

8300101345  
VWT0500CSNJS

# EC axial panel fan - AxiEco

Fan housing with guard grille

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Amtsgericht (court of registration) Stuttgart · HRB 590142

## Nominal data

Item	8300101345	
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 <sup>-1</sup>	795
Power consumption	W	150
Current draw	A	1.3
Max. back pressure	Pa	80
Max. back pressure	in. wg	0.32
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 $\eta_{es}$	%	50.1	28.4	09 Power consumption $P_{ed}$	kW	0.14
02 Measurement category		A		09 Air flow $q_v$	m <sup>3</sup> /h	3470
03 Efficiency category		Static		09 Pressure increase $p_{fs}$	Pa	66
04 Efficiency grade N		61.7	40	10 Speed (rpm) n	min <sup>-1</sup>	800
05 Variable speed drive		Yes		11 Specific ratio*		1.00

Data obtained at optimum efficiency level.

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

LU-228022

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	500 mm
Motor size	74
Rotor surface	Thick-film passivated
Electronics housing material	Die-cast aluminum
Impeller material	PP plastic
Fan housing material	PP plastic
Number of blades	5
Airflow direction	V
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"><li>- Output 10 VDC, max. 10 mA</li><li>- Locked-rotor detection</li><li>- Tach output</li><li>- Speed control</li><li>- Power limiter</li><li>- Motor current limitation</li><li>- Soft start</li><li>- Control input 0-10 VDC / PWM</li><li>- Control interface with SELV potential safely disconnected from the mains</li><li>- Overvoltage detection</li><li>- Thermal overload protection for electronics/motor</li><li>- Line undervoltage detection</li></ul>
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

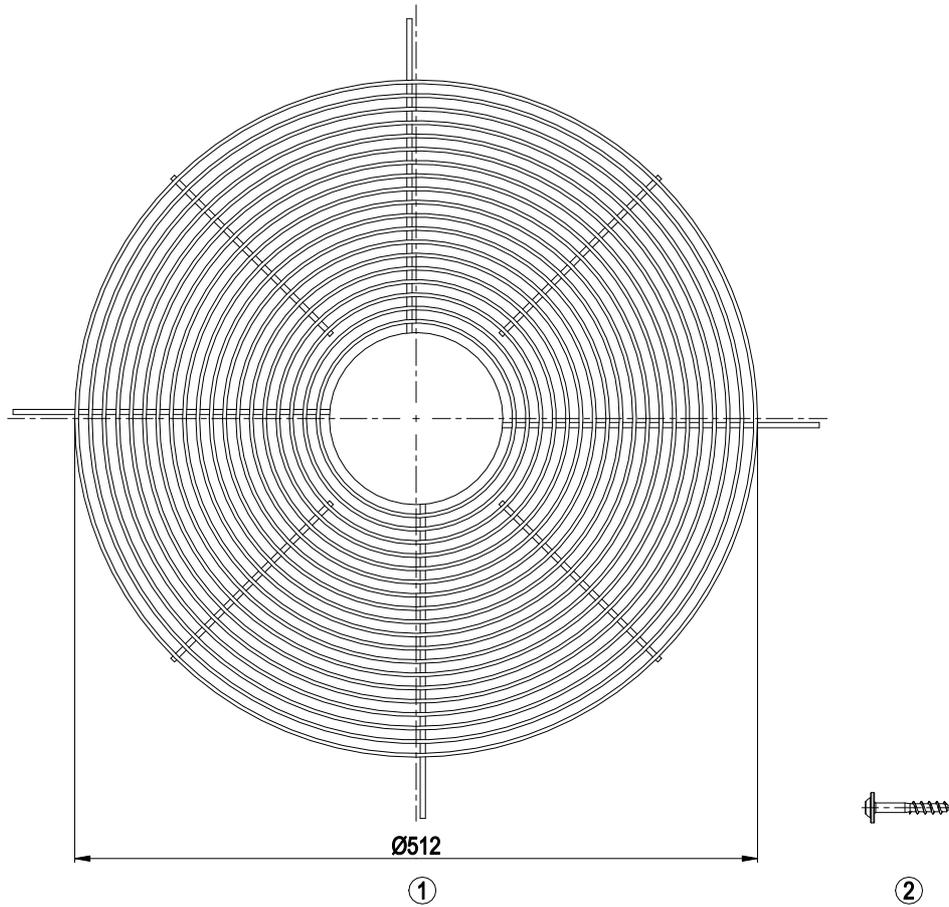


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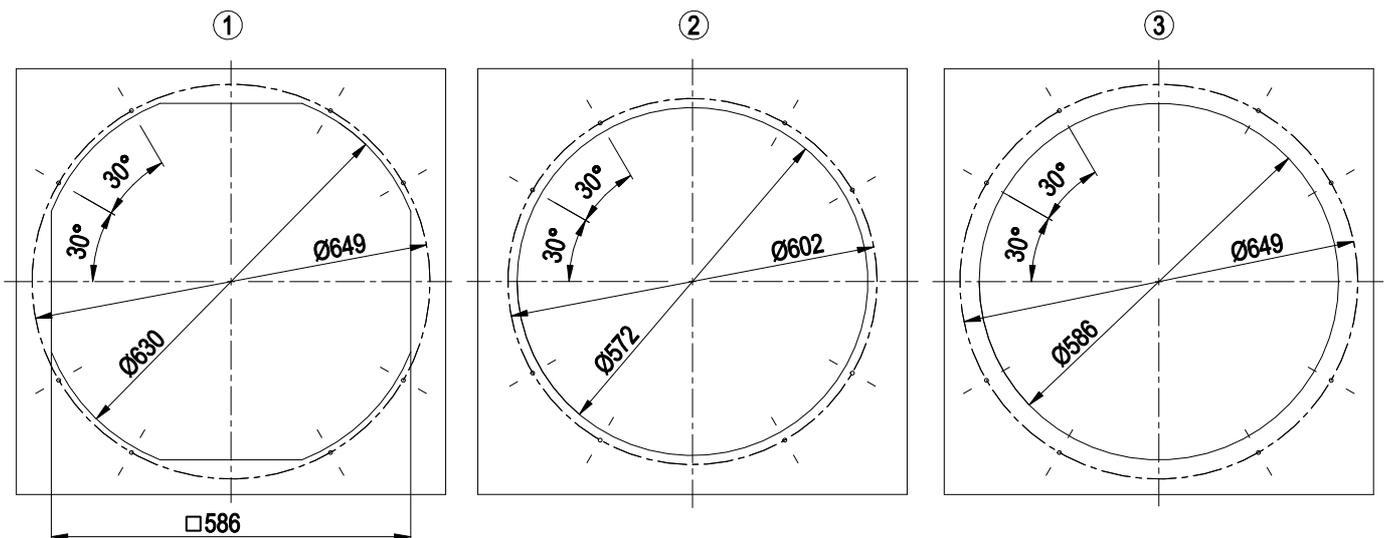
Fan housing with guard grille

## Accessory part



- |   |                                   |
|---|-----------------------------------|
| 1 | Guard grill 50070-2-4039          |
| 2 | Oval head screw 60080-7-6201 (4x) |

## Mounting dimensions



All 8 holes on the relevant pitch circle must always be used for all types of fastening.

1 intake-side mounting on flange

2 intake-side mounting on suction nozzle

The  $\text{Ø}6.5$  mm holes must be pierced from the underside with a mandrel or similar tool.

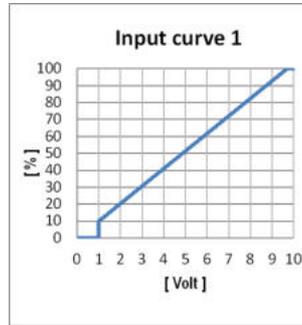
We recommend using M6 cheese-head screws with hexagon socket (DIN 912/DIN EN ISO 4762) for fastening.

3 outlet-side mounting on flange

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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, I <sub>max</sub> = 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%, I <sub>max</sub> =10 mA Short-circuit-proof, power supply for external devices, SELV
	CTRL	-	gray	No function
	CTRL	-	brown	No function

## 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						

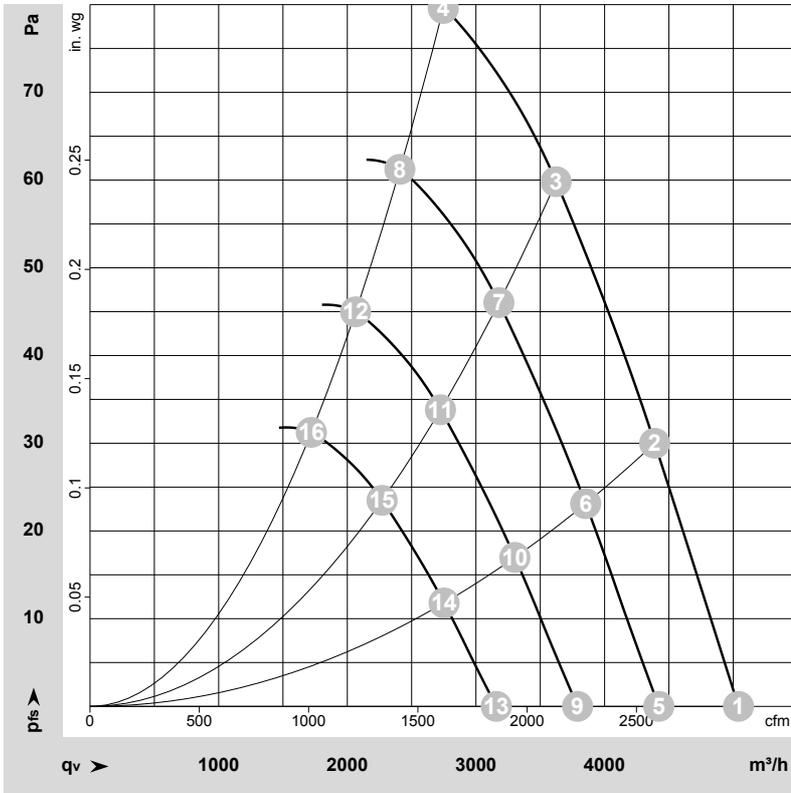
  

	INPUT	OUTPUT
source: set value	◦	
switch: parameter set: #1 / #2	◦	
switch: direction of rotation: cw / ccw	◦	
switch: enable/disable input	◦	
configurable function	◦	
signal: tach out		◦
signal: diagnostics out		◦
signal: alarm out		◦
signal: run monitoring		◦
signal: status		◦
signal: configurable 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-228022-1  
Date: 2023-07-27  
Housing: 50100-2-4013

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 <sub>e</sub>	I	LpA <sub>in</sub>	LwA <sub>in</sub>	LwA <sub>out</sub>	LwA	q <sub>v</sub>	P <sub>fs</sub>	q <sub>v</sub>	P <sub>fs</sub>
		V	Hz	min <sup>-1</sup>	W	A	dB(A)	dB(A)	dB(A)	dB	m <sup>3</sup> /h	Pa	cfm	in. wg
1	1~	230	50	795	115	0.98	60	66	66	69	5040	0	2965	0.00
2	1~	230	50	795	132	1.12	57	63	64	67	4390	30	2585	0.12
3	1~	230	50	795	142	1.21	55	61	63	65	3625	60	2130	0.24
4	1~	230	50	795	150	1.30	55	62	63	66	2745	80	1615	0.32
5	1~	230	50	700	78	0.66	56	62	63	66	4420	0	2605	0.00
6	1~	230	50	700	89	0.76	54	60	61	64	3855	23	2270	0.09
7	1~	230	50	700	96	0.82	52	58	59	62	3180	46	1870	0.18
8	1~	230	50	700	101	0.86	52	59	60	62	2410	61	1420	0.24
9	1~	230	50	600	49	0.42	52	58	59	62	3790	0	2230	0.00
10	1~	230	50	600	56	0.48	50	56	57	60	3300	17	1945	0.07
11	1~	230	50	600	61	0.51	48	54	55	58	2725	34	1605	0.14
12	1~	230	50	600	64	0.54	48	55	56	59	2065	45	1215	0.18
13	1~	230	50	500	28	0.24	48	54	54	57	3160	0	1860	0.00
14	1~	230	50	500	32	0.28	45	52	53	55	2750	12	1620	0.05
15	1~	230	50	500	35	0.30	43	50	51	53	2270	23	1335	0.09
16	1~	230	50	500	37	0.31	44	50	52	54	1720	31	1010	0.12

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P<sub>e</sub> = Power consumption · I = Current draw · LpA<sub>in</sub> = Sound pressure level intake side · LwA<sub>in</sub> = Sound power level intake side  
LwA<sub>out</sub> = Sound power level outlet side · q<sub>v</sub> = Air flow · P<sub>fs</sub> = Pressure increase