A3G630-BE55-51

EC axial fan - HyBlade

sickle-shaped blades (S series)

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Nominal data

Type	**A3G630-BE55-51**
Motor	**M3G112-GA**

Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min^{-1}	1000
Power consumption	W	700
Current draw	A	1.1
Max. back pressure	Pa	130
Max. back pressure	in. wg	0.52
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 (EN 17166)

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	46	32.7
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		53.3	40
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.69
09 Air flow q_v	m^3/h	8355
09 Pressure increase p_{fs}	Pa	126
10 Speed (rpm) n	min^{-1}	1020
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-158093

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Technical description

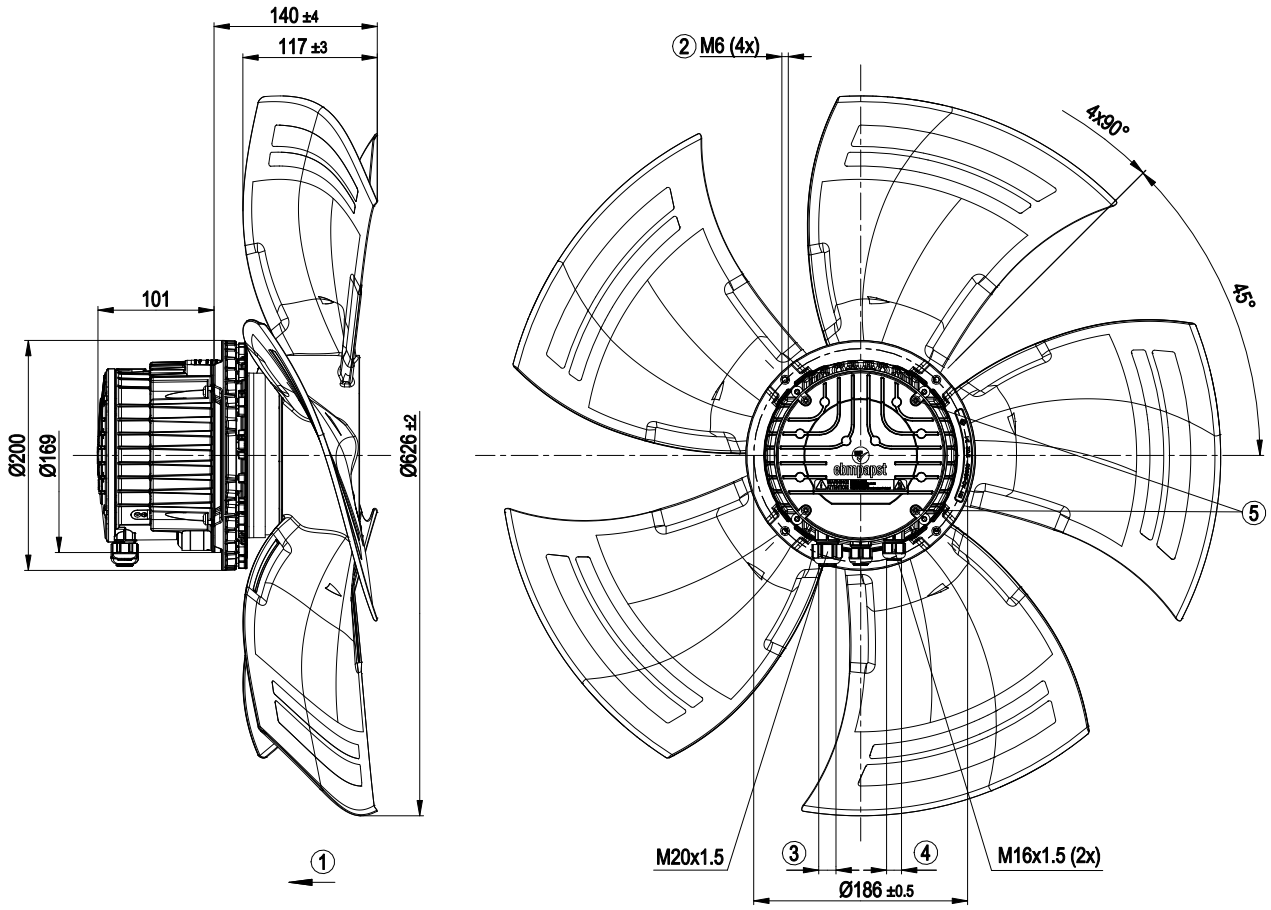
Weight	9.6 kg
Size	630 mm
Motor size	112
Rotor surface	Painted black
Terminal box material	PP plastic
Electronics housing material	Die-cast aluminum, painted black
Blade material	Press-fitted sheet steel blank, sprayed with PP plastic
Number of blades	5
Airflow direction	V
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP55
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H2
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	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	CCC; CSA C22.2 No. 77 + CAN/CSA-E60730-1; UL 1004-7 + 60730-1; EAC
Comment	Conformity with EN 60335-1 in preparation

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Product drawing



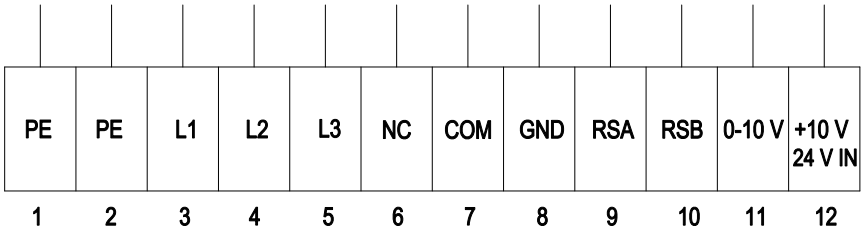
1	Direction of air flow "V"
2	Max. clearance for screw 16 mm
3	Cable diameter min. 8 mm, max. 12 mm, tightening torque 1.8±0.3 Nm (use must be made of seal provided) Cable diameter min. 4 mm, max. 10 mm, tightening torque 1.8±0.3 Nm
4	Cable diameter min. 6 mm, max. 10 mm, tightening torque 1.8±0.3 Nm (use must be made of seal provided) Cable diameter min. 4 mm, max. 7 mm, tightening torque 1.8±0.3 Nm
5	Tightening torque 1.5 ± 0.2 Nm

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Connection diagram



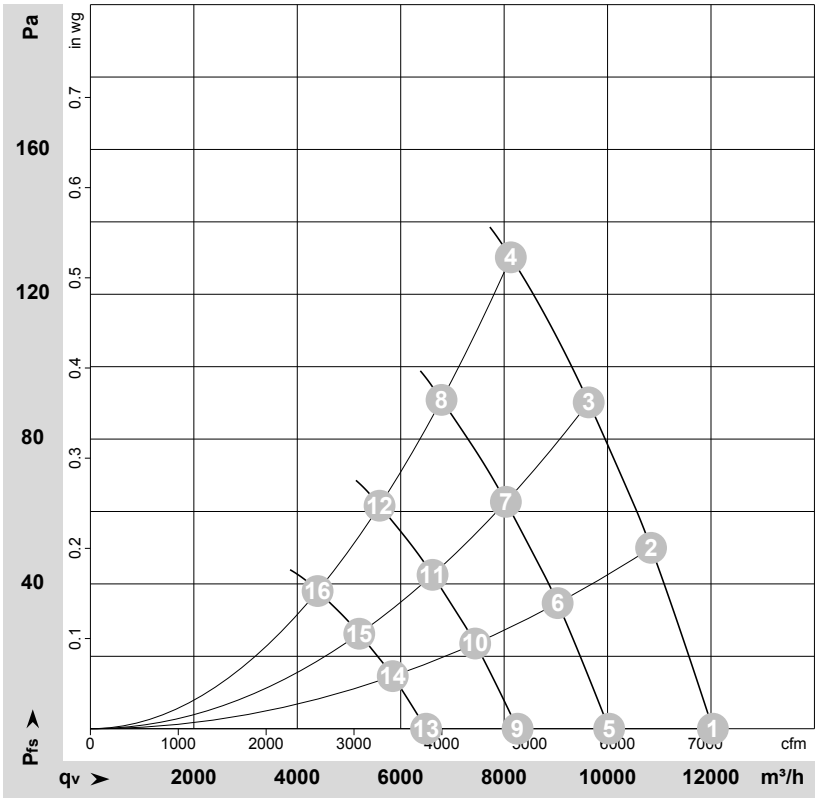
No.	Conn.	Designation	Function/assignment
	1	PE	Protective earth
	2	PE	Protective earth
	3	L1	Power supply
	4	L2	Power supply
	5	L3	Power supply
	6	NC	Status relay, floating status contact, break for failure, contact rating 250 VAC / 2 A (AC1) / min. 10 mA; reinforced insulation on supply side and basic 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-158093-1

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	400	50	1000	473	0.77	68	75	74	12035	0	7085	0.00
2	400	50	1000	561	0.90	64	71	71	10840	50	6380	0.20
3	400	50	1000	629	1.01	62	69	69	9635	90	5670	0.36
4	400	50	1000	700	1.10	63	70	70	8130	130	4785	0.52
5	400	50	850	274	0.45	64	70	70	10030	0	5905	0.00
6	400	50	850	324	0.52	60	67	66	9035	35	5320	0.14
7	400	50	850	364	0.58	58	65	64	8035	63	4730	0.25
8	400	50	850	408	0.65	59	66	65	6790	91	3995	0.37
9	400	50	700	153	0.25	59	65	65	8260	0	4860	0.00
10	400	50	700	181	0.29	55	62	61	7440	24	4380	0.10
11	400	50	700	204	0.33	53	60	60	6615	43	3895	0.17
12	400	50	700	228	0.36	54	61	60	5590	62	3290	0.25
13	400	50	550	74	0.12	53	59	59	6490	0	3820	0.00
14	400	50	550	88	0.14	49	56	55	5845	15	3440	0.06
15	400	50	550	99	0.16	47	54	53	5200	26	3060	0.10
16	400	50	550	110	0.18	48	55	54	4395	38	2585	0.15

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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