

EC axial fan

sickled blades (S series)

A3G450-AE21-55 ebmpapst Datasheet
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Nominal data

Type	A3G450-AE21-55	
Motor	M3G084-DF	
Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min ⁻¹	1100
Power input	W	215
Current draw	A	1.5
Max. back pressure	Pa	80
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
 Subject to alterations

Data according to ErP directive

		Actual	Request 2015
01 Overall efficiency η_{es}	%	43.6	29.4
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		54.2	40
05 Variable speed drive		Yes	

Data definition with optimum efficiency.

The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

09 Power input P_{ed}	kW	0.21
09 Air flow q_v	m³/h	3655
09 Pressure increase p_{fs}	Pa	81
10 Speed (rpm) n	min ⁻¹	1100
11 Specific ratio*		1.00

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

LU-163265



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Technical features

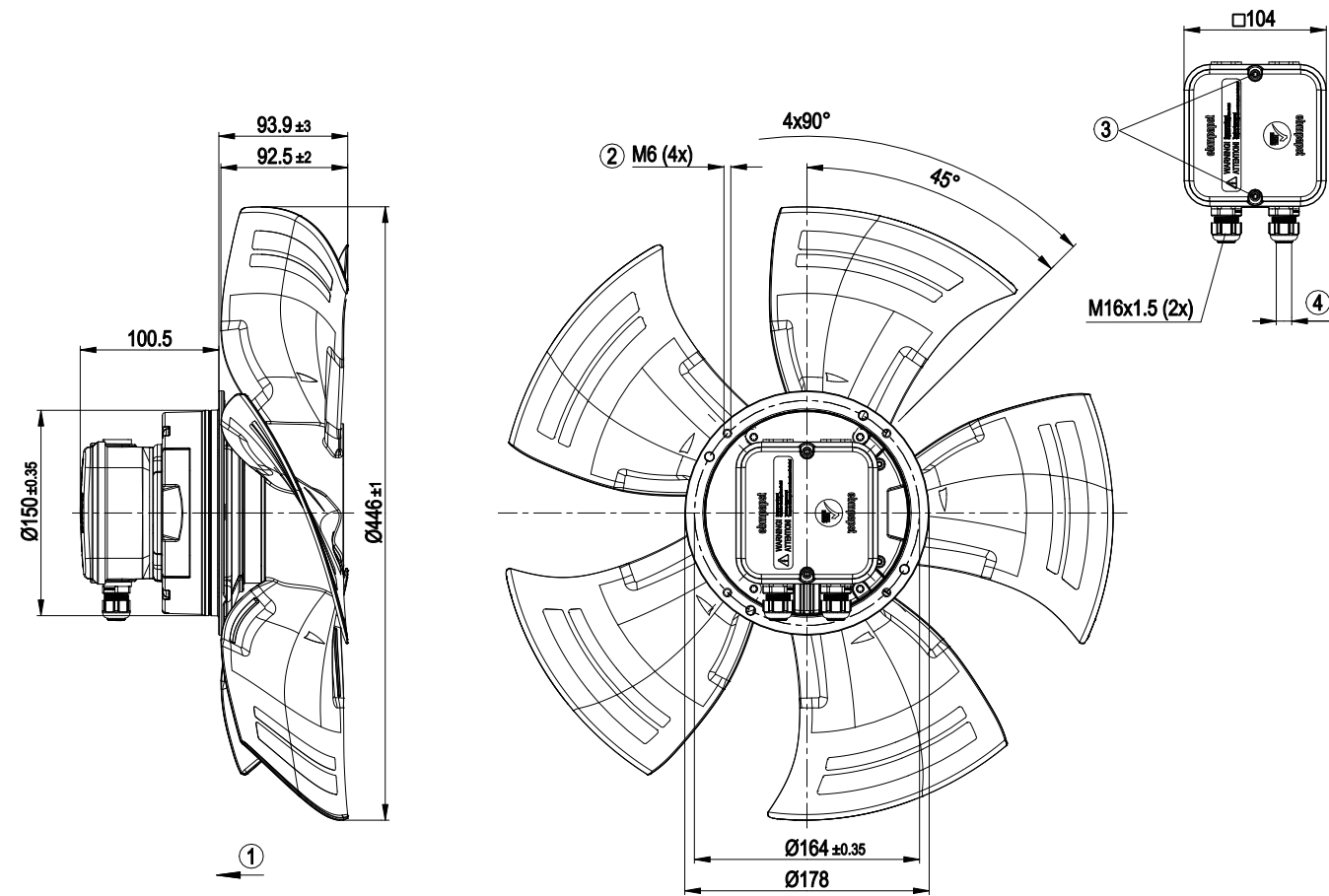
Mass	4.2 kg
Size	450 mm
Surface of rotor	Coated in black
Material of terminal box	PC / ABS plastic
Material of electronics housing	Die-cast aluminium, coated in black
Material of blades	Press-fitted sheet steel blank, sprayed with PP plastic
Number of blades	5
Direction of air flow	"V"
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
Humidity (F)/environmental protection class (H)	F4-1
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensate discharge holes	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Alarm relay - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Over-temperature protected electronics / motor
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC harmonics	Acc. to EN 61000-3-2/3
EMC interference emission	Acc. to EN 61000-6-3 (household environment)
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Electrical leads	Via terminal box
Motor protection	Thermal overload protector (TOP) wired internally
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1; CE



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Product drawing

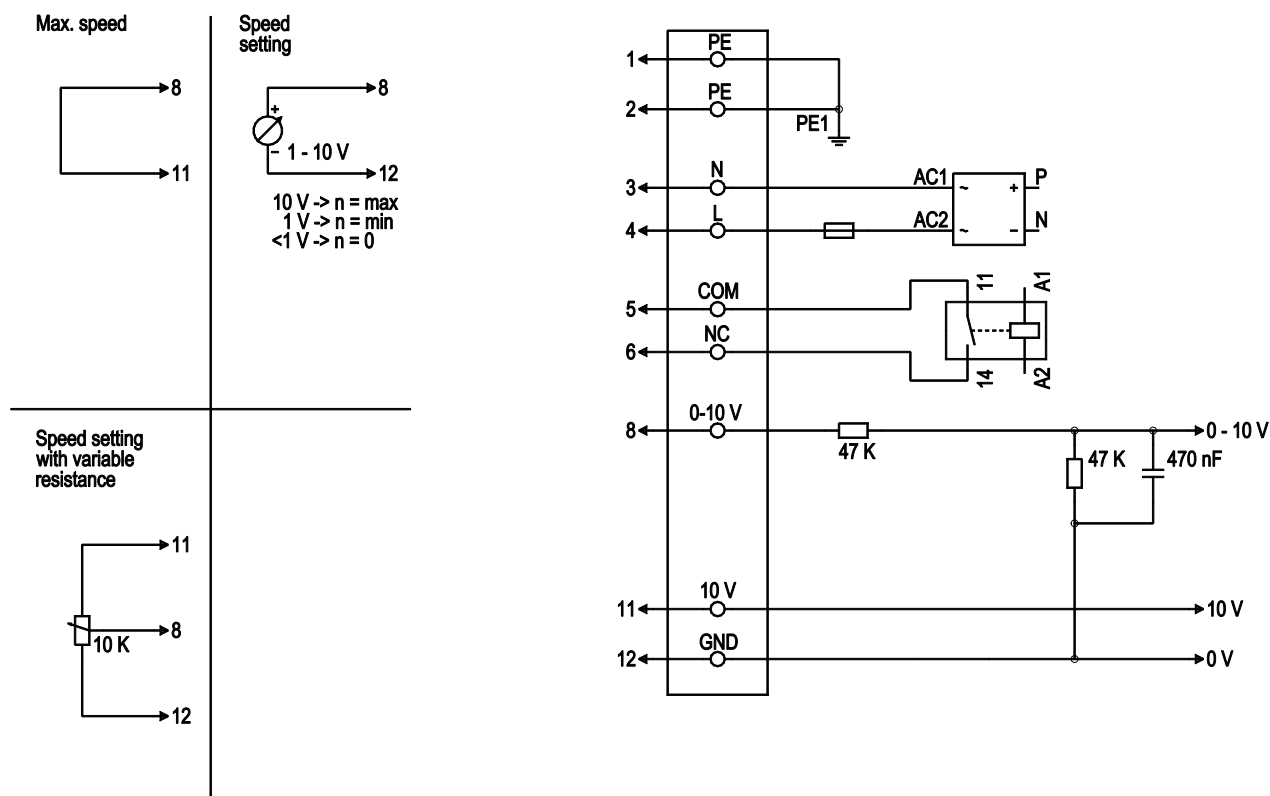


1	Direction of air flow "V"
2	Depth of screw max. 10 mm
3	Tightening torque 1.5 ± 0.2 Nm
4	Cable diameter min. 4 mm, max. 10 mm, tightening torque 2.5 ± 0.4 Nm



Connection screen

Customer circuit

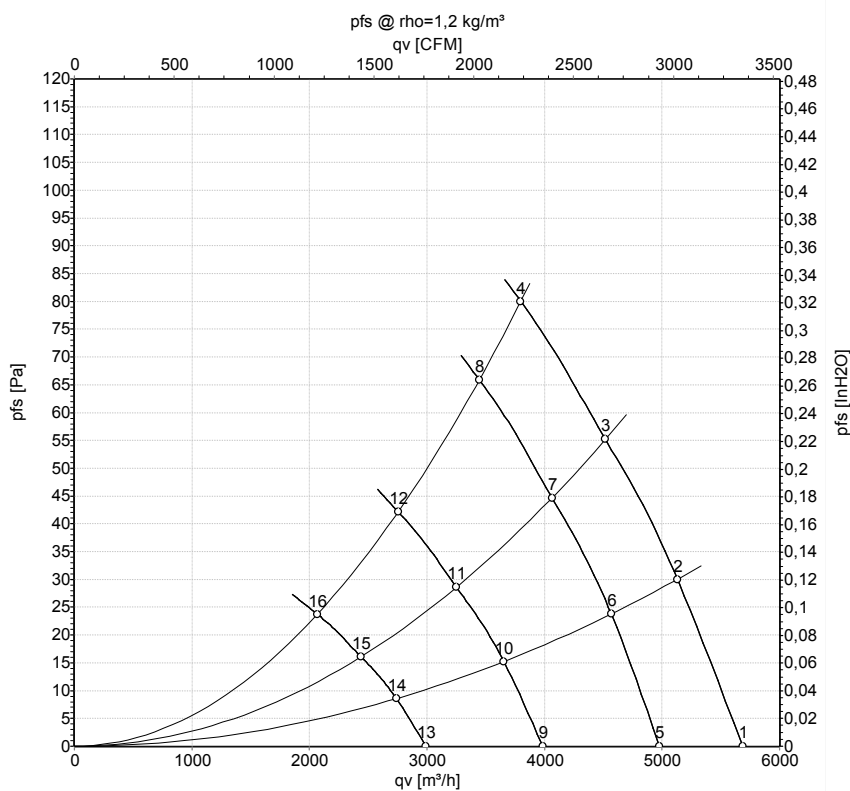


No.	Conn.	Designation	Colour	Function / assignment
1	1,2	PE	green/yellow	Protective earth
1	3	N	blue	Supply voltage, neutral conductor, 50/60 Hz
1	4	L	black	Supply voltage, phase, 50/60 Hz
1	5	COM	white 1	Floating status message contact, break for failure (2 A, max. 250 VAC, min. 10 mA, AC1)
1	6	NC	white 2	Floating status message contact, break for failure
2	8	0 - 10 V	yellow	Control input, set value 0 - 10 VDC, impedance 100 kOhm, SELV
2	11	10 VDC	red	Voltage output 10 VDC (+/-3%), max. 10 mA, supply voltage for ext. devices (e.g. potentiometer), SELV
2	12	GND	blue	Reference mass for control interface, SELV

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Charts: Air flow 50 Hz



Measurement: LU-163265-1

Air performance measured as per ISO 5801
 Installation category A. For detailed
 information on the measuring set-up, please
 contact ebm-papst. Suction-side noise
 levels: L_{WA} measured as per ISO 13347 /
 L_{pA} measured with 1m distance to fan axis.
 The values given are valid under the
 measuring conditions mentioned above and
 may vary according to the actual installation
 situation. With any deviation from the
 standard set-up, the specific values have to
 be checked and reviewed with the unit
 installed.

Measured values

	U	f	n	P _{ed}	I	q _v	p _{fs}	q _v	p _{fs}
	V	Hz	min ⁻¹	W	A	m ³ /h	Pa	cfm	inH ₂ O
1	230	50	1140	187	1.28	5685	0	3345	0.00
2	230	50	1125	198	1.35	5130	30	3020	0.12
3	230	50	1110	208	1.41	4520	55	2660	0.22
4	230	50	1100	215	1.50	3795	80	2235	0.32
5	230	50	1000	125	0.86	4980	0	2930	0.00
6	230	50	1000	140	0.95	4570	24	2690	0.10
7	230	50	1000	151	1.02	4065	45	2390	0.18
8	230	50	1000	159	1.08	3445	66	2030	0.26
9	230	50	800	64	0.44	3985	0	2345	0.00
10	230	50	800	72	0.49	3655	15	2150	0.06
11	230	50	800	77	0.52	3250	29	1915	0.12
12	230	50	800	82	0.55	2755	42	1620	0.17
13	230	50	600	27	0.19	2985	0	1760	0.00
14	230	50	600	30	0.21	2740	9	1615	0.04
15	230	50	600	33	0.22	2440	16	1435	0.06
16	230	50	600	34	0.23	2065	24	1215	0.10

U = Supply voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power input · I = Current draw · q_v = Air flow · p_{fs} = Pressure increase

