A3G450-AE21-55

EC axial fan

sickled blades (S series)

ebm-papst Mulfingen GmbH & Co. KG
Bachmühle 2 · D-74673 Mulfingen
Phone +49 7938 81-0
Fax +49 7938 81-110
info1@de.ebmpapst.com
www.ebmpapst.com

Limited partnership · Headquarters Mulfingen
County court Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
County court Stuttgart · HRB 590142

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	

09 Power input P_{ed}	kW	0.21
09 Air flow q_v	m^3/h	3655
09 Pressure increase p_{fs}	Pa	81
10 Speed (rpm) n	min^{-1}	1100
11 Specific ratio*		1.00

Data definition with optimum efficiency.
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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

LU-163265

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Technical features

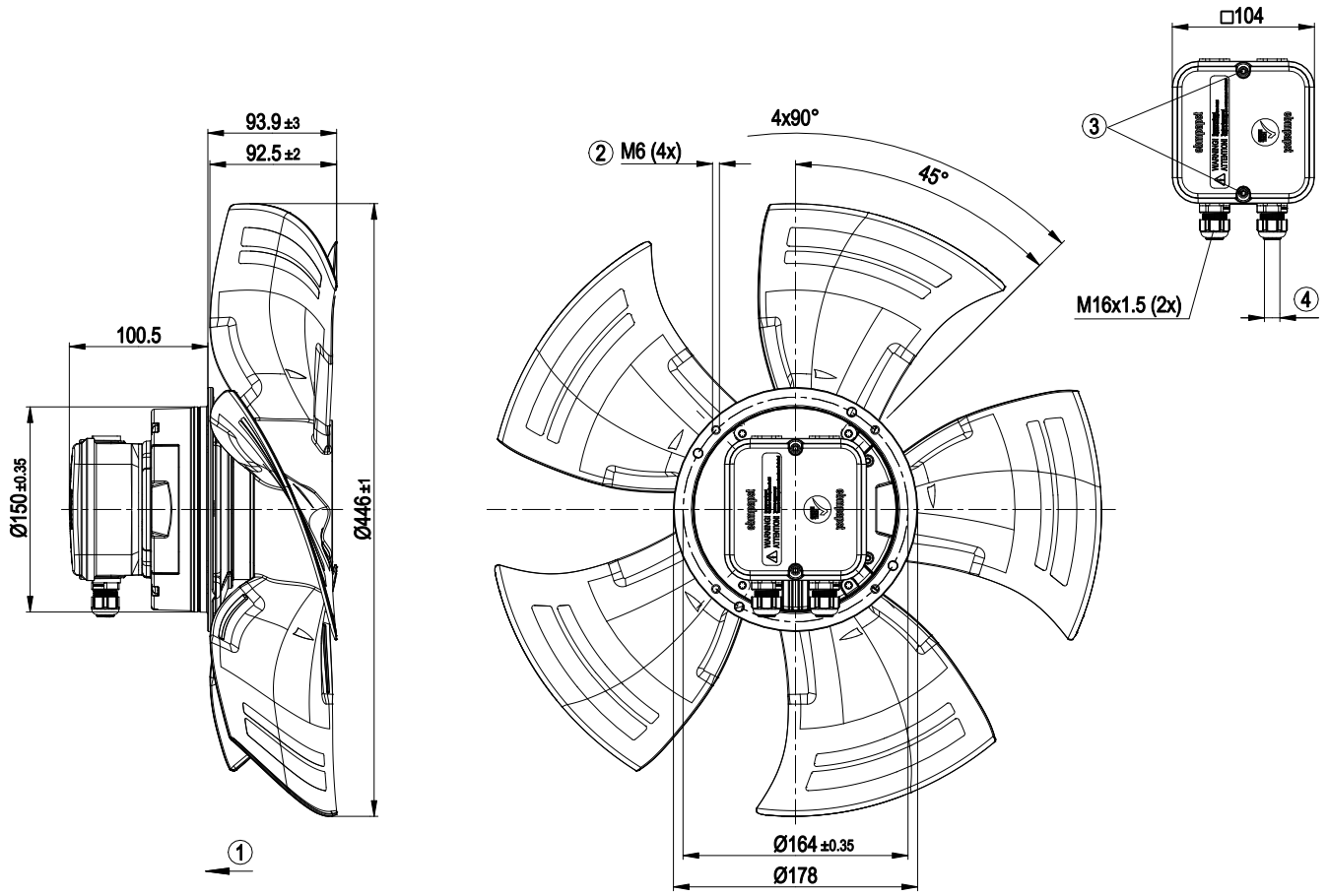
Mass	4.2 kg
Size	450 mm
Surface of rotor	Coated in black
Material of terminal box	PC / ABS plastic
Material of electronics housing	Die-cast aluminium, coated in black
Material of blades	Press-fitted sheet steel blank, sprayed with PP plastic
Number of blades	5
Direction of air flow	"V"
Direction of rotation	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



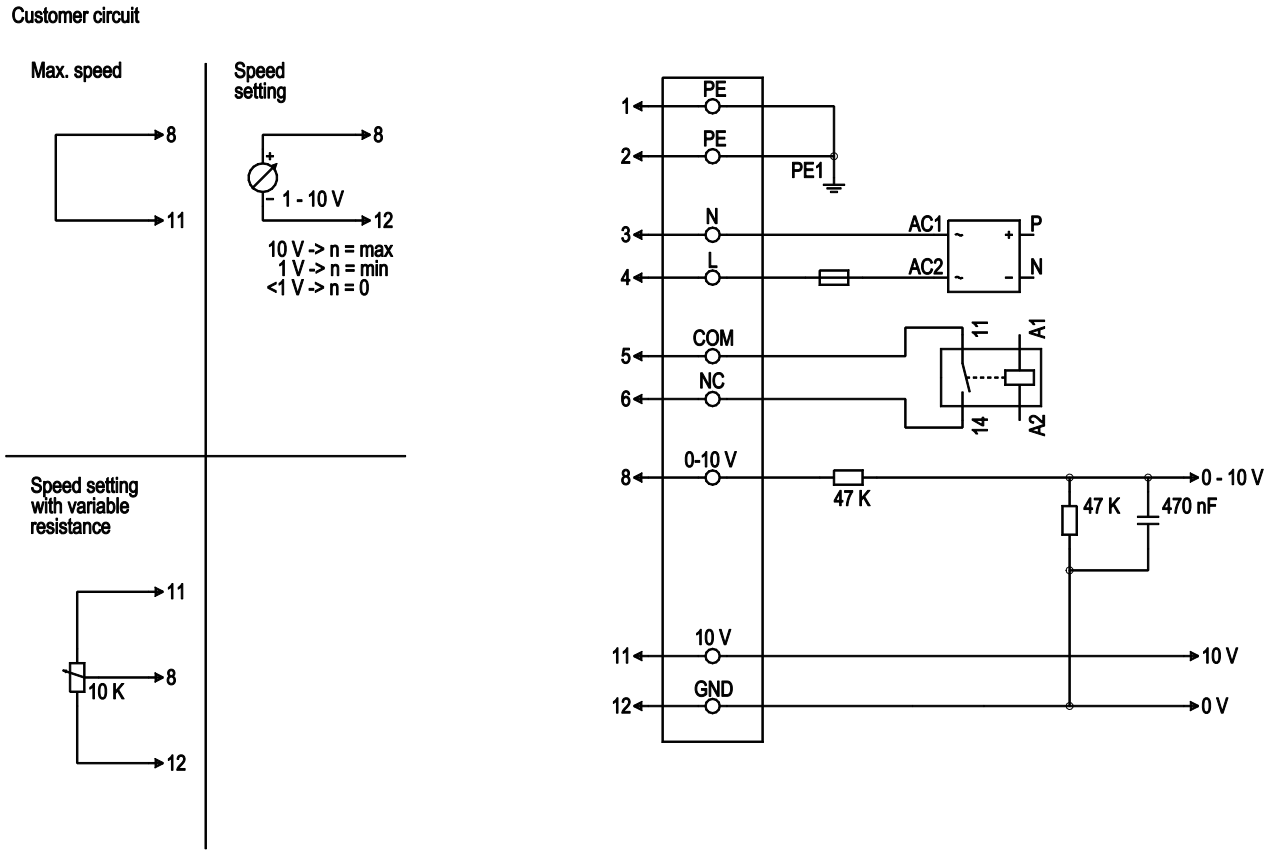
1	Direction of air flow "V"
2	Depth of screw max. 10 mm
3	Tightening torque 1.5±0.2 Nm
4	Cable diameter min. 4 mm, max. 10 mm, tightening torque 2.5±0.4 Nm

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Connection screen



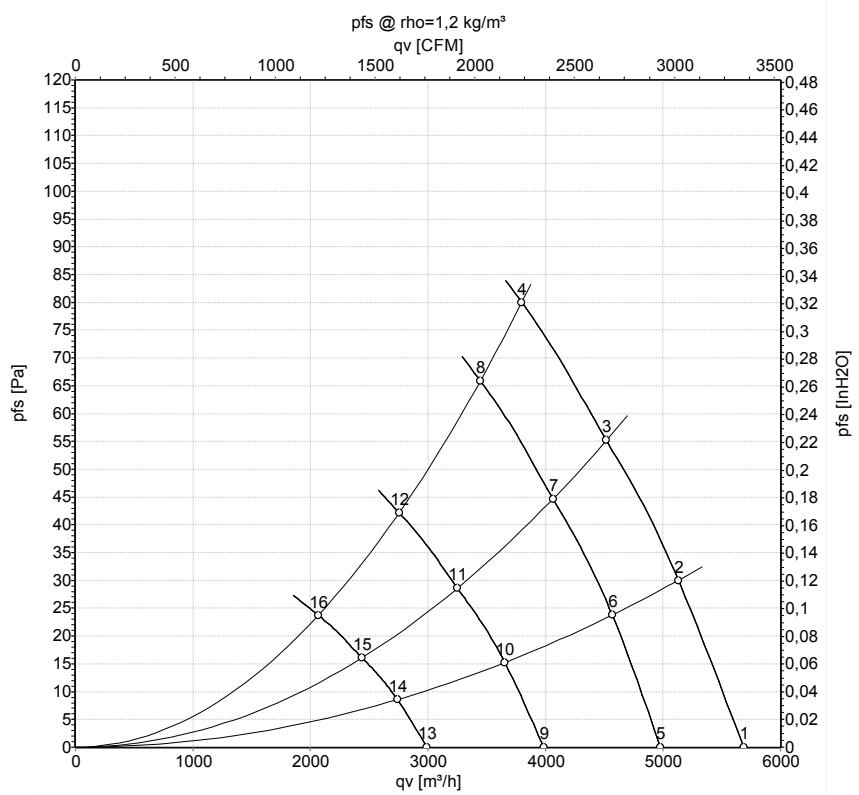
No.	Conn.	Designation	Colour	Function / assignment
1	1,2	PE	green/yellow	Protective earth
1	3	N	blue	Supply voltage, neutral conductor, 50/60 Hz
1	4	L	black	Supply voltage, phase, 50/60 Hz
1	5	COM	white 1	Floating status message contact, break for failure (2 A, max. 250 VAC, min. 10 mA, AC1)
1	6	NC	white 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: LwA measured as per ISO 13347 / LpA 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	inH2O
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

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