A3G800-AO81-35

EC axial fan - HyBlade

sickled blades (S series)

for agricultural ventilation

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Nominal data

Type	**A3G800-AO81-35**
Motor	**M3G112-IA**

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}	710
Power input	W	730
Current draw	A	3.2
Max. back pressure	Pa	100
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	50

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}	%	43.7	32.6
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		51.1	40
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	0.68
09 Air flow q_v	m^3/h	11680
09 Pressure increase p_{fs}	Pa	84
10 Speed (rpm) n	min^{-1}	715
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-121620

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Technical features

Mass	11.9 kg
Size	800 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium, coated in black
Material of blades	Press-fitted, coated sheet steel blank, sprayed with PP plastic
Number of blades	5
Direction of air flow	"A"
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
Humidity (F)/environmental protection class (H)	F4-2
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 top; rotor on bottom on request
Condensate discharge holes	On the stator side
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Output 20 VDC, max. 50 mA - Output for slave 0-10 V - Operation and alarm display - Direction of rotation selection counter-clockwise / clockwise - Input for sensor 0-10 V or 4-20 mA - External 24 V input (programming) - Alarm relay - Integrated PID controller - Motor current limit - PFC, active - RS485 MODBUS RTU - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Over-temperature protected electronics / motor - Line undervoltage / phase failure detection
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 61800-5-1; CE
Approval	EAC

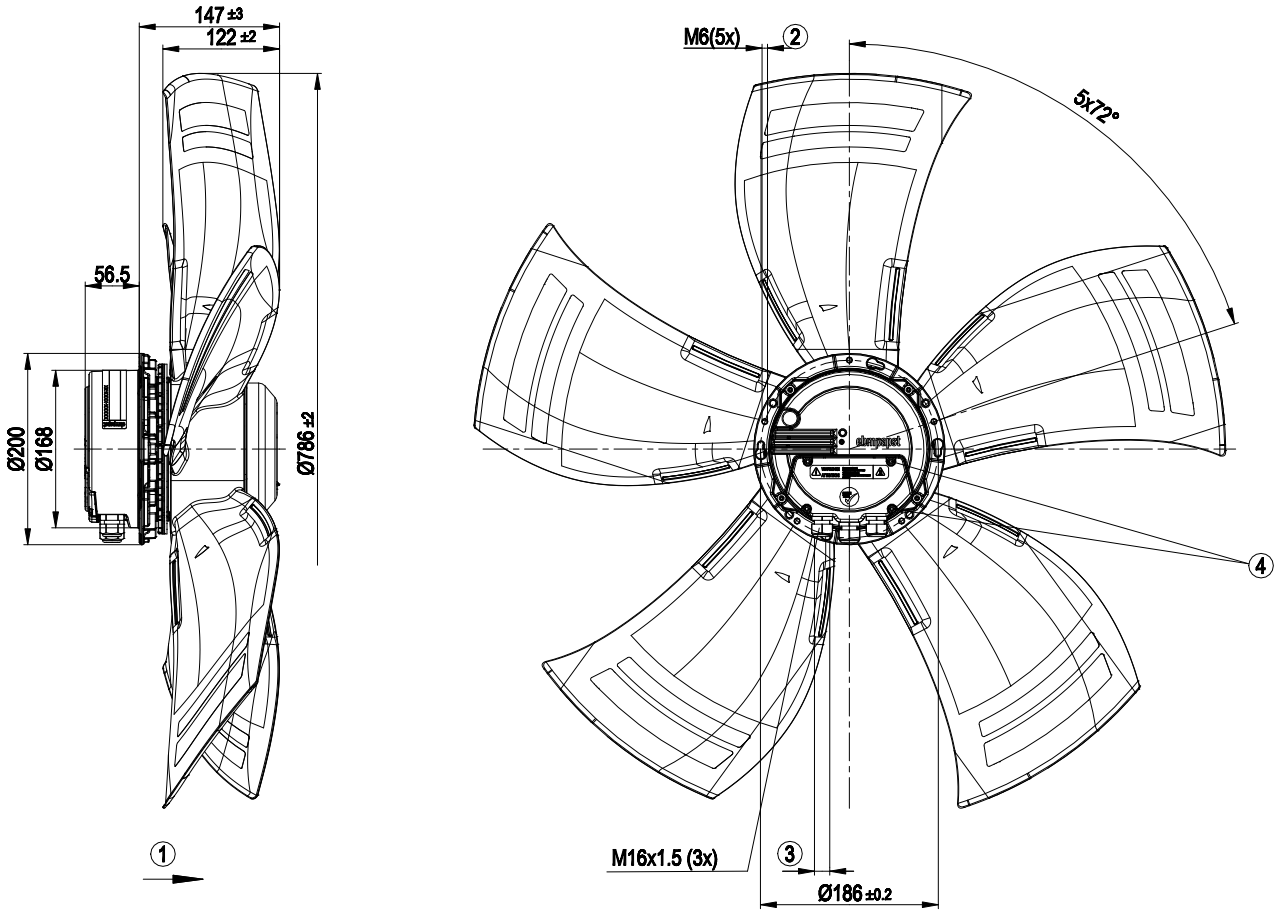
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Product drawing



1	Direction of air flow "A"
2	Depth of screw max. 16 mm
3	Cable diameter: min. 4 mm, max. 10 mm, tightening torque: 2.5±0.4 Nm
4	Tightening torque 3.5±0.5 Nm

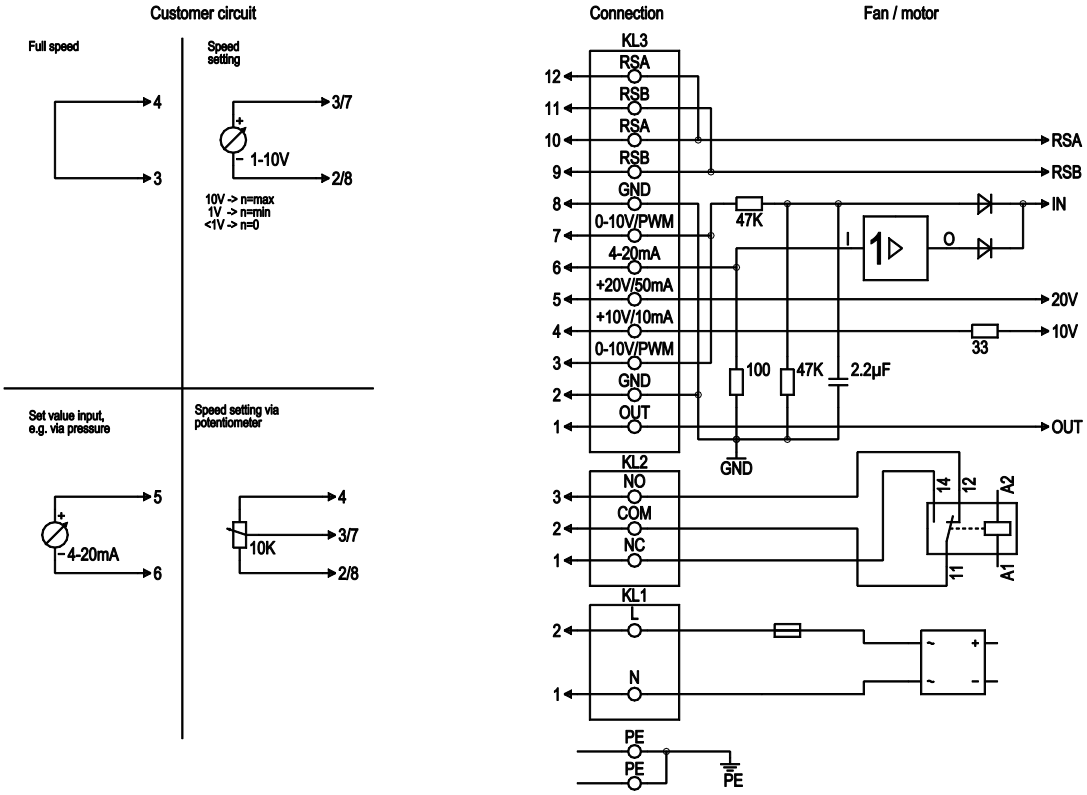
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Connection screen



No.	Conn.	Designation	Function / assignment
PE	-	PE	Protective earth connection
KL1	1, 2	N, L	Supply voltage, 50/60 Hz
KL2	1	NC	Floating status message contact, break for failure
KL2	2	COM	Floating status message contact, changeover contact, common connection (2 A, max. 250 VAC, min. 10 mA, AC1)
KL2	3	NO	Floating status message contact, normally open, make for failure
KL3	1	OUT	Analogue output, 0-10 VDC, max. 3 mA, SELV, Output of the current motor level control coefficient: 1 V corresponds to 10% level control coefficient, 10 V correspond to 100% level control coefficient.
KL3	2, 8	GND	Reference mass for control interface, SELV
KL3	3, 7	0-10 V	Use control / actual value input 0-10 VDC, impedance 100 kΩ only as alternative to 4-20 mA input, SELV
KL3	4	+10 V	Voltage output 10 VDC (+/- 3%), max. 10 mA, Supply voltage for ext. devices (e.g. potentiometer), SELV
KL3	5	+20 V	Voltage output 20 VDC (+25%/-10%), max. 50 mA Supply voltage for ext. devices (e.g. sensors), SELV
KL3	6	4-20 mA	Use control / actual value input 4-20 mA, impedance 100 Ω, only as alternative to 0-10 V input, SELV
KL3	9, 11	RSB	RS485 interface for MODBUS, RSB
KL3	10, 12	RSA	RS485 interface for MODBUS, RSA

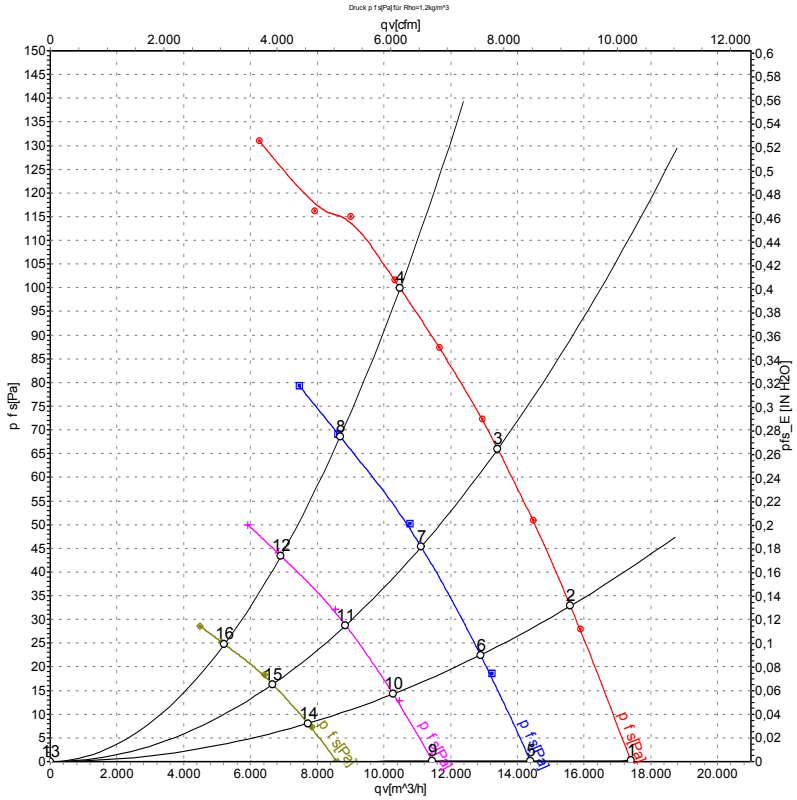
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Charts: Air flow 50 Hz



Measurement: LU-121620-1
Measurement: LU-121634-1
Measurement: LU-121635-1
Measurement: LU-121636-1

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	LpA_{in}	LwA_{in}	LwA_{out}	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	cfm	inH2O
1	230	50	710	462	2.15	63	70	70	17400	0	10240	0.00
2	230	50	710	549	2.51	60	66	66	15590	33	9175	0.13
3	230	50	710	634	2.86	58	65	64	13410	66	7895	0.26
4	230	50	710	730	3.20	61	69	69	10490	100	6175	0.40
5	230	50	590	264	1.25	59	65	65	14390	0	8470	0.00
6	230	50	590	309	1.44	56	62	62	12890	23	7585	0.09
7	230	50	590	352	1.64	54	60	60	11120	46	6545	0.18
8	230	50	590	395	1.84	57	64	64	8690	69	5115	0.28
9	230	50	470	188	0.69	54	60	60	11450	0	6740	0.00
10	230	50	470	164	0.78	51	57	57	10270	15	6045	0.06
11	230	50	470	186	0.88	49	55	55	8850	29	5210	0.12
12	230	50	470	208	0.98	50	58	57	6910	44	4070	0.18
13	230	50	355	138	0.74	44	53	54	0	60	0	0.24
14	230	50	355	81	0.46	45	51	51	7715	8	4540	0.03
15	230	50	355	90	0.51	43	49	49	6670	16	3925	0.06
16	230	50	355	98	0.55	43	50	50	5220	25	3075	0.10

U = Supply voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side · LwA_{out} = Sound power level outlet side
q_V = Air flow · p_{fs} = Pressure increase

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