A3G910-BG94-01

EC axial fan - HyBlade

sickle-shaped blades (S series)

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**A3G910-BG94-01**	
Motor	**M3G112-IA**	
Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Method of obtaining data		ml
Status		prelim.
Speed (rpm)	min^{-1}	650
Power consumption	W	760
Current draw	A	1.3
Max. back pressure	Pa	90
Max. back pressure	inH2O	0.36
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}	%	43.4	32.8
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		50.6	40
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.72
09 Air flow q_v	m^3/h	13515
09 Pressure increase p_{fs}	Pa	77
10 Speed (rpm) n	min^{-1}	650
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-154872

ebmpapst

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Technical description

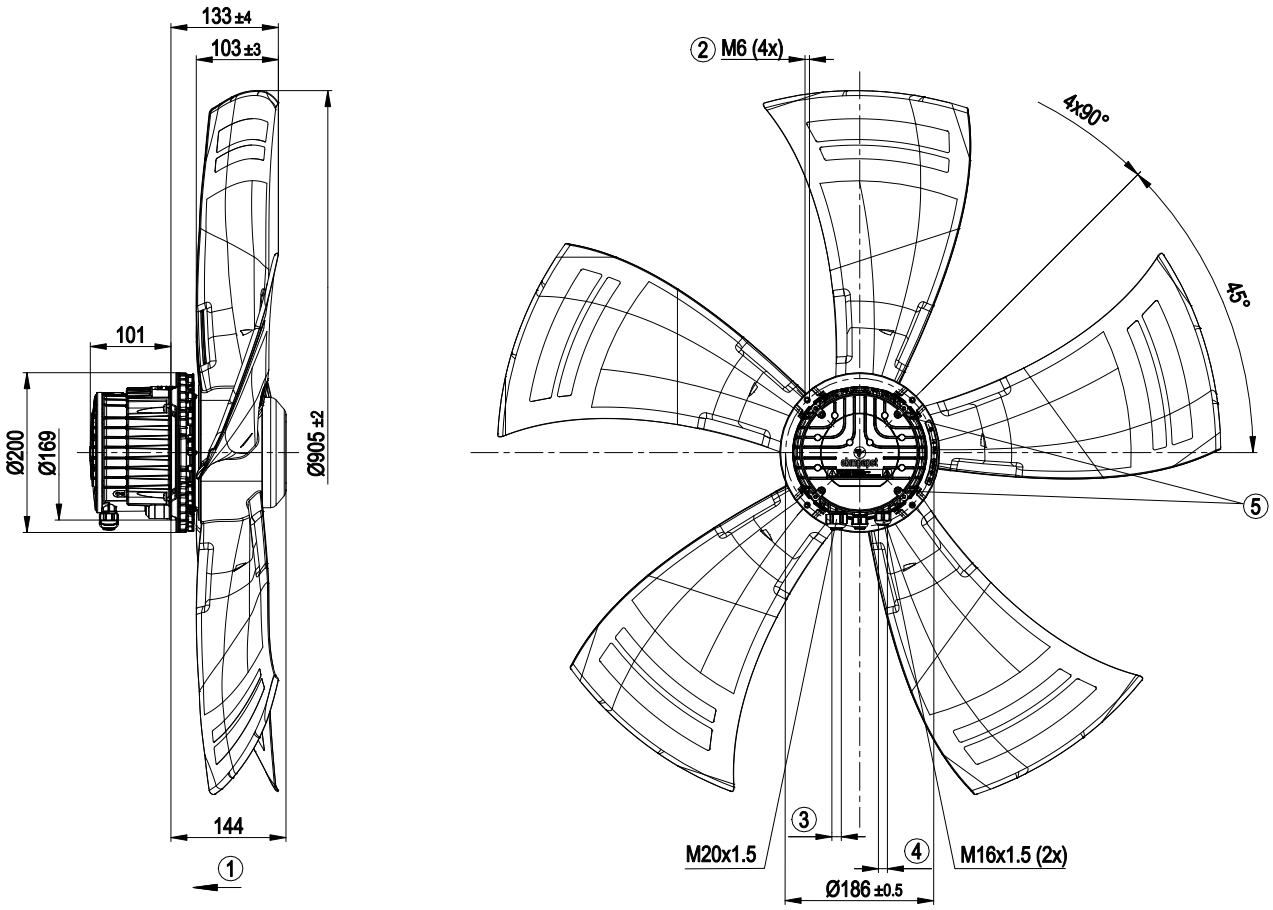
Weight	12 kg
Fan size	910 mm
Rotor surface	Painted black
Terminal box material	PP plastic
Electronics housing material	Die-cast aluminum, painted black
Blade material	Press-fitted sheet steel blank, sprayed with PP plastic
Number of blades	5
Airflow direction	"V"
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP55
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H2
Ambient temperature note	Occasional start-up between -40°C and -25°C is permissible. For continuous operation at temperatures below -25°C (e.g. refrigeration applications) we recommend our fan design with special low-temperature bearings.
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; (sealed)
Technical features	- Output 10 VDC, max. 10 mA - Operation and alarm display - External 24 V input (parameter setting) - Alarm relay - Integrated PID controller - Motor current limitation - PFC, passive - RS-485 MODBUS-RTU - Soft start - EEPROM write cycles: 100,000 maximum - 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	Via 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
Approval	EAC; C22.2 No.77 + CAN/CSA-E60730-1; UL 1004-7 + 60730
Comment	Conformity with EN 60335-1 in preparation

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Product drawing



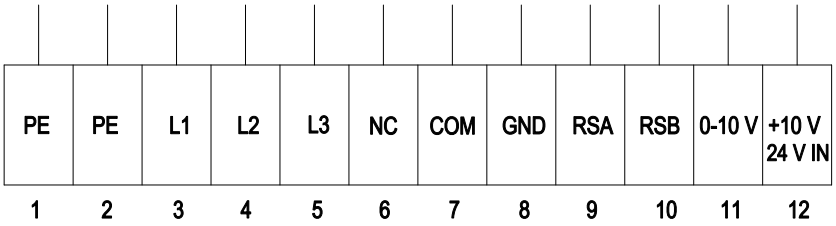
1	Direction of air flow "V"
2	Max. clearance for screw 16 mm
3	Cable diameter min. 6 mm, max. 12 mm, tightening torque 4 ± 0.6 Nm
4	Cable diameter min. 4 mm, max. 10 mm, tightening torque 2.5 ± 0.4 Nm
5	Tightening torque 1.5 ± 0.2 Nm

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Connection diagram



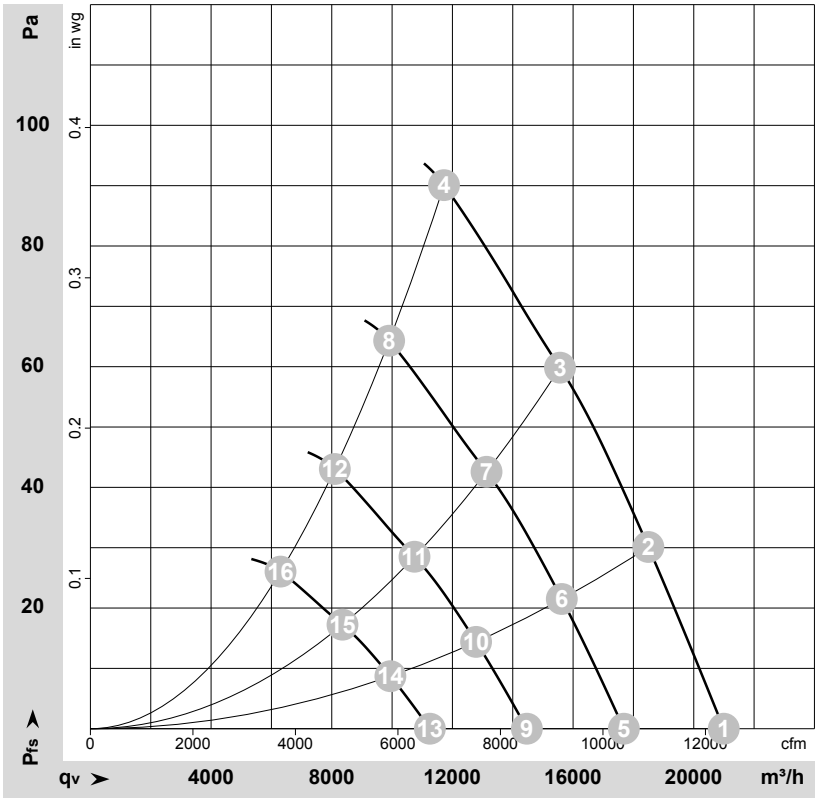
No.	Conn.	Designation	Function/assignment
	1	PE	Protective earth
	2	PE	Protective earth
	3	L1	Power supply
	4	L2	Power supply
	5	L3	Power supply
	6	NC	Status relay, floating status contact, break for failure, contact rating 250 VAC / 2 A (AC1) / min. 10 mA; reinforced insulation on supply side and basic insulation on control interface side
	7	COM	Status relay, floating status contact, break for failure, contact rating 250 VAC / 2 A (AC1) / min. 10 mA; reinforced insulation on supply side and basic insulation on control interface side
	8	GND	Reference ground for control interface, SELV
	9	RSA	RS485 interface for MODBUS, RSA; SELV
	10	RSB	RS485 interface for MODBUS, RSB; SELV
	11	0-10 V	Analog input (set value) SELV, 0-10 V, Ri = 100 kΩ, adjustable curve
	12	+10 V	Fixed voltage output 10 VDC, SELV, +10 V ±3%, max. 10 mA, short-circuit-proof, power supply for external devices (e.g. pot); fixed voltage input 24 VDC for setting parameters via MODBUS without line voltage supply

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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-154872-1

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	400	50	650	478	0.83	62	70	69	20995	0	12355	0.00
2	400	50	650	580	0.98	60	68	67	18495	30	10885	0.12
3	400	50	650	674	1.12	60	67	66	15565	60	9160	0.24
4	400	50	650	760	1.30	64	71	71	11720	90	6900	0.36
5	400	50	550	286	0.49	58	65	65	17685	0	10410	0.00
6	400	50	550	350	0.59	56	64	63	15625	22	9195	0.09
7	400	50	550	405	0.67	55	63	62	13130	43	7730	0.17
8	400	50	550	460	0.76	59	67	66	9905	64	5830	0.26
9	400	50	450	156	0.27	53	60	59	14470	0	8515	0.00
10	400	50	450	192	0.32	51	58	58	12785	14	7525	0.06
11	400	50	450	222	0.37	50	58	57	10745	29	6325	0.12
12	400	50	450	252	0.41	54	62	61	8100	43	4770	0.17
13	400	50	350	74	0.13	47	54	53	11255	0	6625	0.00
14	400	50	350	90	0.15	45	52	51	9945	9	5850	0.04
15	400	50	350	104	0.17	44	51	51	8355	17	4920	0.07
16	400	50	350	119	0.20	48	55	55	6300	26	3710	0.10

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

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