

8300101445
VVY0450NSNDS

EC axial panel fan - AxiTone

sickle-shaped blades (S series)

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Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Item	8300101445	
Motor	E07432-18	
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	820
Power consumption	W	85
Current draw	A	0.7
Max. back pressure	Pa	42
Max. back pressure	in. wg	0.17
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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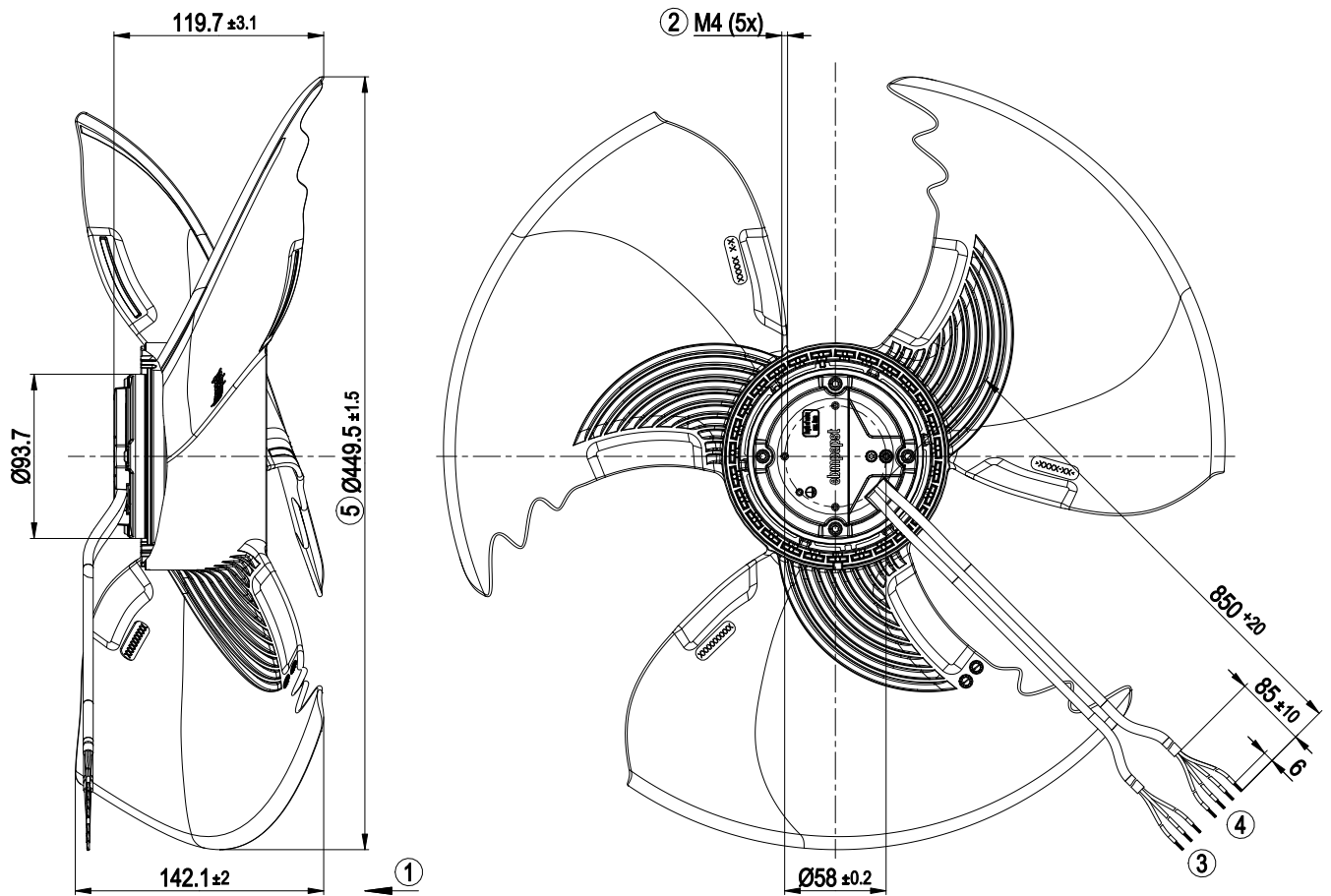
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Technical description

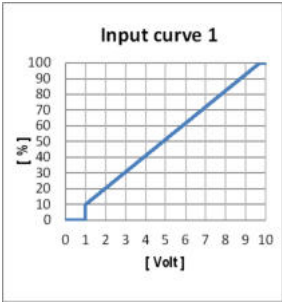
Size	450 mm
Motor size	74
Rotor surface	Thick-film passivated
Electronics housing material	Die-cast aluminum
Impeller material	PP plastic
Number of blades	3
Airflow direction	V
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (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	- Output 10 VDC, max. 1.1 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
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
Comment on CE	Ecodesign Directive 2009/125/EC + Fan Directive (EC) No. 327/2011 does not apply, as power consumption <125W.

Product drawing



1	Airflow direction "V"
2	Max. clearance for screw 5 mm
3	Cable PVC AWG20 (PWR) 3x splice
4	Cable PVC AWG22 (CTRL) 4x splice
5	The diameter of the impeller becomes larger than indicated on the drawing due to the centrifugal forces during operation. The dimension indicated refers to the condition on delivery.

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=1.1 mA Not short-circuit-proof, power supply for external devices, SELV

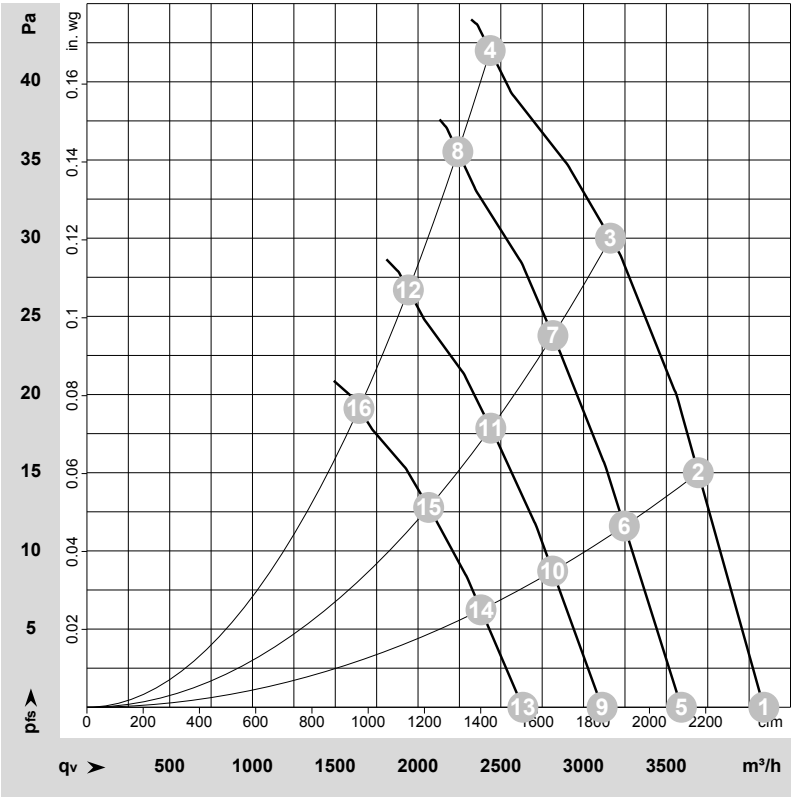
Terminal/plug assignment

		configurable IO mode		electrical specification		INPUT		OUTPUT			
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} = 1 k - 10 kHz, SELV			switch: parameter set: #1 / #2	○	switch: enable/disable input	○	configurable function	
						switch: direction of rotation: cw / ccw	○			signal: tach out	
								signal: diagnostics out		signal: alarm out	
										signal: run monitoring	
										signal: status	
IO2	Tach out (open collector)	Diagnostics out (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-230319-1
Date: 2024-01-17
Housing: 64007-2-4037

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	855	71	0.59	48	54	54	57	4090	0	2405	0.00
2	1~	230	50	855	79	0.65	46	52	53	56	3695	15	2175	0.06
3	1~	230	50	845	85	0.69	43	50	51	53	3160	30	1860	0.12
4	1~	230	50	815	85	0.69	43	50	50	53	2435	42	1435	0.17
5	1~	230	50	750	48	0.40	45	51	51	54	3590	0	2115	0.00
6	1~	230	50	750	54	0.44	42	49	50	52	3245	12	1910	0.05
7	1~	230	50	750	60	0.49	40	47	48	50	2815	24	1655	0.10
8	1~	230	50	750	66	0.54	41	48	48	51	2240	36	1320	0.14
9	1~	230	50	650	31	0.26	41	47	48	50	3110	0	1830	0.00
10	1~	230	50	650	35	0.29	39	45	46	49	2815	9	1655	0.04
11	1~	230	50	650	39	0.32	37	43	44	47	2440	18	1435	0.07
12	1~	230	50	650	43	0.35	37	44	44	47	1940	27	1145	0.11
13	1~	230	50	550	19	0.16	37	43	43	46	2635	0	1550	0.00
14	1~	230	50	550	21	0.17	35	41	42	45	2380	6	1400	0.02
15	1~	230	50	550	24	0.19	32	39	40	43	2065	13	1215	0.05
16	1~	230	50	550	26	0.21	33	40	40	43	1645	19	965	0.08

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