

EC axial fan - HyBlade

sickle-shaped blades (S series)

with square full nozzle

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Nominal data

Type	W3G910-GG02-21	
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	620
Power consumption	W	610
Current draw	A	2.6
Max. back pressure	Pa	75
Max. back pressure	in. wg	0.3
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60
Starting current	A	3.9

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · oe = Customer equipment
Subject to change

Data according to Commission Regulation (EU) 327/2011 (EN 17166)

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	47.8	32.2
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		55.6	40
05 Variable speed drive		Yes	

Data obtained at optimum efficiency level.
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

09 Power consumption P_{ed}	kW	0.57
09 Air flow q_v	m ³ /h	14380
09 Pressure increase p_{fs}	Pa	65
10 Speed (rpm) n	min ⁻¹	620
11 Specific ratio*		1.00

* Specific ratio = $1 + p_{fs} / 100\,000\text{ Pa}$

LU-208730



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Technical description

Weight	35.8 kg
Size	910 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
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
Airflow direction	V
Direction of rotation	Clockwise, 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 - 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
Approval	CSA C22.2 No. 77 + CAN/CSA-E60730-1; EAC; UL 1004-7 + 60730-1
Comment	Conformity with standard EN 60335-1 on request

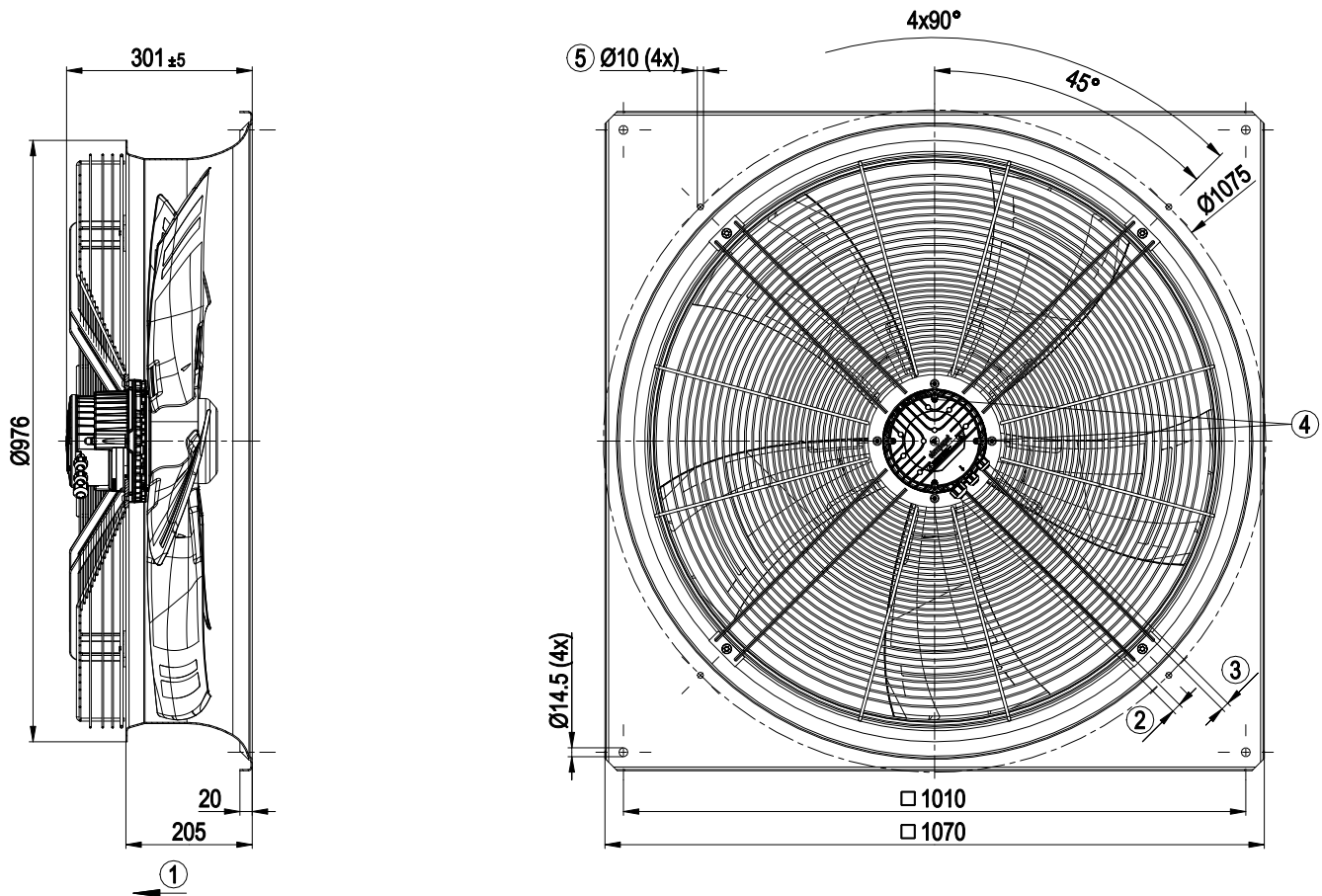


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Product drawing



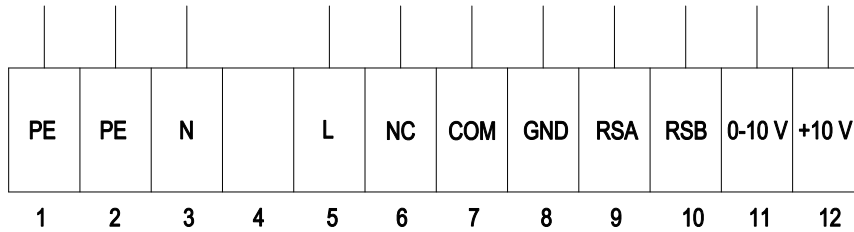
1	Direction of air flow "V"
2	Cable diameter min. 8 mm, max. 12 mm, tightening torque 1.8 ± 0.3 Nm (use must be made of seal provided) Cable diameter min. 4 mm, max. 10 mm, tightening torque 1.8 ± 0.3 Nm
3	Cable diameter min. 6 mm, max. 10 mm, tightening torque 1.8 ± 0.3 Nm (use must be made of seal provided) Cable diameter min. 4 mm, max. 7 mm, tightening torque 1.8 ± 0.3 Nm
4	Tightening torque 1.5 ± 0.2 Nm
5	Attachment holes for FlowGrid (91000-2-2957 not included in scope of delivery)

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Connection diagram



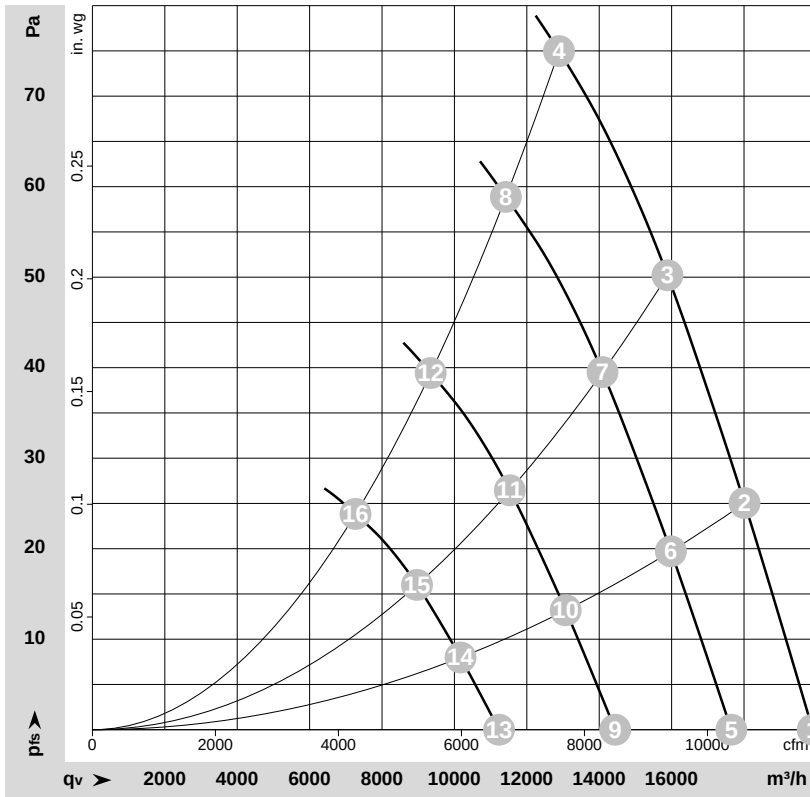
No.	Conn.	Designation	Function/assignment
1	PE	PE	Protective earth
2	PE	PE	Protective earth
3	N	N	Power supply, neutral conductor
4	-	-	not used
5	L	L	Power supply, phase
6	NC	NC	Status relay, floating status contact, break for failure, contact rating 250 VAC / 2 A (AC1) / min. 10 mA; basic insulation on supply side and reinforced insulation on control interface side
7	COM	COM	Status relay, floating status contact, common connection, contact rating 250 VAC / 2 A (AC1) / min. 10 mA; basic insulation on supply side and reinforced insulation on control interface side
8	GND	GND	Reference ground for control interface, SELV
9	RSA	RSA	RS485 interface for MODBUS, RSA; SELV
10	RSB	RSB	RS485 interface for MODBUS, RSB; SELV
11	0-10 V	0-10 V	Analog input (set value) SELV, 0-10 V, Ri = 100 kΩ, adjustable curve
12	+10 V	+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)

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Curves: Air performance 50 Hz



$$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$$

Measurement: LU-208730-1

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

	Wired	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)	m³/h	Pa	cfm	in. wg
1	1~	230	50	620	394	1.75	60	67	66	19895	0	11710	0.00
2	1~	230	50	620	473	2.09	59	66	64	18015	25	10600	0.10
3	1~	230	50	620	540	2.37	58	65	63	15885	50	9350	0.20
4	1~	230	50	620	610	2.60	61	67	66	12890	75	7585	0.30
5	1~	230	50	550	275	1.22	57	64	63	17650	0	10390	0.00
6	1~	230	50	550	330	1.46	56	63	61	15980	20	9405	0.08
7	1~	230	50	550	377	1.66	55	62	60	14090	40	8295	0.16
8	1~	230	50	550	419	1.84	58	64	63	11420	59	6725	0.24
9	1~	230	50	450	151	0.67	52	59	58	14440	0	8500	0.00
10	1~	230	50	450	181	0.80	51	57	56	13075	13	7695	0.05
11	1~	230	50	450	206	0.91	50	56	55	11530	27	6785	0.11
12	1~	230	50	450	229	1.01	53	59	58	9345	39	5500	0.16
13	1~	230	50	350	71	0.32	46	52	51	11230	0	6610	0.00
14	1~	230	50	350	85	0.38	45	51	50	10170	8	5985	0.03
15	1~	230	50	350	97	0.43	44	50	49	8965	16	5280	0.06
16	1~	230	50	350	108	0.47	46	53	52	7270	24	4280	0.10

Wired = Wiring · 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

