A3G910-AO84-35

EC axial fan - HyBlade

sickle-shaped blades (S series)

for barn ventilation

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Nominal data

Type	**A3G910-AO84-35**
Motor	**M3G112-IA**

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}	590
Power consumption	W	580
Current draw	A	2.6
Max. back pressure	Pa	80
Max. back pressure	in. wg	0.32
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 Commission Regulation (EU) 327/2011

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	49.1	32
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		57.1	40
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.54
09 Air flow q_v	m^3/h	12865
09 Pressure increase p_{fs}	Pa	68
10 Speed (rpm) n	min^{-1}	590
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

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Technical description

Weight	13.5 kg
Size	910 mm
Motor size	112
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum, painted black
Blade material	Press-fitted, painted sheet steel blank, sprayed with PP plastic
Number of blades	5
Airflow direction	A
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H2+A
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 top; rotor on bottom on request
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 - Selection of direction of rotation left/right - Input for sensor 0-10 V or 4-20 mA - External 24 V input (parameter setting) - Alarm relay - Integrated PID controller - Power limiter - Motor current limitation - PFC, active - RS-485 MODBUS-RTU - 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 / phase failure detection
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	Terminal box
Motor protection	Thermal overload protector (TOP) internally connected
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1; CE

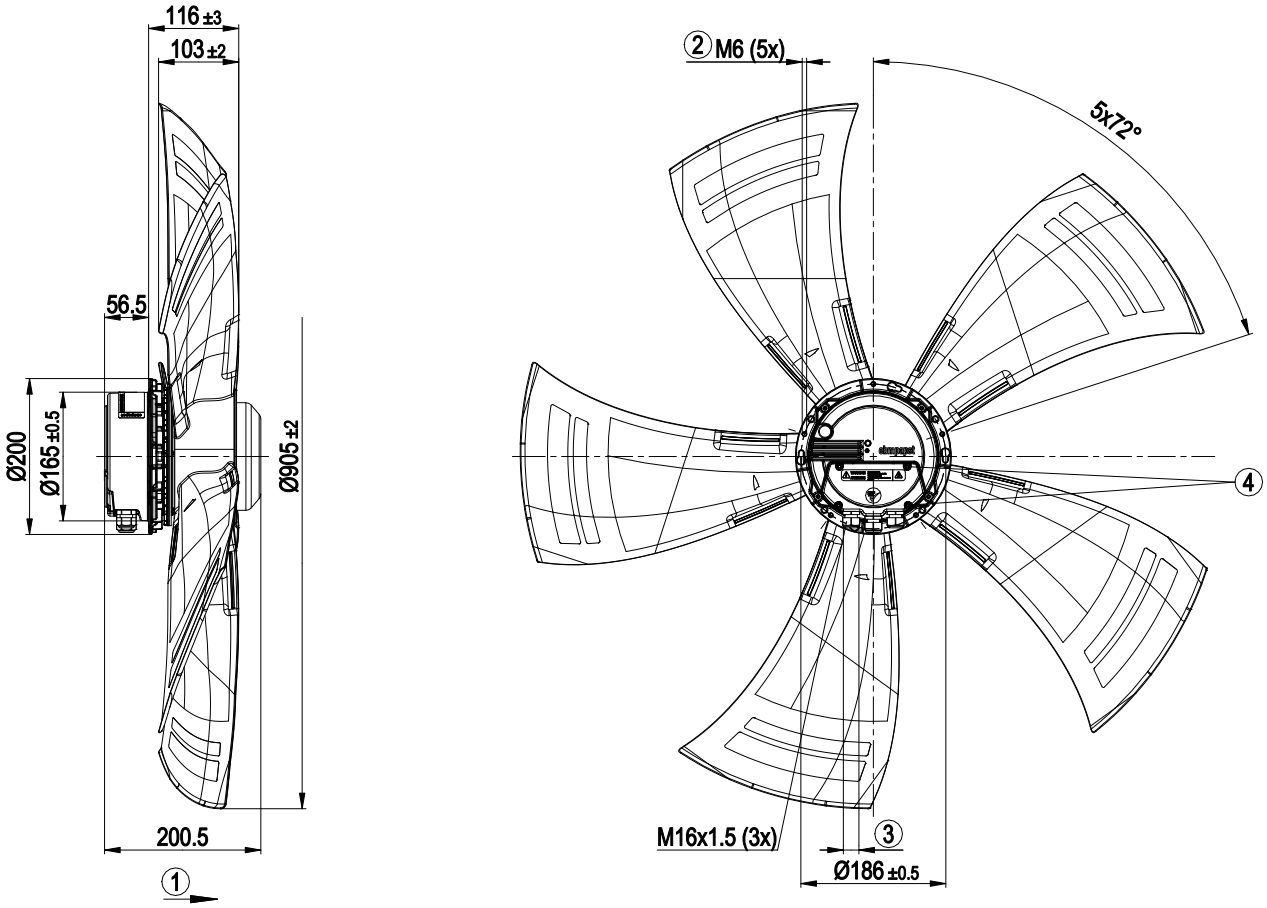
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Product drawing



1	Direction of air flow "A"
2	Max. clearance for screw 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

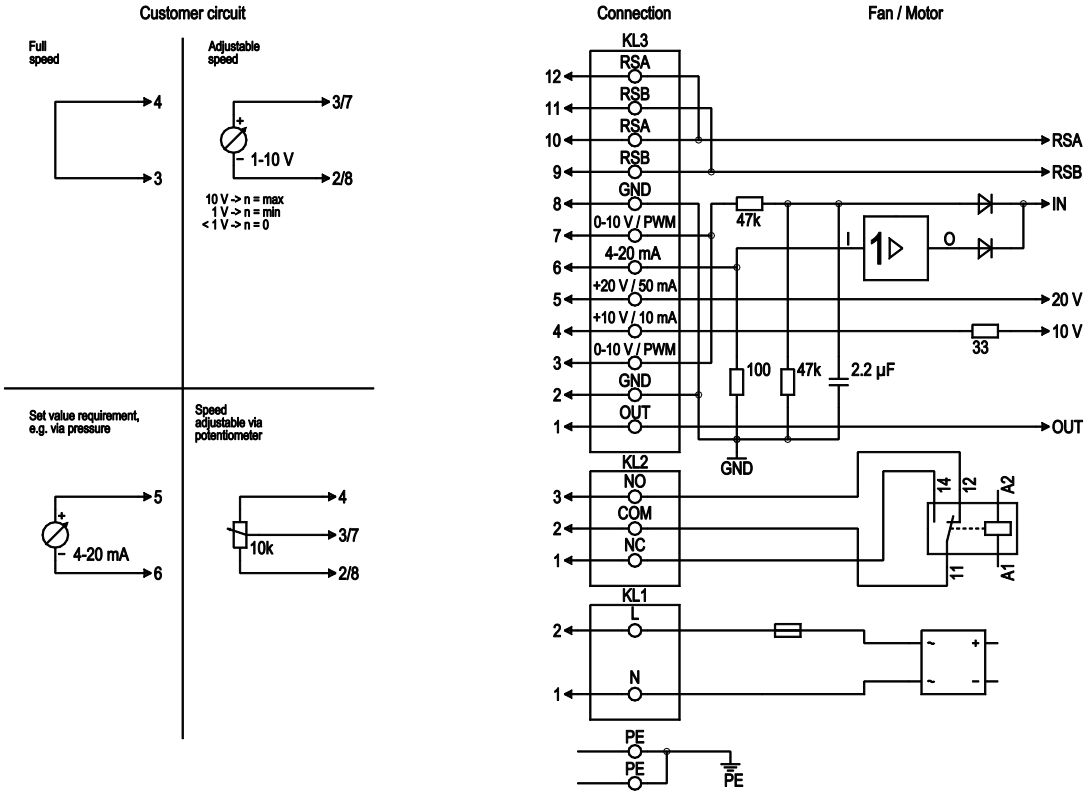
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Connection diagram



No.	Conn.	Designation	Function/assignment
PE	-	PE	Protective earth terminal
KL1	1, 2	N, L	Power supply 50/60 Hz
KL2	1	NC	Floating status contact, break for failure
KL2	2	COM	Floating status contact, changeover contact, common connection (2 A, max. 250 VAC, min. 10 mA, AC1)
KL2	3	NO	Floating status contact, make for failure
KL3	1	OUT	Analog output, 0-10 VDC, max. 3 mA, SELV output of current motor modulation level: 1 V corresponds to 10% modulation level. 10 V corresponds to 100% modulation level.
KL3	2, 8	GND	Reference ground for control interface, SELV
KL3	3, 7	0-10 V	Control/current sensor value input 0-10 VDC, impedance 100 kΩ, use only as alternative to 4-20 mA input, SELV
KL3	4	+10 V	Voltage output 10 VDC (+/- 3%), max. 10 mA, power supply for ext. devices (e.g. potentiometer), SELV
KL3	5	+20 V	Voltage output 20 VDC (+25%/-10%), max. 50 mA power supply for ext. devices (e.g. sensors), SELV
KL3	6	4-20 mA	Control/current sensor value input 4-20 mA, impedance 100 Ω, use 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

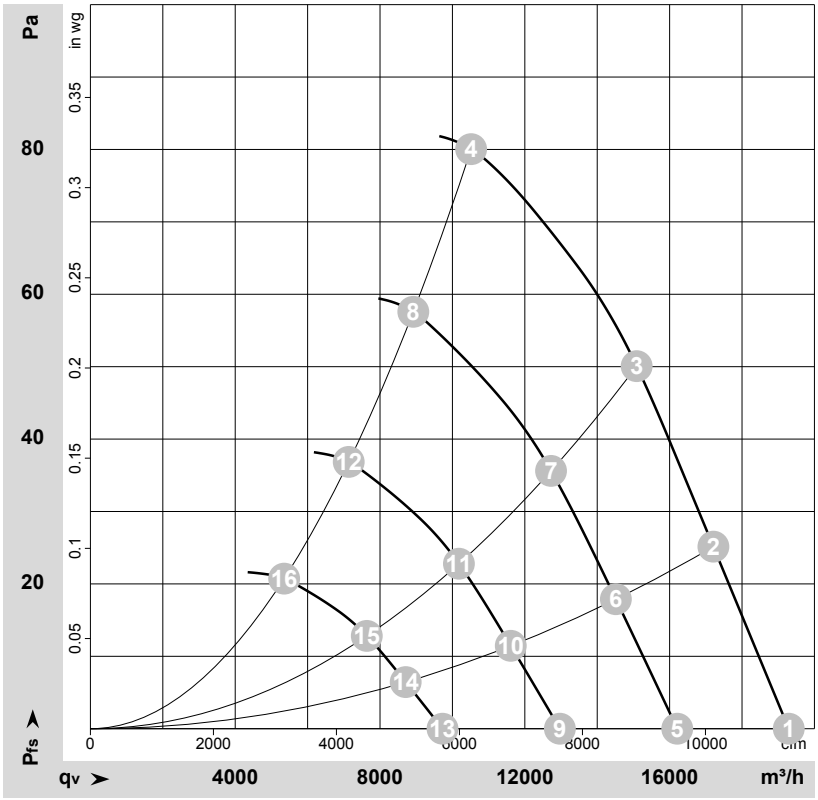
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Curves: Air performance 50 Hz



ρ = 1.177 kg/m³ ± 2 %

Measurement: LU-182848-1

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}	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	in. wg
1	230	50	590	368	1.61	60	67	66	19290	0	11355	0.00
2	230	50	590	441	1.92	58	65	64	17210	25	10130	0.10
3	230	50	590	504	2.20	58	65	64	15090	50	8880	0.20
4	230	50	590	580	2.60	61	69	69	10515	80	6190	0.32
5	230	50	500	219	0.96	56	63	62	16210	0	9540	0.00
6	230	50	500	265	1.16	54	61	60	14515	18	8545	0.07
7	230	50	500	302	1.32	53	60	59	12725	36	7490	0.14
8	230	50	500	351	1.53	57	65	65	8920	58	5250	0.23
9	230	50	400	112	0.49	50	57	56	12970	0	7635	0.00
10	230	50	400	136	0.59	48	55	54	11610	12	6835	0.05
11	230	50	400	155	0.68	48	55	54	10180	23	5990	0.09
12	230	50	400	179	0.78	52	59	59	7135	37	4200	0.15
13	230	50	300	47	0.21	43	50	49	9725	0	5725	0.00
14	230	50	300	57	0.25	41	48	47	8710	6	5125	0.02
15	230	50	300	65	0.29	41	47	46	7635	13	4495	0.05
16	230	50	300	76	0.33	44	52	52	5350	21	3150	0.08

U = Voltage · 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 · q_V = Air flow · p_{fs} = Pressure increase

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