A3G450-AN04-10

EC axial fan

sickled blades (S series)

A3G450-AN04-10 ebmpapst Datasheet
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Nominal data

Type	**A3G450-AN04-10**
Motor	**M3G074-CF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min^{-1}	870
Power input	W	122
Current draw	A	1.0
Max. back pressure	Pa	57
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

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Technical features

Mass	2.5 kg
Size	450 mm
Surface of rotor	Thick layer passivated
Material of electronics housing	Die-cast aluminium
Material of blades	PP plastic
Number of blades	5
Direction of air flow	"A"
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
Humidity (F)/environmental protection class (H)	F3-1
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Mounting position	Any
Condensate discharge holes	None, open rotor
Cooling bore / aperture	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Tach output - Output limit - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Overvoltage detection - Over-temperature protected electronics / motor - Line undervoltage detection
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Motor protection	PTC resistor
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1; CE

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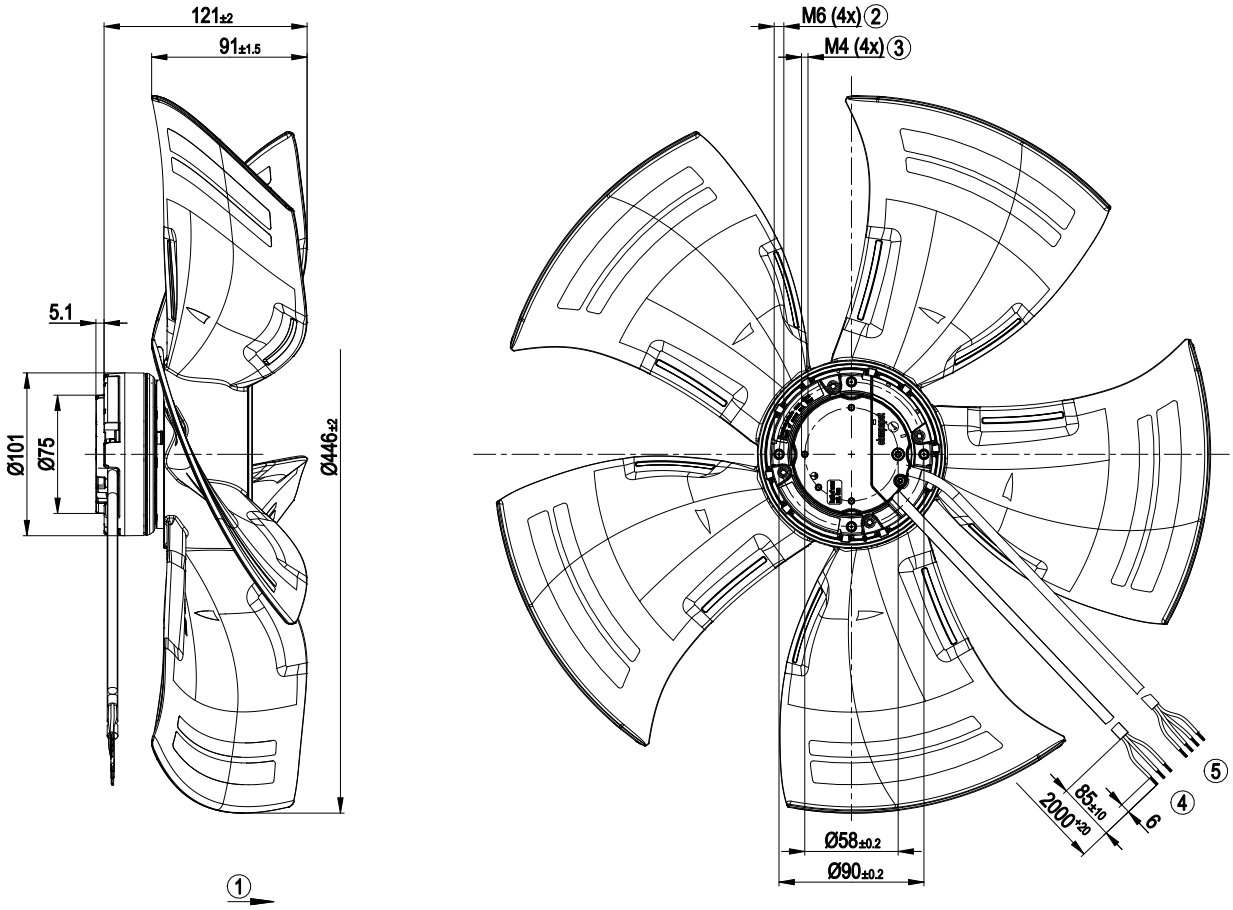
Product drawing



1	Direction of air flow "A"
2	Thread reach max. 10 mm
3	Thread reach max. 5 mm
4	Connection line PVC AWG20, 3x lead tips crimped
5	Connection line PVC AWG22, 4x lead tips crimped

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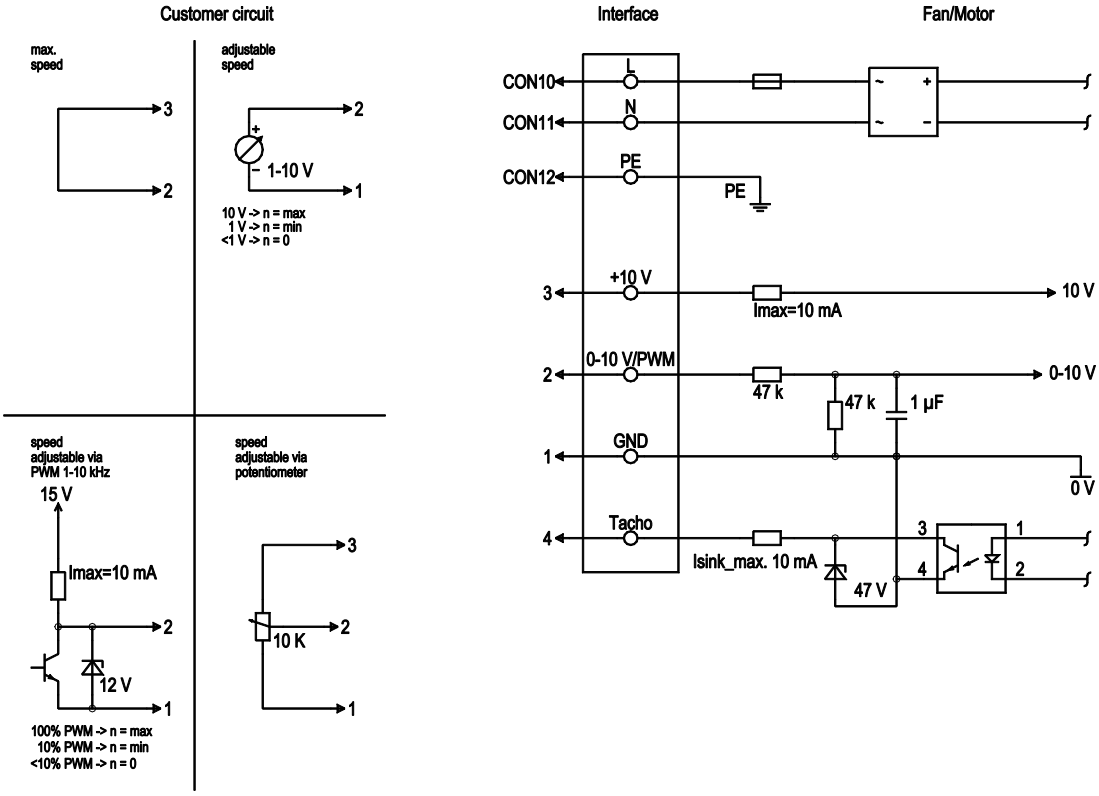
Connection screen



No.	Conn.	Designation	Colour	Function / assignment
	CON10	L	black	Mains connection, power supply, phase, see type plate for voltage range
	CON11	N	blue	Mains connection, power supply, neutral conductor, see type plate for voltage range
	CON12	PE	green/yellow	Earth connection
	2	0- 10V PWM	yellow	0-10 V/PWM control input, Ri=100 kΩ, SELV
	4	Tach	white	Speed monitoring output, open collector, 1 pulse per revolution, Isink max = 10 mA, SELV
	3	+10 V	red	Fixed voltage output 10 VDC +/-3 %, Imax. 10 mA, short-circuit-proof, power supply for ext. devices (e.g. potentiometer), SELV
	1	GND	blue	Signal ground for control interface, SELV

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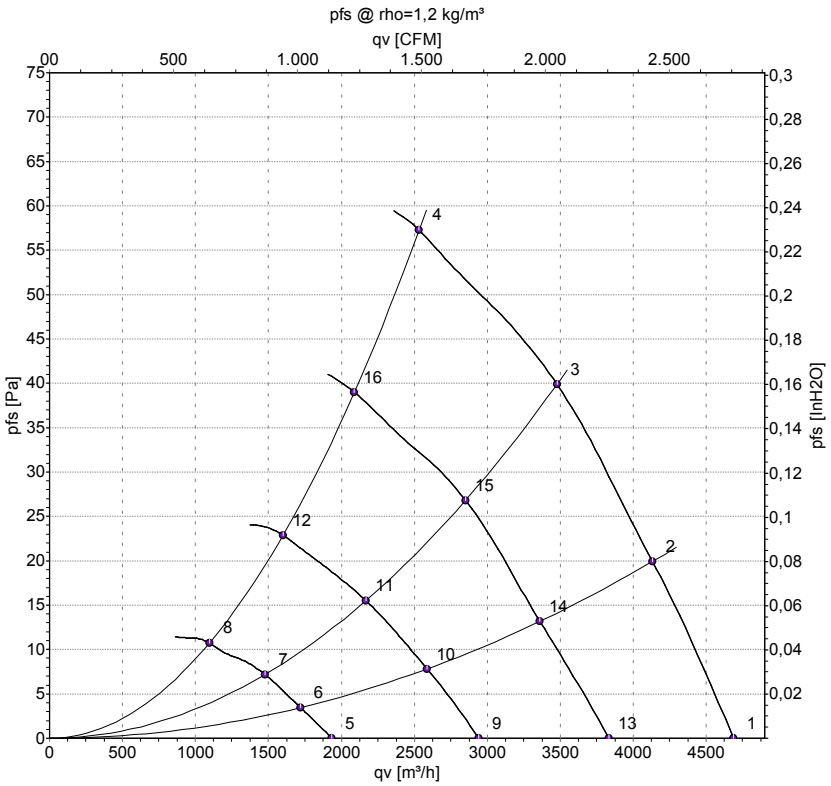
Charts: Air flow 50 Hz



Measurement: LU-158669-1
Measurement: LU-138633-1
Measurement: LU-138626-1
Measurement: LU-138619-1

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	930	101	0.85	4685	0	2760	0.00
2	230	50	910	109	0.91	4130	20	2430	0.08
3	230	50	895	114	0.96	3475	40	2045	0.16
4	230	50	870	122	1.00	2530	57	1490	0.23
5	230	50	395	10.0	0.11	1935	0	1140	0.00
6	230	50	390	11	0.12	1720	3	1010	0.01
7	230	50	385	12	0.12	1475	7	870	0.03
8	230	50	380	12	0.12	1095	11	645	0.04
9	230	50	580	27	0.26	2940	0	1730	0.00
10	230	50	575	29	0.29	2585	8	1525	0.03
11	230	50	565	32	0.30	2170	16	1275	0.06
12	230	50	555	33	0.31	1600	23	940	0.09
13	230	50	760	56	0.50	3835	0	2255	0.00
14	230	50	745	61	0.55	3360	13	1975	0.05
15	230	50	735	64	0.58	2850	27	1675	0.11
16	230	50	720	69	0.62	2090	39	1230	0.16

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