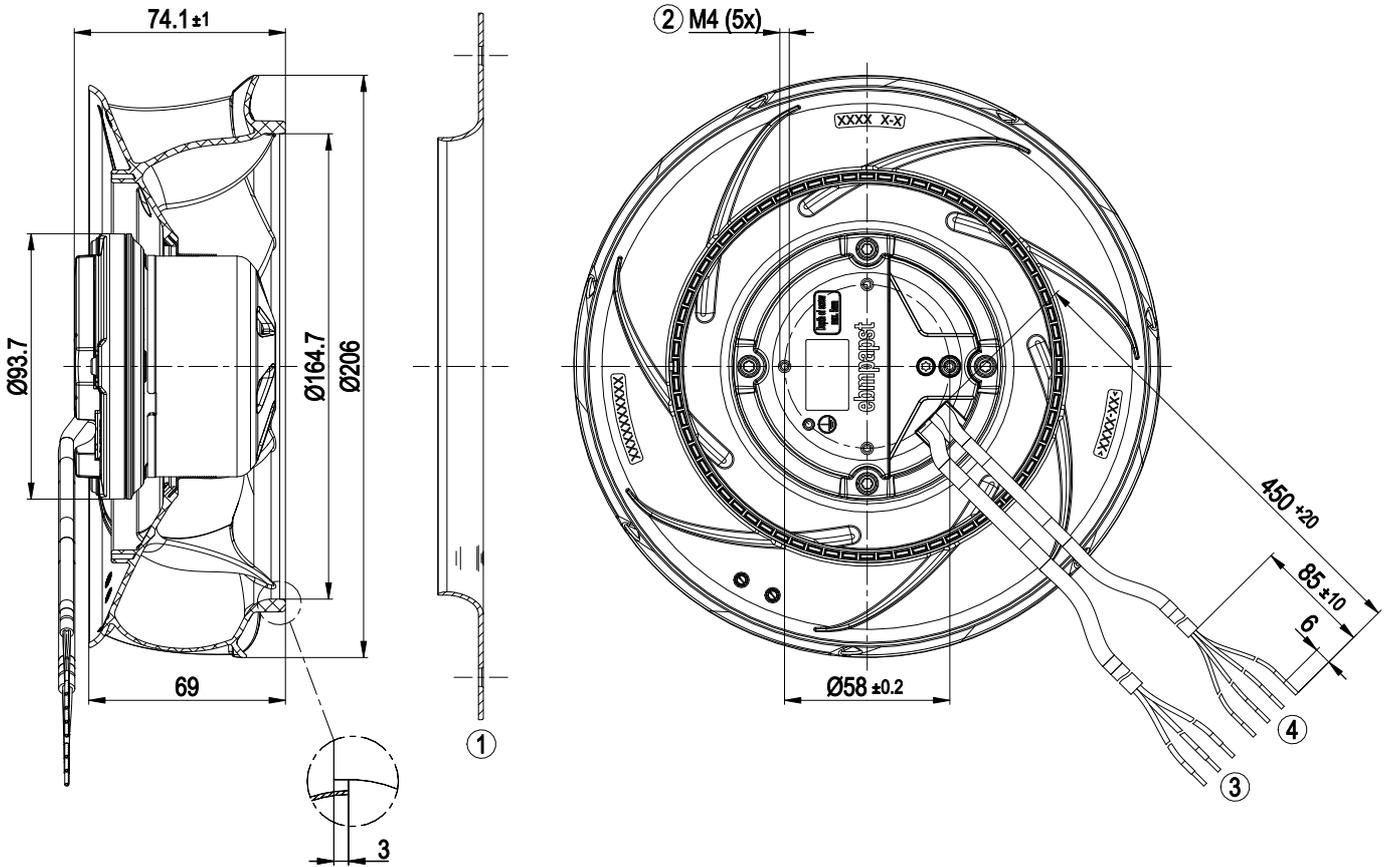
Weight	1.12 kg
Size	206 mm
Motor size	60
Rotor surface	Thick-film passivated
Electronics housing material	Die-cast aluminum
Impeller material	PP plastic
Number of blades	7
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (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. 1.1 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.
Approval	CSA C22.2 No.113 + CAN/CSA-E60730-1; UL 1004-7 + 60730-1

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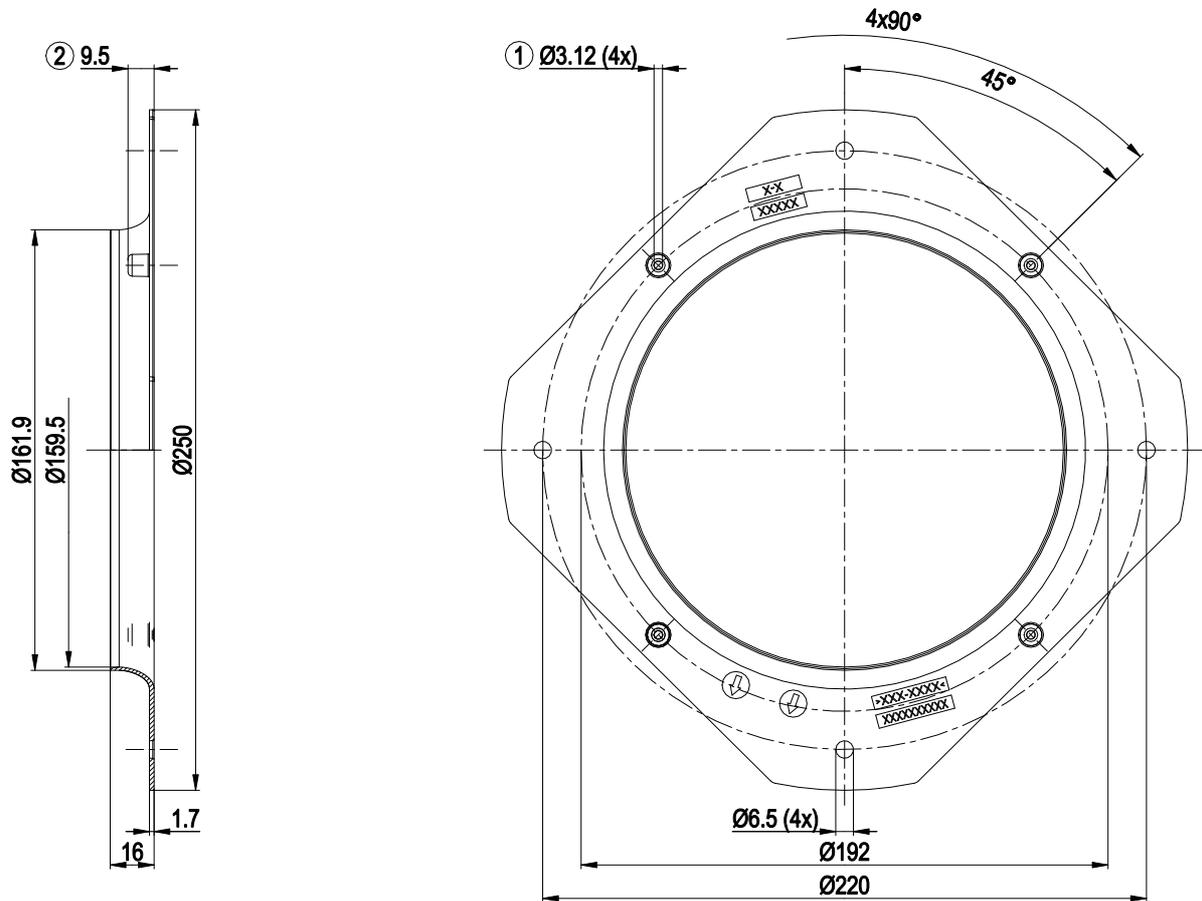
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Product drawing



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

Accessory part

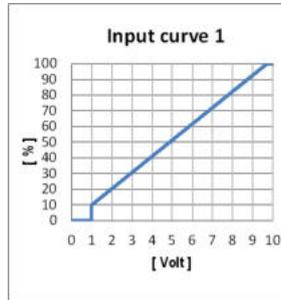


-	Inlet ring 8217118486
1	Fastening holes for FlowGrid 8217118542 (not included in scope of delivery) are provided and must be subsequently opened as required
2	Screw-on domes are only permissible for Flowgrid!

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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=1.1 mA Not short-circuit-proof, power supply for external devices, SELV

Terminal/plug assignment

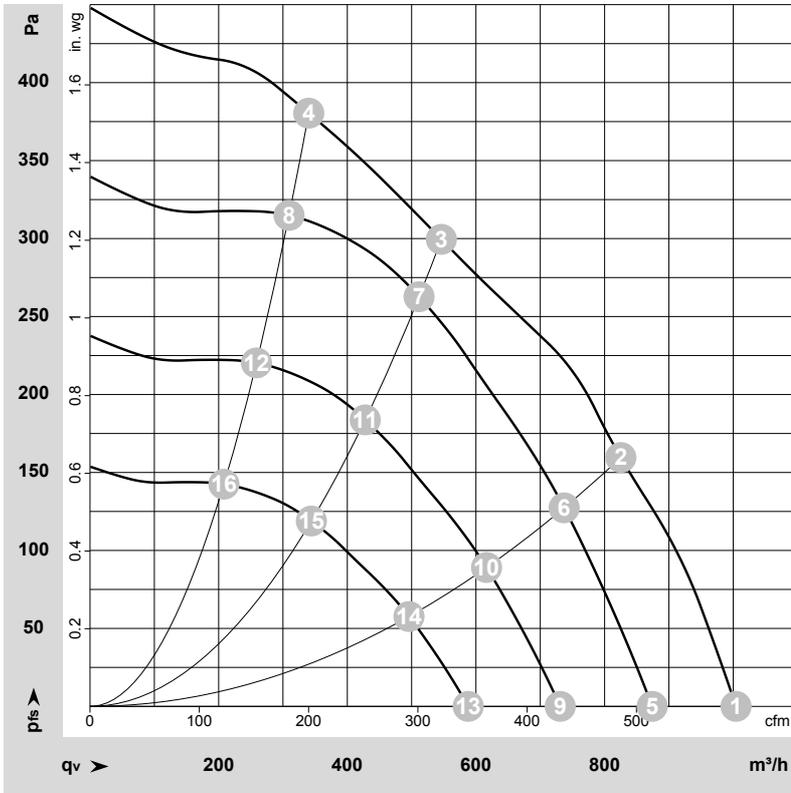
	configurable IO mode	electrical specification					
IO1	◦ Din1 (high active): digital input	active: parameterizable voltage x-30 VDC not active: pin open or parameterizable voltage <x VDC, SELV					
	◦ Ain1 0-10 V/PWM: analog input	RI = 100 kΩ, characteristic curve parameterizable, $f_{\text{PWM}} = 1\text{k}..10\text{kHz}$, 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-225327-1
Date: 2023-03-13
Nozzle: 8217118486

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	3160	67	0.56	65	73	1005	0	590	0.00
2	1~	230	50	3070	85	0.70	61	69	825	160	485	0.64
3	1~	230	50	2950	85	0.70	60	67	545	300	320	1.20
4	1~	230	50	3020	85	0.70	63	71	340	380	200	1.53
5	1~	230	50	2750	44	0.37	61	69	875	0	515	0.00
6	1~	230	50	2750	62	0.50	58	66	735	128	435	0.51
7	1~	230	50	2750	70	0.57	57	65	510	263	300	1.06
8	1~	230	50	2750	65	0.53	60	68	310	316	180	1.27
9	1~	230	50	2300	26	0.22	57	65	730	0	430	0.00
10	1~	230	50	2300	36	0.29	54	62	615	90	365	0.36
11	1~	230	50	2300	41	0.34	53	61	430	184	250	0.74
12	1~	230	50	2300	38	0.31	56	64	260	221	150	0.89
13	1~	230	50	1850	13	0.11	51	59	590	0	345	0.00
14	1~	230	50	1850	19	0.15	48	56	495	58	290	0.23
15	1~	230	50	1850	21	0.17	47	55	345	119	200	0.48
16	1~	230	50	1850	20	0.16	50	58	210	143	120	0.57

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