

8300101064
VBS0175SSLDS

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	8300101064	
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	4500
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

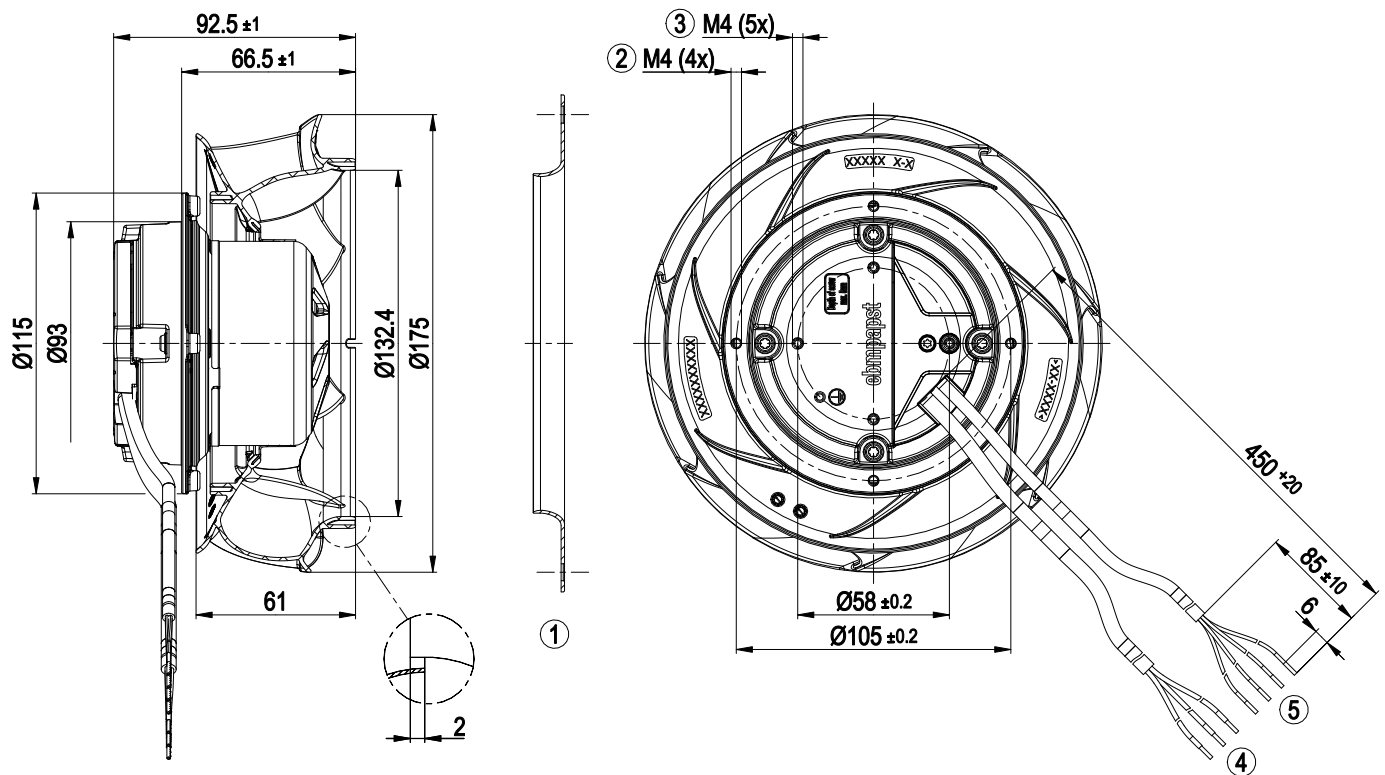
Weight	1,14
Size	175 mm
Motor size	60
Rotor surface	Thick-film passivated
Electronics housing material	Die-cast aluminum
Impeller material	PP plastic
Number of blades	7
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) 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	- 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 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 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

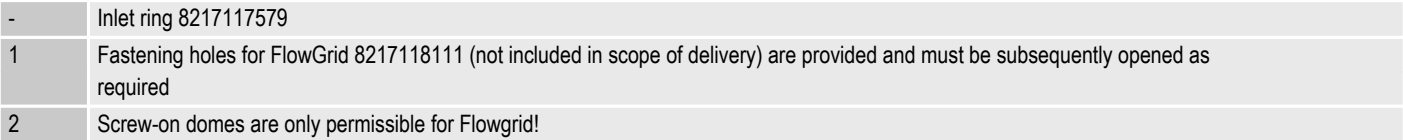


1	Inlet ring 8217117579 not included in scope of delivery
2	Max. clearance for screw 6 mm
3	Max. clearance for screw 5 mm
4	Supply line (PWR) PVC AWG20 3x splice
5	Control wire (CTRL) PVC AWG22 4x splice

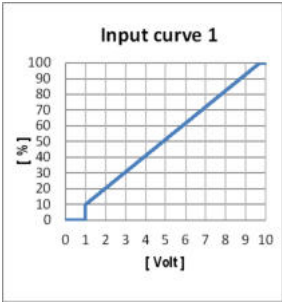
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Accessory part



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

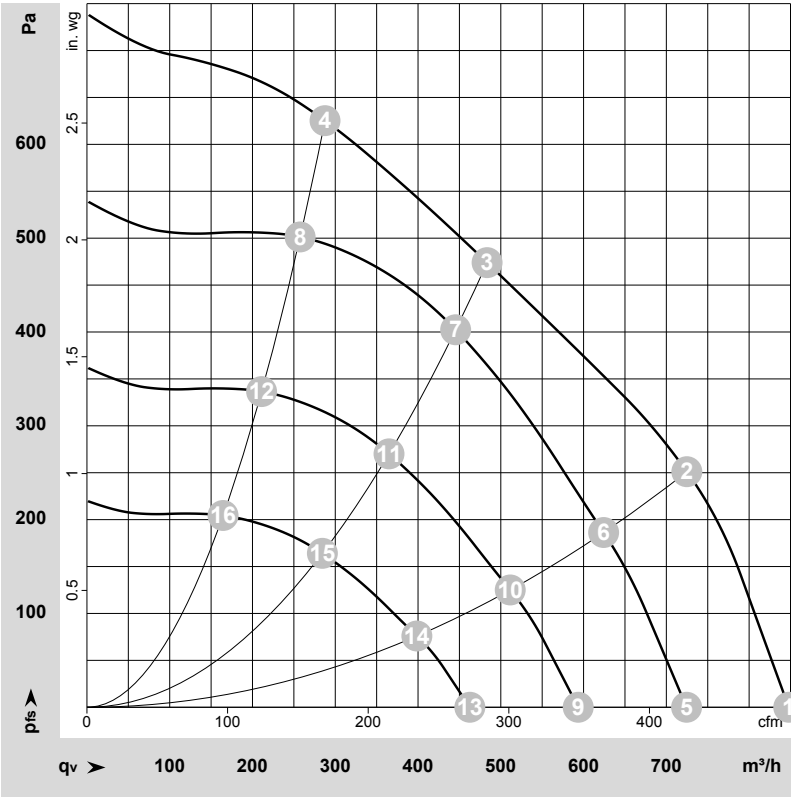
Terminal/plug assignment

	configurable IO mode	electrical specification	INPUT								OUTPUT			
			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		
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	◦	◦	◦	◦								
IO2	◦ Tach out (open collector)	U _{max} =50 VDC, I _{max} =10 mA, SELV					◦							
	◦ Diagnostics out (open collector)	U _{max} =50 VDC, I _{max} =10 mA, SELV						◦						
	◦ Alarm out (open collector)	U _{max} =50 VDC, I _{max} =10 mA, SELV							◦					
	◦ Open collector	U _{max} =50 VDC, I _{max} =10 mA, SELV												◦
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-227626-1
Date: 2023-05-05
Nozzle: 8217117579

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	4855	100	0.84	71	79	850	0	500	0.00
2	1~	230	50	4820	117	0.98	67	75	725	250	425	1.00
3	1~	230	50	4500	120	1.00	64	72	485	475	285	1.91
4	1~	230	50	4630	120	1.00	70	78	290	625	170	2.51
5	1~	230	50	4150	62	0.52	67	75	725	0	425	0.00
6	1~	230	50	4150	75	0.62	63	71	625	186	365	0.75
7	1~	230	50	4150	94	0.78	62	70	445	403	260	1.62
8	1~	230	50	4150	86	0.72	67	75	260	503	150	2.02
9	1~	230	50	3400	34	0.29	62	70	595	0	350	0.00
10	1~	230	50	3400	41	0.34	58	66	510	125	300	0.50
11	1~	230	50	3400	52	0.43	57	65	365	270	215	1.08
12	1~	230	50	3400	48	0.40	62	70	210	338	125	1.36
13	1~	230	50	2650	16	0.14	56	64	465	0	275	0.00
14	1~	230	50	2650	19	0.16	52	60	400	76	235	0.31
15	1~	230	50	2650	25	0.20	51	58	285	164	165	0.66
16	1~	230	50	2650	23	0.19	56	64	165	205	95	0.82

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