A3G450-AC28-59

EC axial fan - HyBlade

sickle-shaped blades (S series)

A3G450-AC28-59 ebmpapst Datasheet
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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**A3G450-AC28-59**
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}	1300
Power consumption	W	345
Current draw	A	2.2
Max. back pressure	Pa	125
Max. back pressure	inH2O	0.5
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}	%	42.6	30.7
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		51.9	40
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.34
09 Air flow q_v	m^3/h	4005
09 Pressure increase p_{fs}	Pa	118
10 Speed (rpm) n	min^{-1}	1305
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-124620

ebmpapst

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Technical description

Weight	4.9 kg
Fan size	450 mm
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum, painted black
Blade material	Press-fitted sheet steel blank, sprayed with PP plastic
Number of blades	5
Airflow direction	"V"
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	F4-1
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
Condensation drainage holes	On rotor side
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	EAC; UL 2111; CSA C22.2 No. 77

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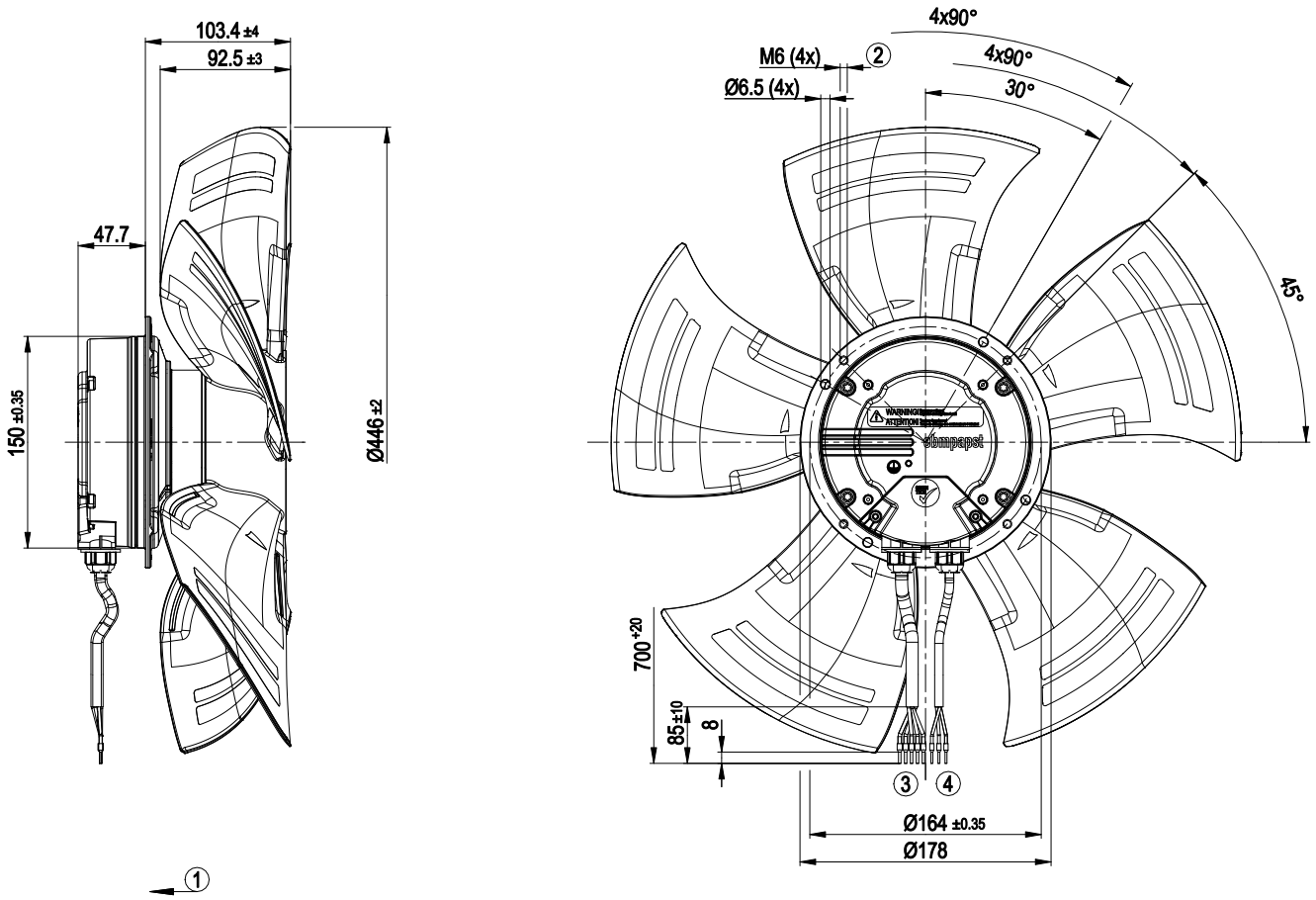
Product drawing



1	Direction of air flow "V"
2	Clearance for screw 8 - 10 mm
3	Cable PVC AWG18, 5 x crimped ferrules
4	Cable PVC AWG22, 3 x crimped ferrules

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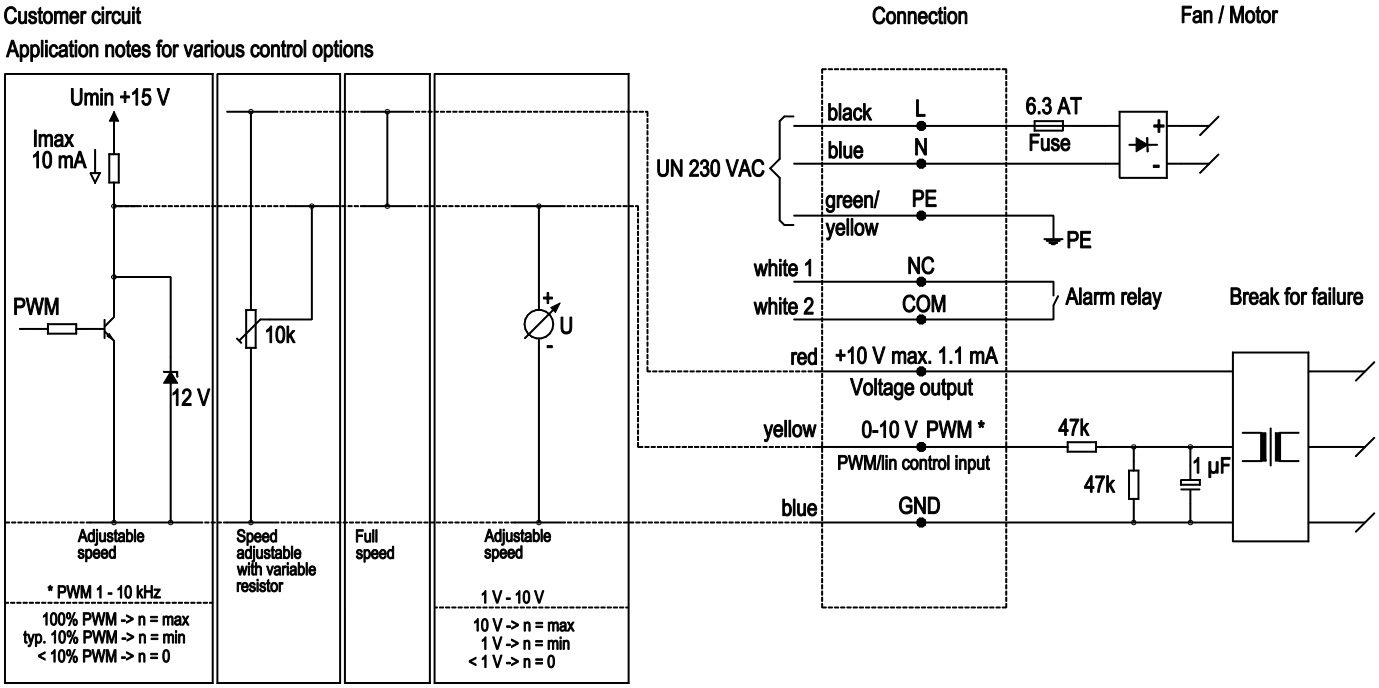
Connection diagram



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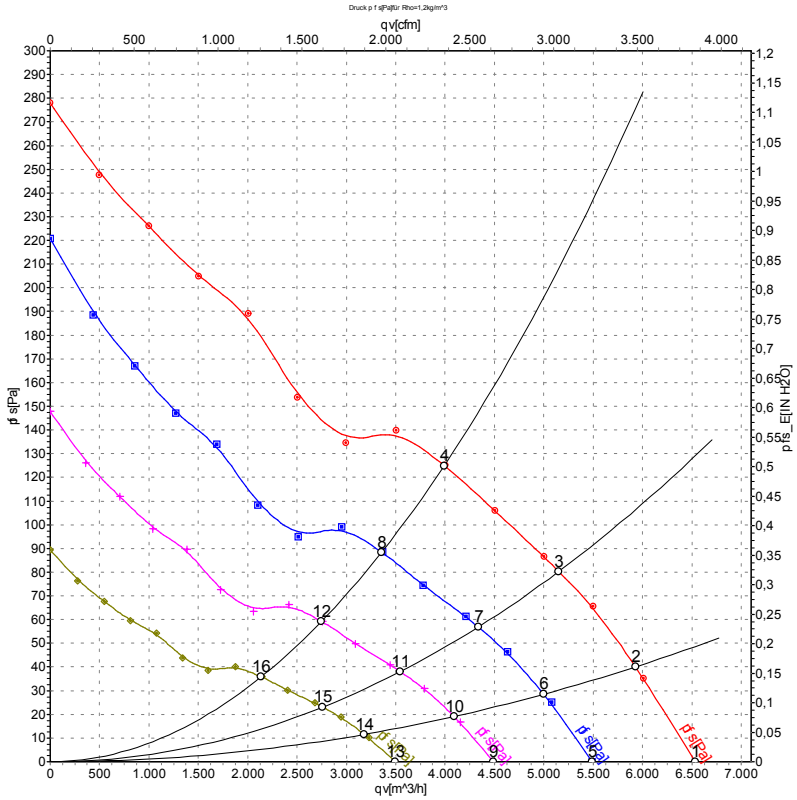
Curves: Air performance 50 Hz



Measurement: LU-124620-1

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	LpA_{in}	LwA_{in}	LwA_{out}	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	CFM	inH2O
1	230	50	1300	270	1.72	65	71	72	6535	0	3845	0.00
2	230	50	1300	298	1.91	62	68	69	5925	40	3490	0.16
3	230	50	1300	326	2.07	60	65	67	5150	80	3030	0.32
4	230	50	1300	345	2.20	61	67	68	3990	125	2350	0.50
5	230	50	1100	160	1.02	61	67	68	5490	0	3230	0.00
6	230	50	1100	179	1.15	58	64	65	4995	29	2940	0.12
7	230	50	1100	194	1.23	56	62	63	4335	57	2550	0.23
8	230	50	1100	205	1.30	57	63	64	3360	89	1975	0.36
9	230	50	900	87	0.56	57	63	64	4490	0	2645	0.00
10	230	50	900	98	0.63	54	60	61	4090	19	2405	0.08
11	230	50	900	106	0.68	52	57	59	3545	38	2085	0.15
12	230	50	900	112	0.71	53	59	60	2745	60	1615	0.24
13	230	50	700	41	0.26	51	57	58	3490	0	2055	0.00
14	230	50	700	46	0.30	48	55	56	3180	12	1870	0.05
15	230	50	700	50	0.32	46	52	53	2760	23	1625	0.09
16	230	50	700	53	0.34	47	54	54	2135	36	1260	0.14

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