

8300101536
VUB0500NSNJS

EC axial panel fan - AxiTone

sickle-shaped blades (S series)
Fan housing with mounting grille

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	8300101536	
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	870
Power consumption	W	170
Current draw	A	1.4
Max. back pressure	Pa	70
Max. back pressure	in. wg	0.28
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

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

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

		Actual	Req. 2015			
01 Overall efficiency η_{es}	%	44.2	28.8	09 Power consumption P_{ed}	kW	0.16
02 Measurement category		A		09 Air flow q_v	m ³ /h	3925
03 Efficiency category		Static		09 Pressure increase p_{fs}	Pa	60
04 Efficiency grade N		55.4	40	10 Speed (rpm) n	min ⁻¹	885
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-232050

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).

8300101536
VUB0500NSNJS

EC axial panel fan - AxiTone

sickle-shaped blades (S series)
Fan housing with mounting grille

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	Sheet steel, galvanized and coated with black plastic (RAL 9005)
Support bracket material	Steel, coated with black plastic (RAL 9005)
Number of blades	3
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
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 60034-1; EN 60204-1; EN 60335-1; CE; UKCA
Approval	CSA C22.2 No. 77 + CAN/CSA-E60730-1; UL 1004-7 + 60730-1

8300101536

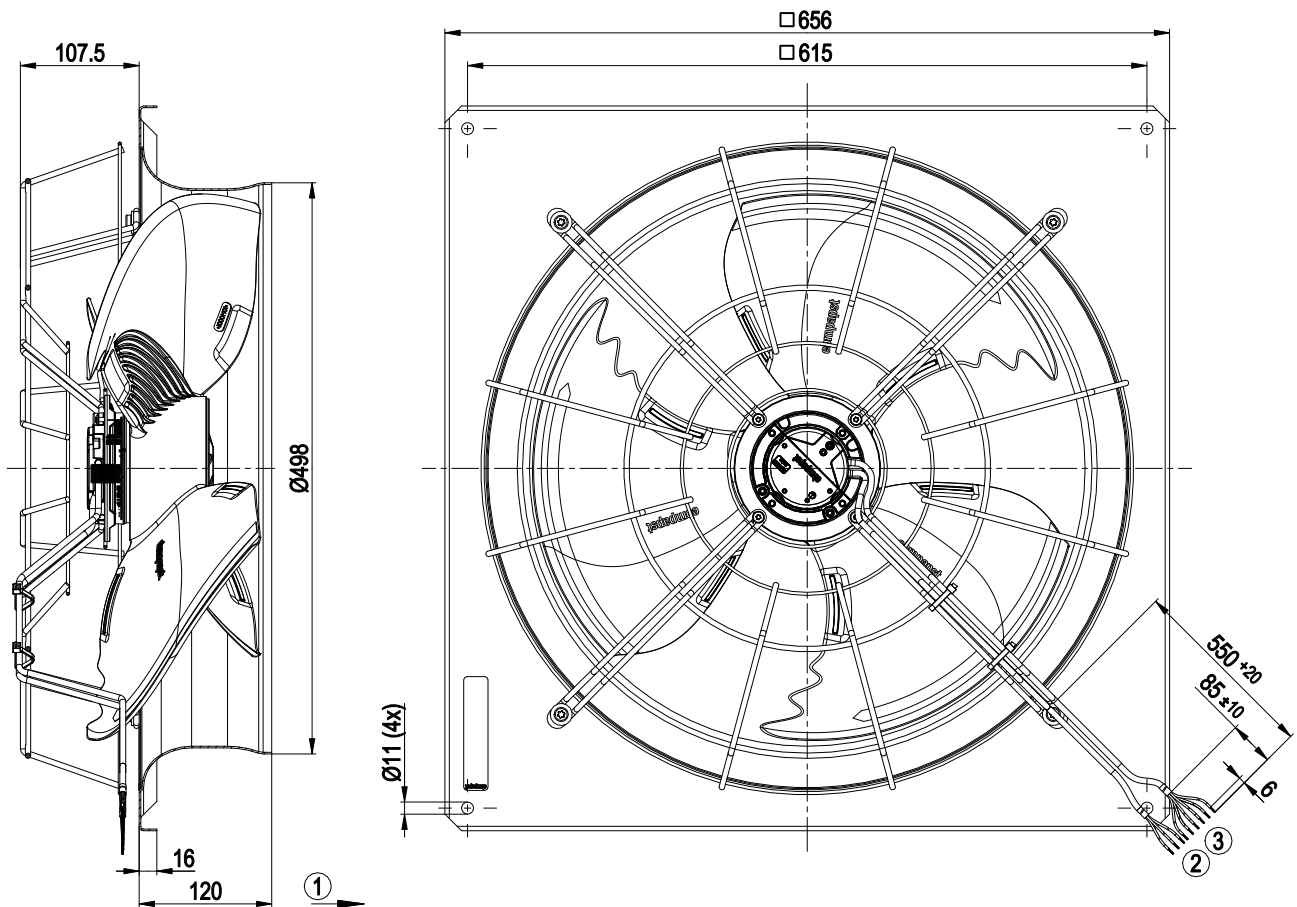
VUB0500NSNJS

EC axial panel fan - AxiTone

sickle-shaped blades (S series)

Fan housing with mounting grille

Product drawing

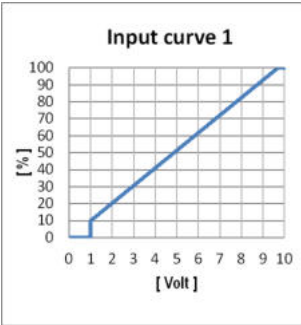


1	Direction of air flow "A"
2	Supply line (PWR) PVC AWG20
	3x splice
3	Control wire (CTRL) PVC AWG22
	6x splice

EC axial panel fan - AxiTone

sickle-shaped blades (S series)
Fan housing with mounting grille

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
	CTRL	-	gray	No function
	CTRL	-	brown	No function

VUB0500NSNJS

Fan housing with mounting grille

Basic (B4)

Factory configuration option upon request

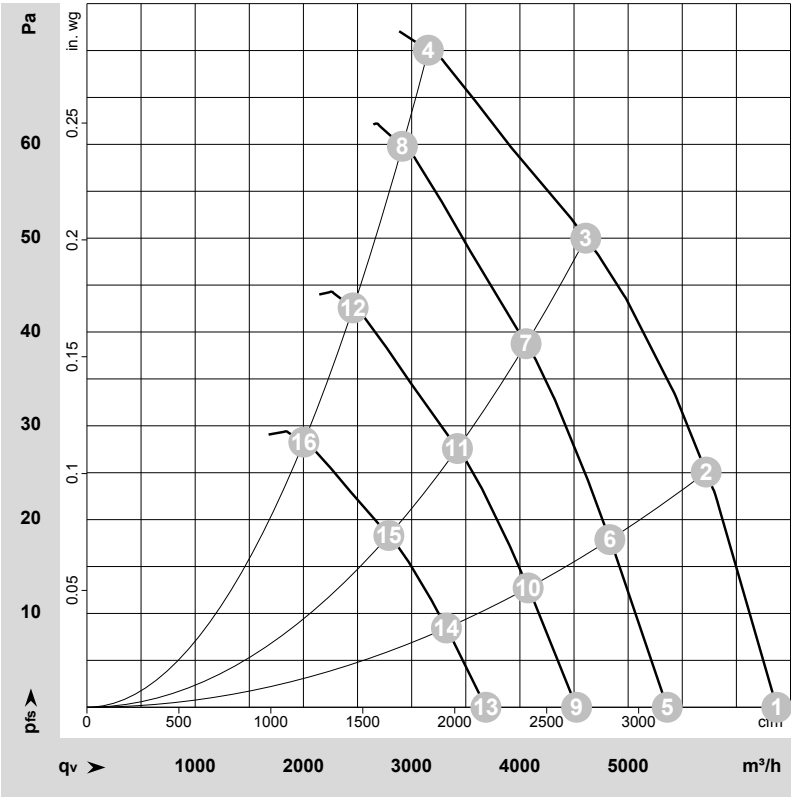
- factory configuration option

IO1	configurable IO mode		electrical specification	
	Dim1 (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, $f_{PWM} = 1\text{ k} - 10\text{ kHz}$, 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	
Voltage output		Voltage 10 VDC, SELV		
Vout				

EC axial panel fan - AxiTone

sickle-shaped blades (S series)
Fan housing with mounting grille

Curves: Air performance 50 Hz



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

Measurement: LU-232050-1
Date: 2024-05-16
Housing: 10524-2-4037

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	950	146	1.23	56	62	61	65	6375	0	3750	0.00
2	1~	230	50	945	166	1.39	54	60	60	63	5720	25	3365	0.10
3	1~	230	50	910	169	1.42	50	57	56	59	4610	50	2715	0.20
4	1~	230	50	865	168	1.42	51	58	57	61	3155	70	1855	0.28
5	1~	230	50	800	87	0.73	51	57	57	60	5360	0	3155	0.00
6	1~	230	50	800	100	0.84	50	56	55	59	4830	18	2845	0.07
7	1~	230	50	800	115	0.97	47	53	53	56	4055	39	2390	0.16
8	1~	230	50	800	133	1.12	49	56	55	59	2915	60	1715	0.24
9	1~	230	50	675	52	0.44	47	53	53	56	4525	0	2665	0.00
10	1~	230	50	675	60	0.50	45	52	51	54	4075	13	2400	0.05
11	1~	230	50	675	69	0.58	43	49	48	52	3425	28	2015	0.11
12	1~	230	50	675	80	0.67	45	52	51	55	2460	43	1445	0.17
13	1~	230	50	550	28	0.24	42	48	47	51	3685	0	2170	0.00
14	1~	230	50	550	33	0.27	40	46	46	49	3320	8	1955	0.03
15	1~	230	50	550	37	0.31	38	44	43	47	2790	18	1640	0.07
16	1~	230	50	550	43	0.36	40	47	46	50	2005	28	1180	0.11

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