

8300100538
VBS0355CSNGS

EC centrifugal fan - RadiPac

backward-curved, single-intake

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Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Item	8300100538	
Motor	E07430-35	

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Method of obtaining data		ml
Status		prelim.
Speed (rpm)	min ⁻¹	2000
Power consumption	W	430
Current draw	A	1.9
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	55

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

Data according to Commission Regulation (EU) 327/2011 (prEN 17166)

		Actual	Req. 2015			
01 Overall efficiency η_{es}	%	68.1	47.7	09 Power consumption P_{ed}	kW	0.43
02 Measurement category		A		09 Air flow q_v	m ³ /h	2700
03 Efficiency category		Static		09 Pressure increase p_{fs}	Pa	353
04 Efficiency grade N		82.4	62	10 Speed (rpm) n	min ⁻¹	2000
05 Variable speed drive		Yes		11 Specific ratio [*]		1.00

Data obtained at optimum efficiency level.

^{*} Specific ratio = $1 + p_{fs} / 100\,000\text{ Pa}$

LU-220869

The efficiency values displayed for achieving conformity with the Ecodesign Regulation EU 327/2011 has been reached with defined air duct components (e.g. inlet rings).
The dimensions must be requested from ebm-papst. If other air conduction geometries are used on the installation side, the ebm-papst evaluation loses its validity/the conformity must be confirmed again.
The product does not fall within the scope of Regulation (EU) 2019/1781 due to the exception specified in Article 2 (2a) (motors completely integrated into a product).



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Technical description

Size	355 mm
Motor size	74
Rotor surface	Thick-film passivated
Electronics housing material	Die-cast aluminum
Impeller material	PP plastic
Number of blades	5
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	Shaft horizontal or rotor on bottom; rotor on top on request
Condensation drainage holes	On rotor side
Mode	S1
Motor bearing	Ball bearing
Technical features	<ul style="list-style-type: none">- Output 10 VDC, max. 10 mA- Operation and alarm display- Alarm relay- Integrated PID controller- Power limiter- Motor current limitation- PFC, active- RS-485 MODBUS-RTU- Soft start- Control input 0-10 VDC / PWM- Control interface with SELV potential safely disconnected from the mains- Thermal overload protection for electronics/motor- Line undervoltage / phase failure 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	Thermal overload protector (TOP) internally connected
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
Approval	CSA C22.2 No. 77 + CAN/CSA-E60730-1; EAC; UL 1004-7 + 60730-1

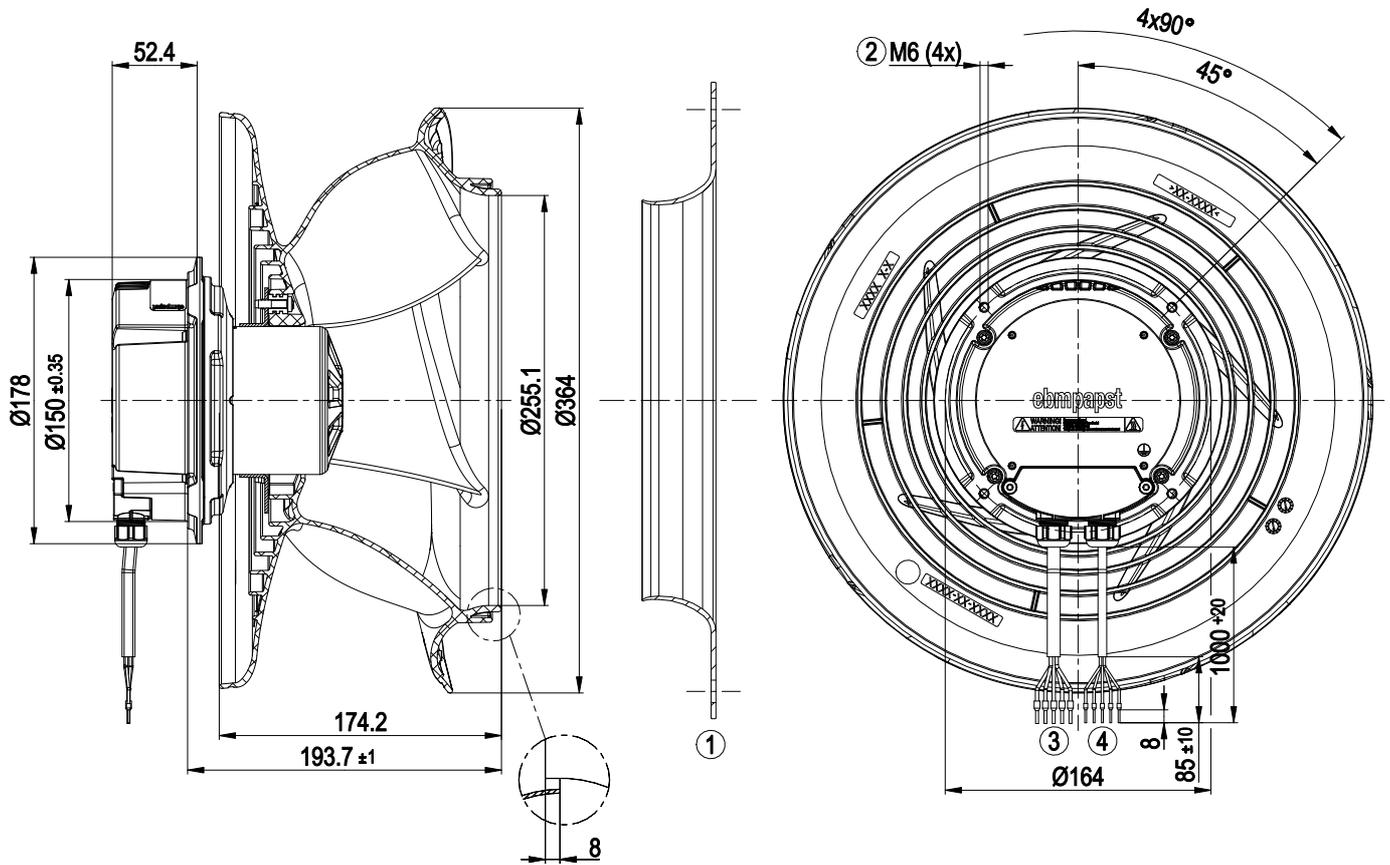


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Product drawing



1	Accessory part: Inlet ring 8217102240 with pressure tap (k-factor: 145) (not included in scope of delivery)
2	Max. clearance for screw 10 mm
3	Cable PVC AWG18 5x splice
4	Cable PVC AWG22 5x wire-end ferrule

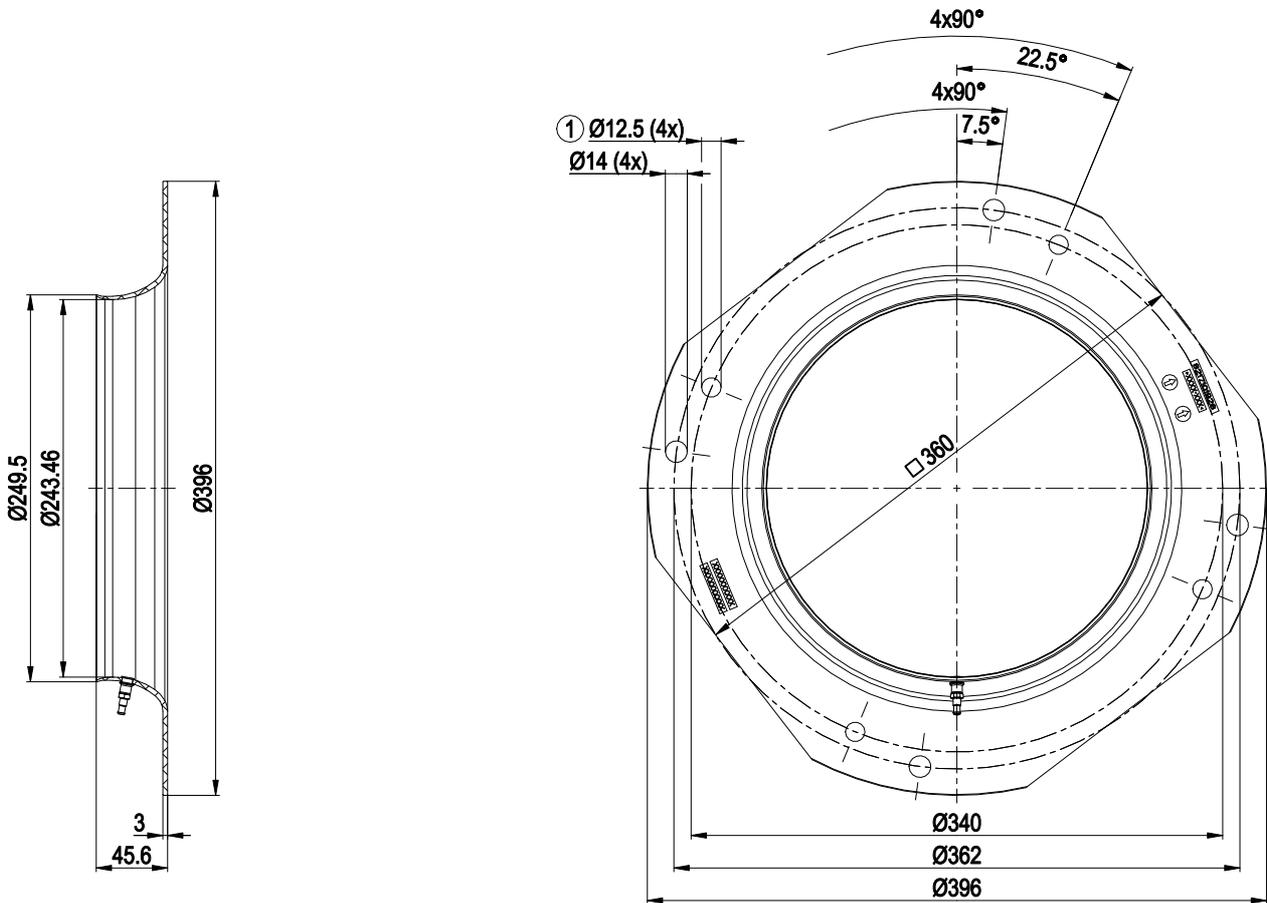


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Accessory part

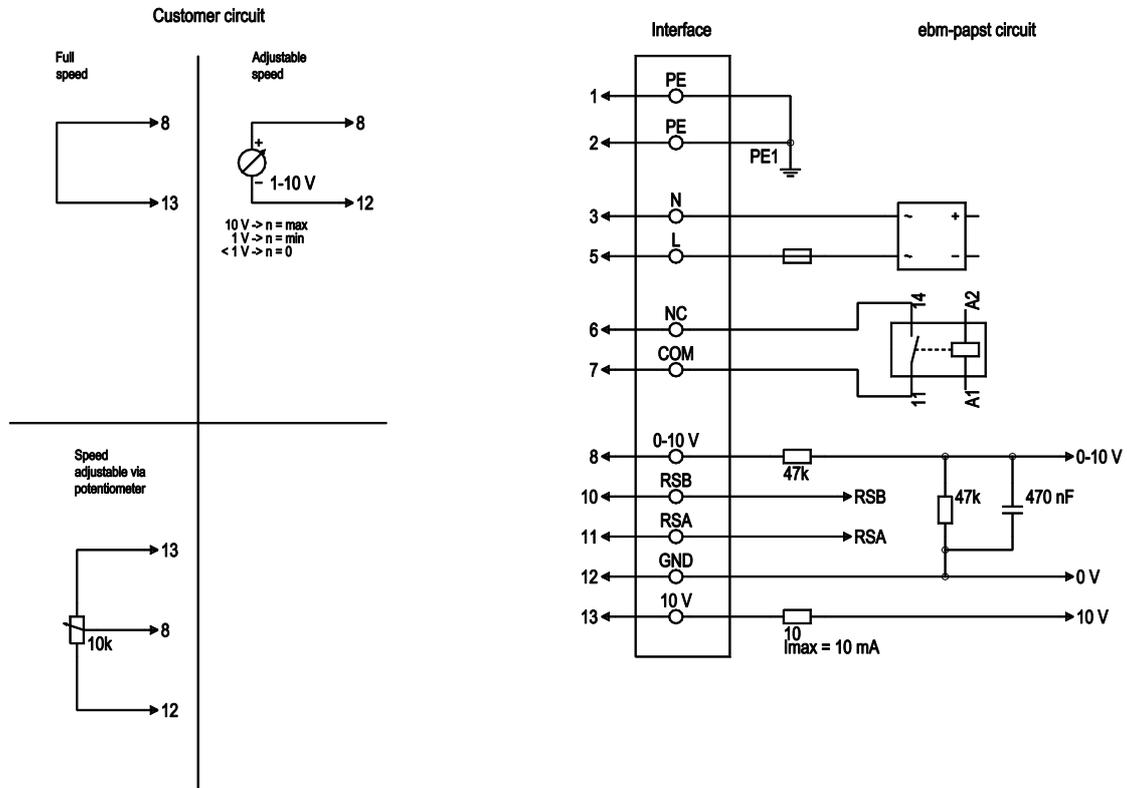


Inlet ring 8217102240 with pressure tap (k-factor: 145)

- | | |
|---|--|
| 1 | Fastening holes for FlowGrid 00400-2-2957 (not included in scope of delivery) are provided and must be subsequently opened as required |
|---|--|

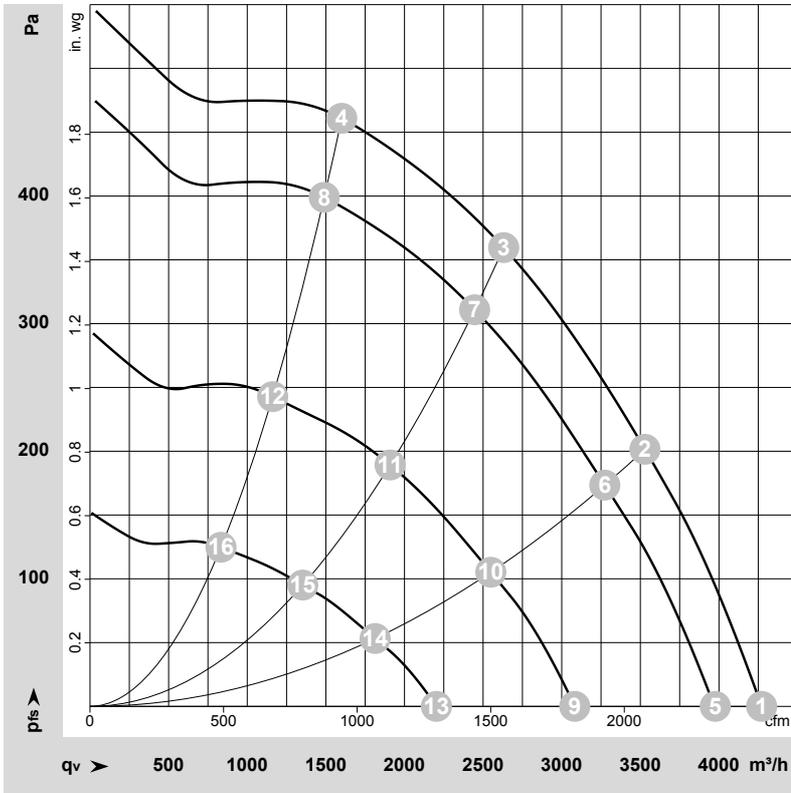


Connection diagram



No.	Conn.	Designation	Color	Function/assignment
1	1, 2	PE	green/yellow	Protective earth
1	3	N	blue	Power supply, neutral conductor, 50/60 Hz
1	5	L	black	Power supply, phase, 50/60 Hz
1	6	NC	white 1	Status relay, floating status contact; break for failure, contact rating 250 VAC / 2A (AC1) / min. 10 mA, basic insulation on supply side and reinforced insulation on control interface side
1	7	COM	white 2	Status relay, floating status contact; common connection, contact rating 250 VAC / 2A (AC1) / min. 10 mA, basic insulation on supply side and reinforced insulation on control interface side
2	8	0-10V	yellow	Analog input (set value); 0-10 V; $R_i = 100\text{ k}\Omega$; adjustable curve
2	10	RSB	brown	RS485 interface for MODBUS, RSB
2	11	RSA	white	RS485 interface for MODBUS, RSA
2	12	GND	blue	Reference ground for control interface, SELV
2	13	+10V	red	Fixed voltage output 10 VDC, +10 V $\pm 3\%$; max. 10 mA; short-circuit-proof; power supply for external devices (e.g. pot)

Curves: Air performance 50 Hz



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

Measurement: LU-220869-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebmpapst. 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}	LwA _{out}	LwA	q _v	P _{fs}	q _v	P _{fs}
		V	Hz	min ⁻¹	W	A	dB(A)	dB(A)	dB(A)	dB	m ³ /h	Pa	cfm	in. wg
1	1~	230	50	2000	284	1.26	70	78	81	83	4270	0	2515	0.00
2	1~	230	50	2000	372	1.64	63	71	75	76	3530	200	2075	0.80
3	1~	230	50	2000	430	1.90	58	67	71	72	2630	360	1550	1.45
4	1~	230	50	2000	400	1.76	62	69	73	74	1600	460	940	1.85
5	1~	230	50	1860	230	1.03	68	76	80	81	3975	0	2340	0.00
6	1~	230	50	1860	300	1.33	61	69	73	75	3275	174	1925	0.70
7	1~	230	50	1860	346	1.52	57	65	69	70	2445	312	1440	1.25
8	1~	230	50	1860	321	1.42	59	67	71	72	1490	399	875	1.60
9	1~	230	50	1460	114	0.53	62	71	74	76	3085	0	1815	0.00
10	1~	230	50	1460	147	0.67	56	64	68	70	2550	105	1500	0.42
11	1~	230	50	1460	167	0.75	51	59	64	65	1910	190	1125	0.76
12	1~	230	50	1455	154	0.69	52	60	64	65	1160	243	685	0.98
13	1~	230	50	1050	49	0.26	56	63	67	69	2205	0	1295	0.00
14	1~	230	50	1050	62	0.32	48	56	61	62	1815	53	1065	0.21
15	1~	230	50	1040	66	0.34	43	51	56	57	1355	95	795	0.38
16	1~	230	50	1045	64	0.33	42	50	55	56	835	125	490	0.50

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
LwA_{out} = Sound power level outlet side · q_v = Air flow · P_{fs} = Pressure increase

