EC axial fan - HyBlade

sickle-shaped blades (S series)

with square full nozzle

Nominal data

Type	**W3G630-GN37-23**
Motor	**M3G112-GA**

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}	960
Power consumption	W	730
Current draw	A	3.3
Max. back pressure	Pa	120
Max. back pressure	in. wg	0.48
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}	%	39.6	32.9
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		46.7	40
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.76
09 Air flow q_v	m^3/h	8215
09 Pressure increase p_{fs}	Pa	126
10 Speed (rpm) n	min^{-1}	960
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-166937

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Technical description

Weight	24.2 kg
Size	630 mm
Motor size	112
Rotor surface	Painted black
Blade material	Sheet aluminum insert, sprayed with PP plastic
Fan housing material	Sheet steel, galvanized and coated with black plastic (RAL 9005)
Guard grille material	Steel, coated with black plastic (RAL 9005)
Number of blades	5
Blade pitch	0°
Airflow direction	V
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
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
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 - Alarm relay - Integrated PID controller - Motor current limitation - PFC, active - RS-485 ebmBUS - Soft start - Control interface with SELV potential safely disconnected from supply - Thermal overload protection for electronics/motor - Line undervoltage / phase failure detection
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC circuit feedback	According to EN 61000-3-2/3
EMC interference emission	According to EN 61000-6-4 (industrial environment)
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	EAC

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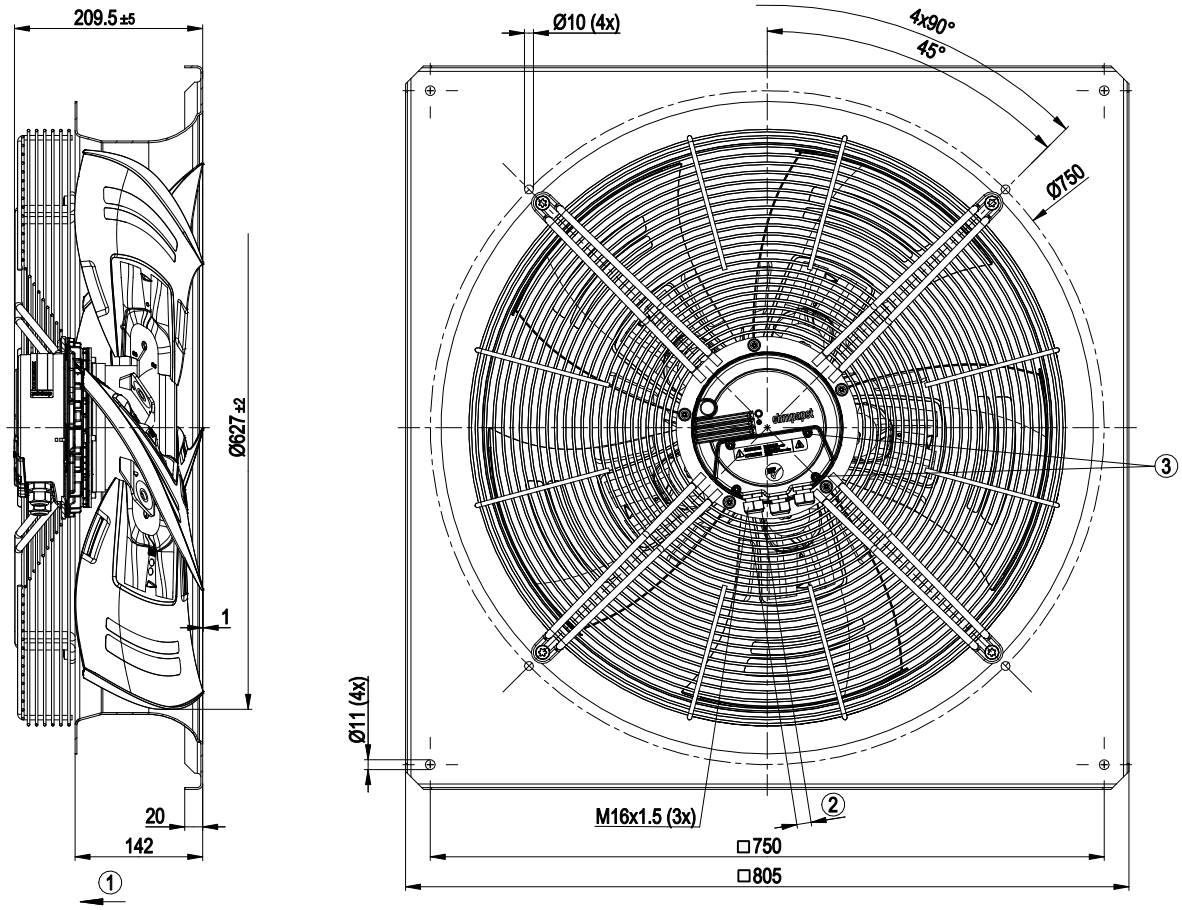
Product drawing



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

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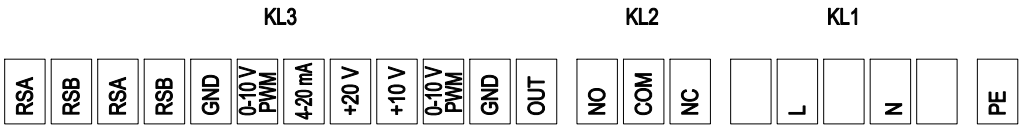
Connection diagram



No.	Conn.	Designation	Function/assignment
PE		PE	Protective earth
KL1		N	Supply 50/60 Hz, neutral conductor
KL1		L	Supply 50/60 Hz, phase
KL2		COM	Alarm relay, common (2 A, 250 VAC, AC1)
KL2		NC	Alarm relay, break for failure
KL2		NO	Alarm relay, make for failure
KL3		+10 V	Supply for external potentiometer, 10 VDC (+10%) @ 10 mA
KL3		+20 V	Supply for external sensor, 20 VDC (±20%) @ 50 mA
KL3		0-10 V/PWM	Control / current sensor value input
KL3		0-10 V/PWM	Control / current sensor value input (impedance 100 kΩ)
KL3		4-20 mA	Control / current sensor value input
KL3		GND	GND
KL3		GND	GND
KL3		OUT	Master output 0-10 V, max. 3 mA
KL3		RSA	RS485 interface for ebmBUS, RSA
KL3		RSA	RS485 interface for ebmBUS, RSA
KL3		RSB	RS485 interface for ebmBUS, RSB
KL3		RSB	RS485 interface for ebmBUS, RSB

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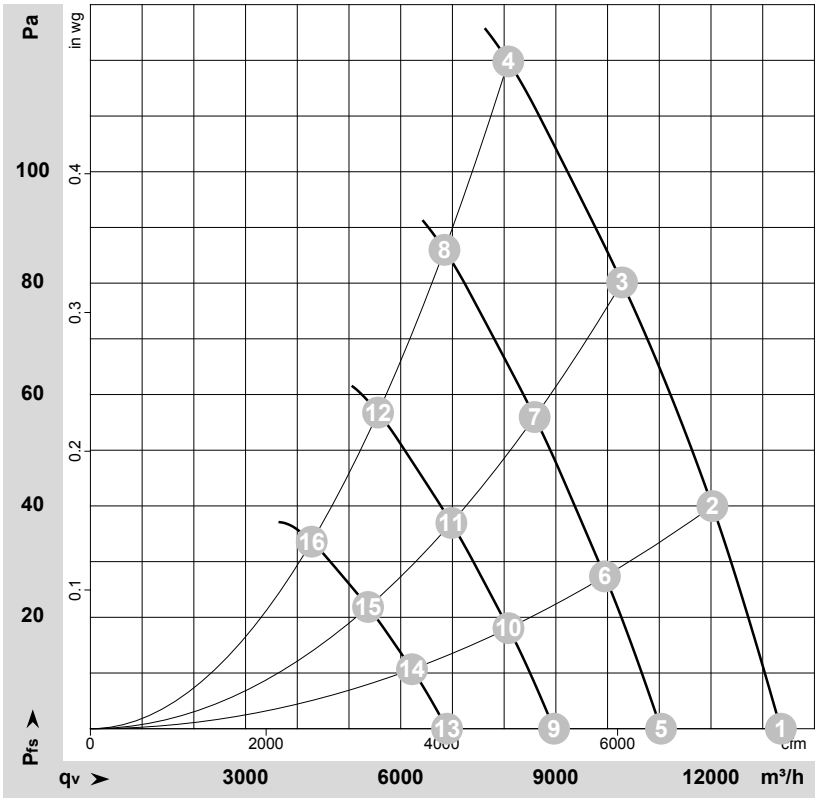
Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-127555-1

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	960	565	2.56	62	69	69	13350	0	7860	0.00
2	230	50	960	642	2.88	60	67	68	12025	40	7080	0.16
3	230	50	960	698	3.11	59	66	67	10280	80	6050	0.32
4	230	50	960	730	3.30	64	71	70	8080	120	4755	0.48
5	230	50	800	319	1.45	57	64	65	11035	0	6495	0.00
6	230	50	800	363	1.63	56	63	63	9950	27	5855	0.11
7	230	50	800	407	1.82	55	62	62	8590	56	5055	0.22
8	230	50	800	448	1.99	60	67	66	6845	87	4030	0.35
9	230	50	650	171	0.78	52	59	59	8965	0	5275	0.00
10	230	50	650	195	0.87	50	57	58	8085	18	4760	0.07
11	230	50	650	218	0.97	50	57	57	6980	37	4110	0.15
12	230	50	650	240	1.07	54	61	61	5560	57	3275	0.23
13	230	50	500	78	0.35	45	52	53	6895	0	4060	0.00
14	230	50	500	89	0.40	44	51	51	6220	11	3660	0.04
15	230	50	500	99	0.44	43	50	50	5370	22	3160	0.09
16	230	50	500	109	0.49	48	55	54	4280	34	2520	0.14

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