8300101210

VUB0450CSNJS

EC axial panel fan - AxiEco

with inlet ring and air inlet grille

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Nominal data

Item	8300101210
Motor	**E07433-43**

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	960
Power consumption	W	170
Current draw	A	1.4
Max. back pressure	Pa	105
Max. back pressure	in. wg	0.42
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

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

		Actual	Req. 2015				
01 Overall efficiency η_{es}	%	48.7	28.8	09 Power consumption P_{ed}	kW	0.16	
02 Measurement category		A		09 Air flow q_v	m³/h	3210	
03 Efficiency category		Static		09 Pressure increase p_{fs}	Pa	82	
04 Efficiency grade N		59.9	40	10 Speed (rpm) n	min-1	980	
05 Variable speed drive		Yes		11 Specific ratio*		1.00	

Data obtained at optimum efficiency level.

* Specific ratio = 1 + p_{fs} / 100 000 Pa

LU-230360

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

Weight	5,4
Size	450 mm
Motor size	74
Rotor surface	Thick-film passivated
Impeller material	PP plastic
Inlet ring material	ABS plastic
Flowgrid material	PP plastic
Number of blades	5
Airflow direction	A
Direction of rotation	Counterclockwise, 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 interference emission	According to EN 61000-6-4 (industrial 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 60335-1; EN 60034-1; EN 60204-1; CE; UKCA
Approval	CSA C22.2 No. 77 + CAN/CSA-E60730-1; UL 1004-7 + 60730-1

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EC axial panel fan - AxiEco
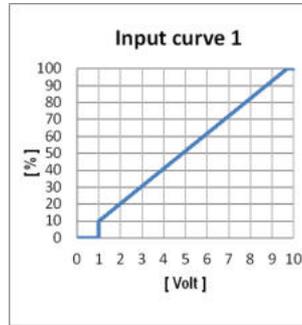
with inlet ring and air inlet grille

Product drawing
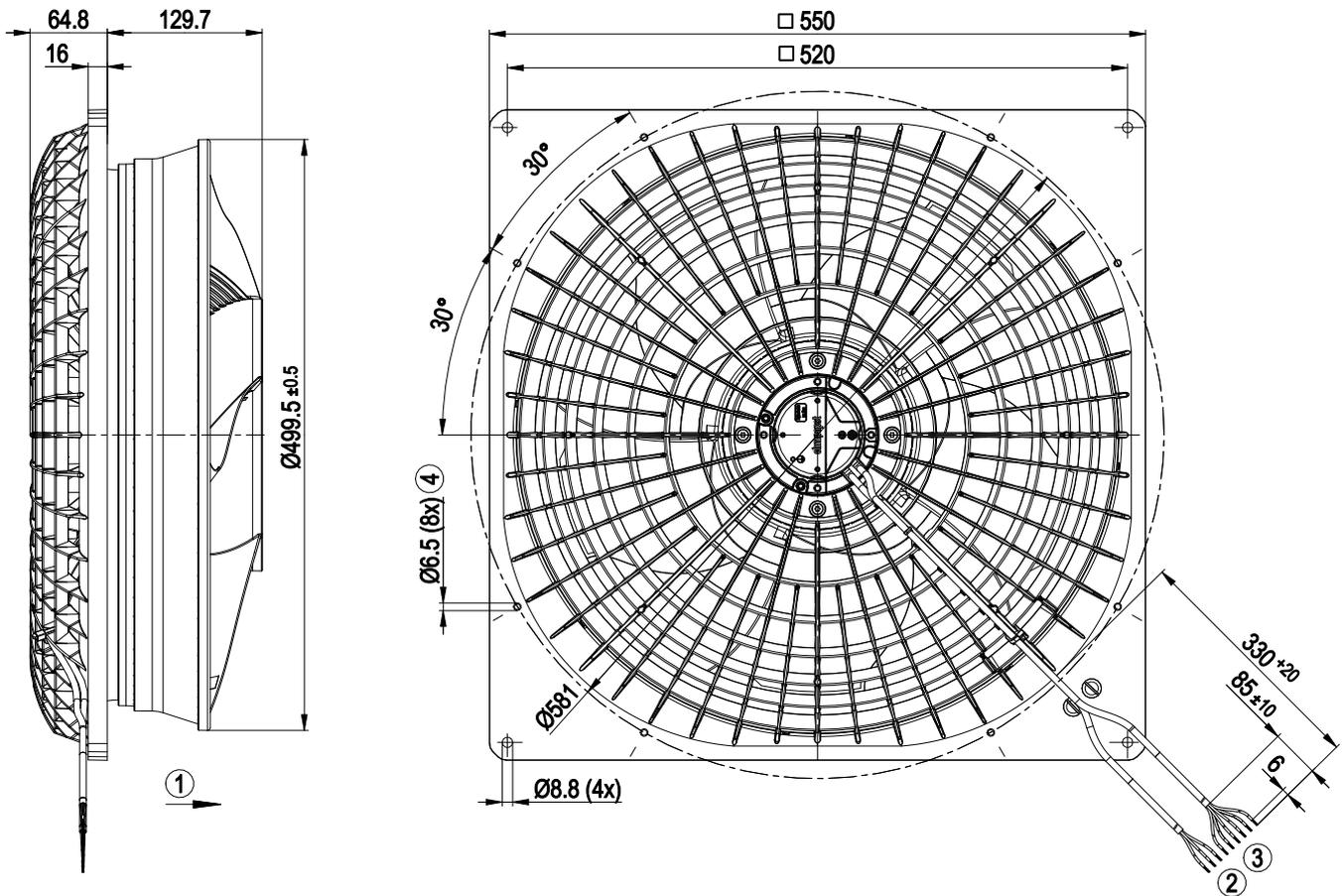
1	Direction of air flow "A"
2	Supply line (PWR) PVC AWG20
	3x splice
3	Control wire (CTRL) PVC AWG22
	6x splice
4	Fastening holes are provided and must be opened subsequently if necessary

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Connection diagram

Input curve 1

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
	CTRL	-	gray	No function
	CTRL	-	brown	No function

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Terminal/plug assignment

Basic (B4)
Factory configuration option upon request

○ *Factory configuration option*

IO	configurable IO mode	electrical specification	INPUT source: set value	INPUT switch: parameter set: #1 / #2	INPUT switch: direction of rotation: cw / ccw	INPUT switch: enable/disable input	INPUT configurable function	OUTPUT signal: tach out	OUTPUT signal: diagnostics out	OUTPUT signal: alarm out	OUTPUT signal: run monitoring	OUTPUT signal: status	OUTPUT signal: configurable function
IO1	○ **Din1** (high active): digital input	active: parameterizable voltage x-30 VDC / not active: pin open or parameterizable voltage <x VDC, SELV		○	○	○	○						
IO1	○ **Ain1** 0-10 V/PWM: analog input	R_i = 100 kΩ, characteristic curve parameterizable, f_{PWM} = 1k..10 kHz, SELV	○				○						
IO2	○ **Tach out** (open collector)	Umax=50 VDC, Imax=10 mA, SELV						○					
IO2	○ **Diagnostics out** (open collector)	Umax=50 VDC, Imax=10 mA, SELV							○				
IO2	○ **Alarm out** (open collector)	Umax=50 VDC, Imax=10 mA, SELV								○			
IO2	○ **Open collector**	Umax=50 VDC, Imax=10 mA, SELV									○	○	○
Vout	○ Voltage output	Voltage10 VDC, SELV											

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Curves: Air performance 50 Hz
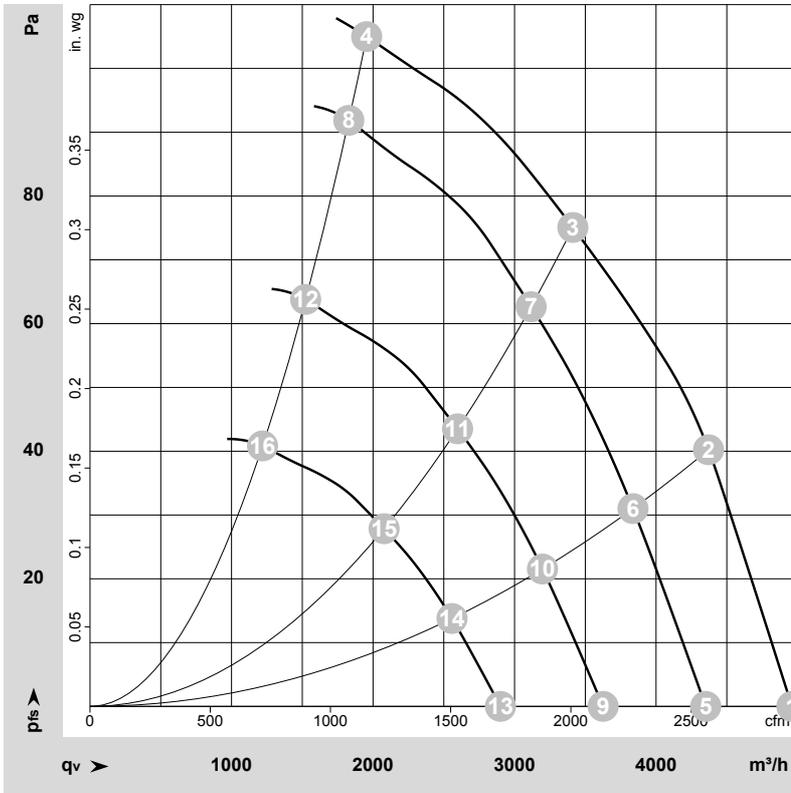
ρ = 1.178 kg/m³ ± 2 %

Measurement: LU-230360-1
Date: 2024-01-16
Nozzle: 8217118762

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}	LwA_{out}	LwA	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min⁻¹	W	A	dB(A)	dB(A)	dB(A)	dB	m³/h	Pa	cfm	in. wg
1	1~	230	50	1025	133	1.14	63	70	73	75	4960	0	2920	0.00
2	1~	230	50	1025	164	1.38	60	68	71	73	4370	40	2575	0.16
3	1~	230	50	985	170	1.40	56	64	67	69	3410	75	2010	0.30
4	1~	230	50	960	170	1.40	57	64	67	69	1955	105	1150	0.42
5	1~	230	50	900	90	0.77	59	67	70	72	4350	0	2560	0.00
6	1~	230	50	900	111	0.93	57	65	68	69	3835	31	2260	0.12
7	1~	230	50	900	129	1.08	54	62	65	66	3115	63	1835	0.25
8	1~	230	50	900	138	1.17	55	63	66	67	1830	92	1075	0.37
9	1~	230	50	750	52	0.44	55	62	65	67	3625	0	2135	0.00
10	1~	230	50	750	64	0.54	52	60	63	65	3195	22	1880	0.09
11	1~	230	50	750	75	0.63	49	57	60	62	2600	44	1530	0.18
12	1~	230	50	750	80	0.67	51	58	61	63	1525	64	895	0.26
13	1~	230	50	600	27	0.23	49	57	60	61	2900	0	1705	0.00
14	1~	230	50	600	33	0.28	47	55	57	59	2560	14	1505	0.06
15	1~	230	50	600	38	0.32	44	51	54	56	2080	28	1225	0.11
16	1~	230	50	600	41	0.35	45	53	55	57	1220	41	715	0.16

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

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