A3G630-AU23-35

EC axial fan - HyBlade

sickled blades (S series)

for agricultural ventilation

A3G630-AU23-35 ebmpapst Datasheet
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Nominal data

Type	**A3G630-AU23-35**
Motor	**M3G150-IF**

Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min^{-1}	1510
Power input	W	3200
Current draw	A	5.0
Max. back pressure	Pa	290
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	65

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

Data in accordance with ecodesign regulation EU 327/2011

		Actual	Request 2015
01 Overall efficiency η_{es}	%	36.9	36.9
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		40	40
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	3.22
09 Air flow q_v	m^3/h	12945
09 Pressure increase p_{fs}	Pa	306
10 Speed (rpm) n	min^{-1}	1500
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-114811

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Technical features

Mass	25.4 kg
Size	630 mm
Motor size	150 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium, coated in black
Material of blades	Aluminium sheet insert (coated in black), sprayed with PP plastic
Number of blades	5
Blade angle	0°
Direction of air flow	A
Direction of rotation	Counter-clockwise, seen on rotor
Protection rating	IP55
Insulation class	"F"
Humidity (F) / environmental protection class (H)	F5
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
Condensation drainage 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 - Input for sensor 0-10 V or 4-20 mA - External 24 V input (programming) - External release input - Alarm relay - Integrated PID controller - Output limit - Motor current limit - PFC, passive - RS485 MODBUS RTU - Soft start -Maximum EEPROM write cycles 100,000 - 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 connection	Terminal box
Motor protection	Reverse polarity and locked-rotor protection
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1; CE
Approval	EAC; UL 1004-7 + 60730; CSA C22.2 no. 77 + CAN/CSA-E60730-1

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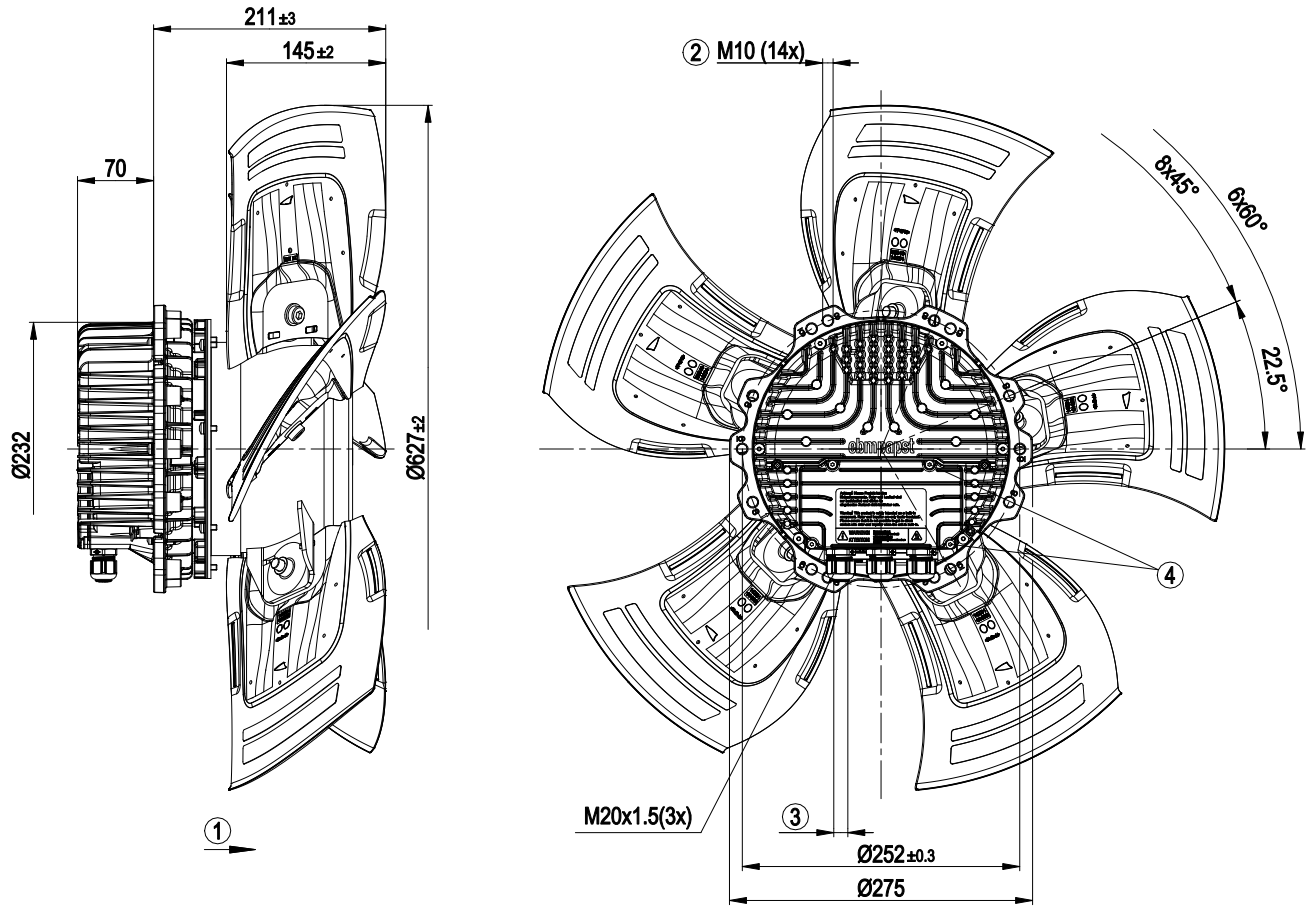
Product drawing



1	Direction of air flow "A"
2	Thread reach max. 25 mm
3	Cable diameter min. 4 mm, max. 10 mm, tightening torque 4±0.6 Nm
4	Tightening torque 3.5±0.5 Nm

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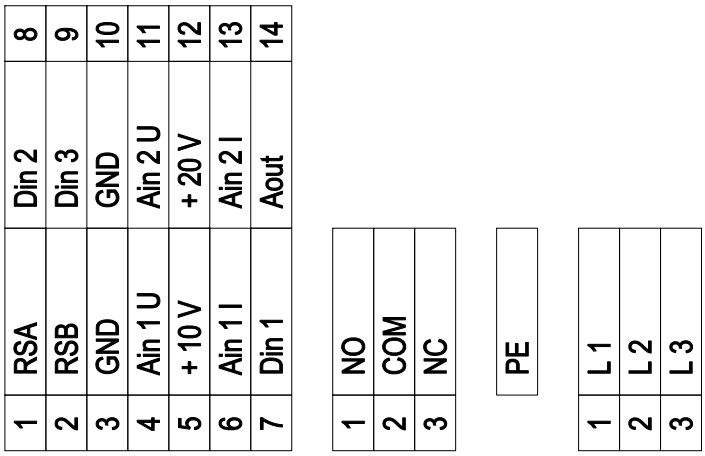
Connection screen



No.	Conn.	Designation	Function / assignment
KL 1	1	L1	Mains supply connection, supply voltage 3~380-480 VAC; 50/60 Hz
KL 1	2	L2	Mains supply connection, supply voltage 3~380-480 VAC; 50/60 Hz
KL 1	3	L3	Mains supply connection, supply voltage 3~380-480 VAC; 50/60 Hz
PE		PE	Earth connection, PE connection
KL 2	1	NO	Status relay, floating status contact; normally open; close with error
KL2	2	COM	Status relay; floating status contact; changeover contact; common connection; contact rating 250 VAC / max. 2 A (AC1) / min. 10 mA
KL2	3	NC	Status relay, floating status contact; break with error
KL 3	1	RSA	Bus connection RS-485, RSA, MODBUS RTU; SELV
KL 3	2	RSB	Bus connection RS-485, RSB, MODBUS RTU; SELV
KL 3	3 / 10	GND	Signal ground for control interface; SELV
KL 3	4	Ain1 U	Analogue input 1, set value: 0-10 V, Ri = 100 kΩ, parametrisable curve, only usable as alternative to input Ain1; SELV
KL 3	5	+ 10 V	Fixed voltage output 10 VDC, +10 V ±3%, max. 10 mA, short-circuit-proof, power supply for external devices (e.g. potentiometer), SELV
KL 3	6	Ain1 I	Analogue input 1, set value: 4-20 mA; Ri = 100 Ω, parametrisable curve, only usable as alternative to input Ain1 U; SELV
KL 3	7	Din1	Digital input 1: enabling of electronics, enabling: open pin or applied voltage 5-50 VDC disabling: bridge to GND or applied voltage <1 VDC reset function: triggers software reset after a level change to <1 VDC; SELV
KL 3	8	Din2	Digital input 2: parameter set switch 1/2, according to EEPROM setting, the valid/used parameter set can be selected via bus or via digital input DIN2. Parameter set 1: open pin or applied voltage 5-50 VDC Parameter set 2: bridge to GND or applied voltage <1 VDC; SELV
KL 3	9	Din3	Digital input 3: controller function of integrated controller, according to EEPROM setting, the controller function of the integrated controller is normally/inversely selectable per bus or per digital input normal: open pin or applied voltage 5-50 VDC inverse: bridge to GND or applied voltage <1 VDC; SELV
KL 3	11	Ain2 U	Analogue input 2, actual value: 0-10 V, Ri = 100 kΩ, parametrisable curve, only usable as alternative to input Ain2; SELV
KL 3	12	+ 20 V	Fixed voltage output 20 VDC, +20 V +25/-10%, max. 50 mA, short-circuit-proof, power supply for external devices (e.g. sensors); SELV

No.	Conn.	Designation	Function / assignment
KL 3	13	Ain2 I	Analogue input 2, actual value: 4-20 mA, Ri = 100 Ω, parametrisable curve, only usable as alternative to input Ain2 U; SELV
KL 3	14	Aout	Analogue output 0-10 VDC, max. 5 mA, output of the current motor level control coefficient / motor speed parametrisable curve; SELV

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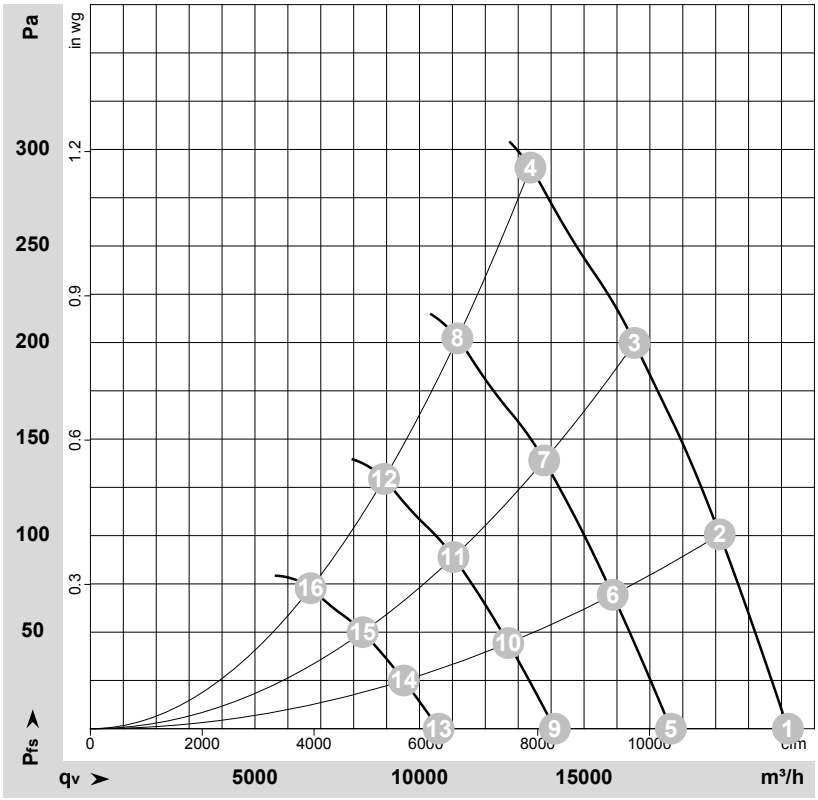
Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-114811-1

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

	Conn.	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	Y	400	50	1510	2484	3.77	74	81	83	21195	0	12475	0.00
2	Y	400	50	1510	2757	4.20	74	81	82	19125	100	11255	0.40
3	Y	400	50	1510	2979	4.52	74	81	82	16535	200	9730	0.80
4	Y	400	50	1510	3200	5.00	79	86	85	13370	290	7870	1.16
5	Y	400	50	1250	1432	2.17	69	77	78	17640	0	10385	0.00
6	Y	400	50	1250	1576	2.40	69	76	78	15870	69	9340	0.28
7	Y	400	50	1250	1727	2.62	70	77	77	13790	139	8115	0.56
8	Y	400	50	1250	1857	2.83	74	81	80	11150	203	6565	0.81
9	Y	400	50	1000	733	1.11	63	71	72	14110	0	8305	0.00
10	Y	400	50	1000	807	1.23	63	71	72	12695	44	7475	0.18
11	Y	400	50	1000	884	1.34	64	71	72	11030	89	6495	0.36
12	Y	400	50	1000	951	1.45	68	76	75	8920	130	5250	0.52
13	Y	400	50	750	309	0.47	56	64	65	10585	0	6230	0.00
14	Y	400	50	750	340	0.52	56	63	65	9525	25	5605	0.10
15	Y	400	50	750	373	0.57	57	64	64	8275	50	4870	0.20
16	Y	400	50	750	401	0.61	61	68	67	6690	73	3940	0.29

Conn. = Connection · 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