A3G450-AA14-72

EC axial fan

sickle-shaped blades (S series)

A3G450-AA14-72 ebmpapst Datasheet
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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**A3G450-AA14-72**
Motor	**M3G084-FA**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min^{-1}	1220
Power consumption	W	310
Current draw	A	2.0
Max. back pressure	Pa	120
Max. back pressure	inH2O	0.48
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

Data according to ErP Directive

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	44.1	30.4
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		53.7	40
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.3
09 Air flow q_v	m^3/h	3605
09 Pressure increase p_{fs}	Pa	121
10 Speed (rpm) n	min^{-1}	1220
11 Specific ratio*		1.00

Data obtained at optimum efficiency level.
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

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

LU-71846

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Technical description

Weight	5.5 kg
Fan size	450 mm
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Blade material	Sheet steel, painted black
Number of blades	5
Direction of rotation	"A"
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	F3-1
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Shaft horizontal or rotor on bottom; rotor on top on request
Mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 1.1 mA - Alarm relay - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Thermal overload protection for electronics/motor - Line undervoltage detection
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC circuit feedback	According to EN 61000-3-2/3
EMC interference emission	According to EN 61000-6-3 (household environment)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1; CE
Approval	UL 1004-1; EAC; CSA C22.2 No. 77

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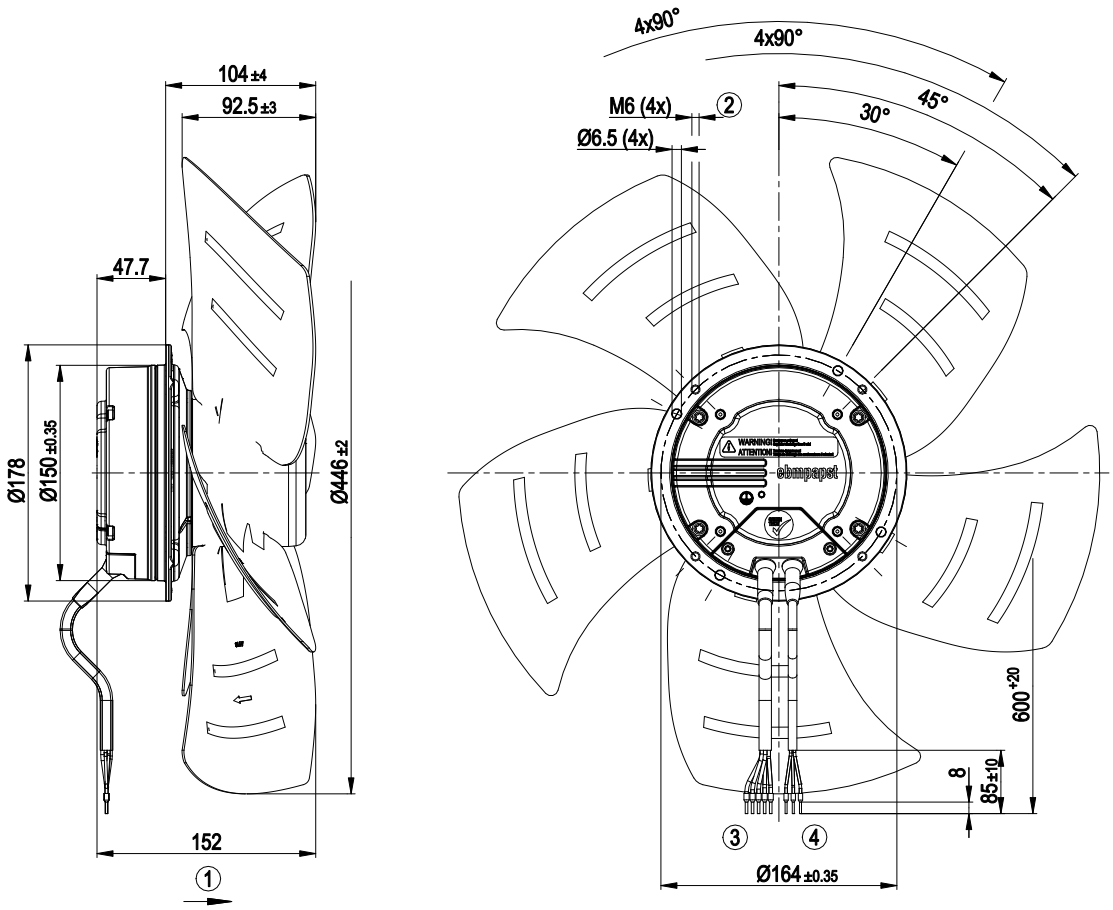
Product drawing



1	Direction of air flow "A"
2	Max. clearance for screw 10 mm
3	Cable AWG18, 5x crimped ferrules
4	Cable AWG22, 3x crimped ferrules

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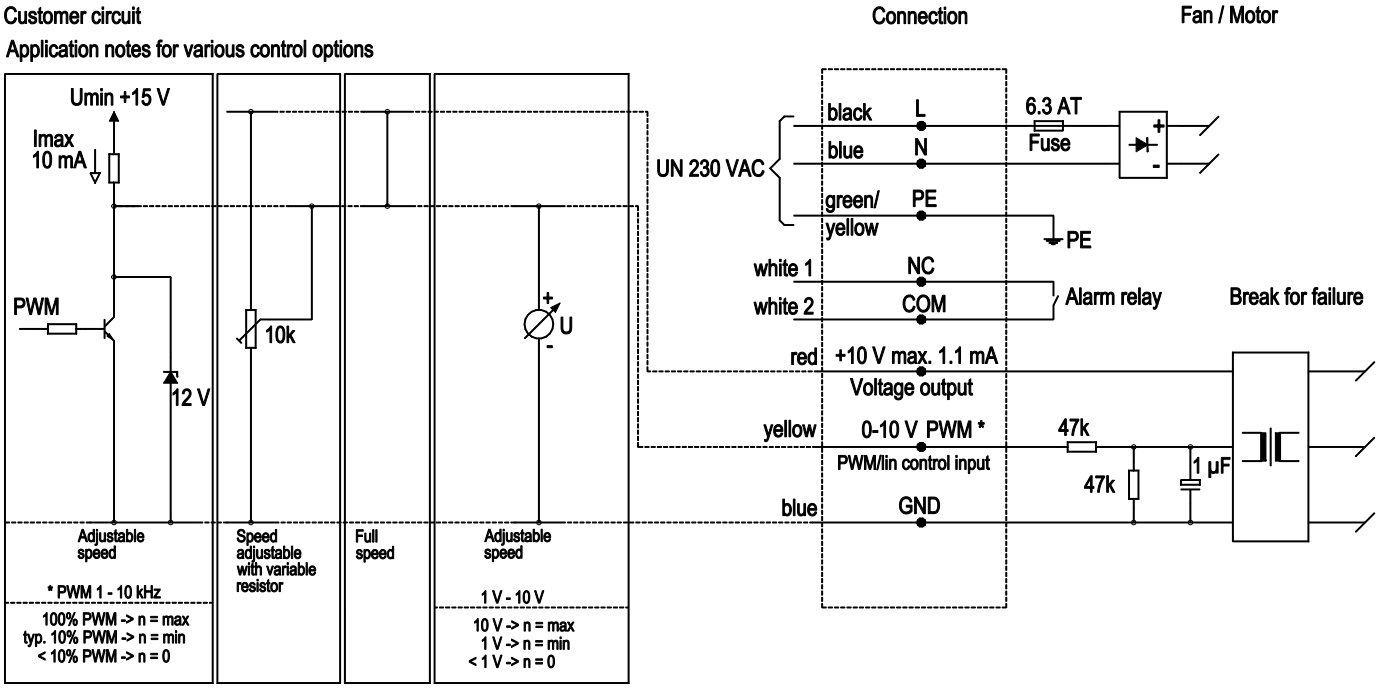
Connection diagram



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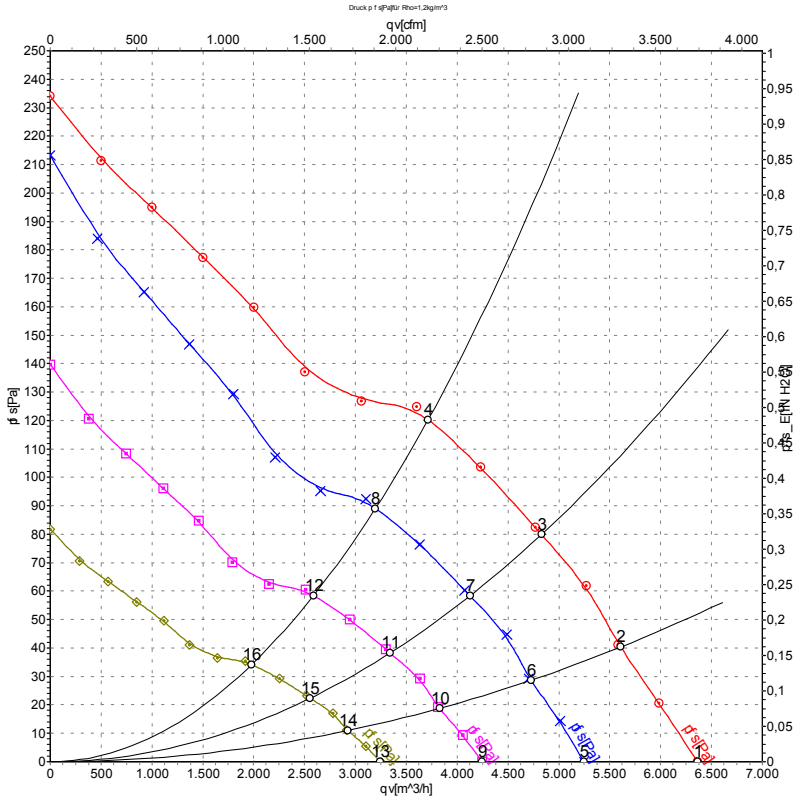
Curves: Air performance 50 Hz



Measurement: LU-71846-1

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

	U	f	n	P_{ed}	I	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	CFM	inH2O
1	230	50	1275	267	1.68	6360	0	3745	0.00
2	230	50	1245	282	1.79	5610	40	3300	0.16
3	230	50	1230	298	1.89	4830	80	2840	0.32
4	230	50	1220	310	2.00	3715	120	2185	0.48
5	230	50	1050	149	0.94	5245	0	3085	0.00
6	230	50	1050	169	1.07	4730	28	2785	0.11
7	230	50	1050	186	1.18	4125	58	2430	0.23
8	230	50	1050	196	1.25	3195	90	1880	0.36
9	230	50	850	79	0.50	4245	0	2500	0.00
10	230	50	850	89	0.57	3830	18	2255	0.07
11	230	50	850	99	0.62	3340	38	1965	0.15
12	230	50	850	104	0.66	2585	59	1525	0.24
13	230	50	650	35	0.22	3245	0	1910	0.00
14	230	50	650	40	0.25	2925	11	1725	0.04
15	230	50	650	44	0.28	2555	22	1505	0.09
16	230	50	650	47	0.30	1980	34	1165	0.14

U = Power supply · f = Frequency · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · qv = Air flow · p_{fs} = Pressure increase